

Interaction between Treatment Directiveness
and Locus of Control in
Self-administered Weight Control Programs

by

Joseph S. Rallo

A dissertation
presented to the Department of Psychology,
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in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

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INTERACTION BETWEEN TREATMENT DIRECTIVENESS AND LOCUS OF
CONTROL IN SELF-ADMINISTERED WEIGHT CONTROL PROGRAMS

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JOSEPH S. RALLO

A thesis submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
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I would like to dedicate this dissertation to my mother and father, who probably had begun to wonder if their son would ever finish school.

Abstract

The present study investigated the interaction between Weight Locus of Control (Saltzer, 1982) and the directiveness of self-administered weight control programs. One hundred and twenty obese subjects were assigned to one of three treatment conditions varying in directiveness. The interaction was significant for weight reduction and cost-effectiveness ($p < .05$) at posttreatment, and approached significance at the six month followup ($p < .10$). The interaction was also significant for behaviour change/compliance ($p < .05$). Congruent subject/treatment pairings (internals/non-directive; externals/directive) resulted in enhanced weight reduction and maintenance, cost-effectiveness, self-monitoring, homework completion, and calorie reduction. With one exception, only congruent pairings resulted in significant weight reduction ($p < .005$) at posttreatment and at followup. The importance of considering both subject and treatment variables is discussed, and an "interactionist" approach (Magnusson & Endler, 1977) to the development of assessment instruments for predicting response to weight control programs is recommended.

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Introduction

One potentially cost-effective method to improve the delivery and management of behavioural weight control programs has been to incorporate proven behavioural self-control principles into self-administered treatment manuals requiring little or no professional contact. Several studies have reported significant weight reductions utilizing a behavioural manual with minimal or no professional contact (Balch & Ross, 1974; Balch & Balch, 1976; Black & Threlfall, 1986; Cameron et al., 1985; Dilley, Balch & Balch, 1979; Fernan, 1973; Hagen, Foreyt & Durham, 1976; Hall, Hall, Hanson & Borden, 1974; Lindstrom, Balch & Reese, 1976; Pezzot-Pearce, 1980; Tobias & MacDonald, 1977). Pezzot-Pearce (1980) demonstrated that a behavioural manual for weight reduction could be administered under varying degrees of therapist contact ranging from weekly individual contact to no contact without significant changes in effectiveness, but with accompanying increases in cost-effectiveness as therapist contact decreased.

There are, however, significant problems with the use of self-administered behavioural manuals. The large inter-individual variability in outcome that has characterized behavioural self-control treatments for weight loss in general (Abramson, 1977; Brownell, 1982; Jeffery Snell & Forster, 1985; Kinsey, 1980, 1983; Stunkard & Mahoney, 1976; Wilson, 1978;

Wilson & Brownell, 1980) has also been reported in studies examining the effectiveness of behavioural manuals (e.g., Black & Threlfall, 1986; Cameron et al., 1985; Jeffery & Gerber, 1982; Pezzot-Pearce, 1980). Overall, these findings suggest that not all people are equally adept at implementing behavioural self-control strategies effectively. This is especially problematic for self-administered treatments which rely heavily on client responsibility for initiating, executing, and evaluating treatment components, critical elements for effective self-control (Kanfer, 1971, 1977). This is unfortunate because, as indicated above, several reports have shown behavioural bibliotherapy to be an effective and inexpensive alternative for many people. This emphasizes a need to identify subject variables for predicting response to such treatments. To date, the search for subject predictors of success at weight reduction has been discouraging (Brownell, 1984), although more recent attention to the development of measures more specific to weight control has produced more promising results (e.g., Klesges, 1984; Barnstuble, Klesges, & Terbizan, 1986; Saltzer, 1982).

Subject variables may not be the only factors influencing response to self-control treatments. Another potential contributor is the treatment itself. This is most evident when written, self-administered behavioural programs are examined. The actual content, style, format, and structure of these manuals varies considerably. One potentially important difference

between manuals is the style or format in which materials and prescriptions for change are presented to the reader. Some manuals are very directive. They instruct the reader what to do in a step-by-step fashion. Such manuals can be highly structured and restrictive in their recommendations. Other manuals are considerably more non-directive, allowing the reader considerable choice and freedom in how to adopt the various principles he/she has been presented with.

Research reviewed below on behavioural self-control suggests that the amount of direction and external input provided by self-control programs may influence outcome. It also suggests that subject and treatment variables may interact with each other to further influence response to treatment. The present study thus set out to examine the effects of one subject variable (locus of control) and one treatment variable (directiveness), along with their interaction, on response to a self-administered behavioural treatment for weight reduction. The choice of variables for examination and the proposed hypotheses were generated from past research on Kanfer's (1971, 1977) model of behavioural self-control, and from extensive research on the relationship between self-control and locus of control. A brief summary of these areas follows.

A model of behavioural self-control. Kanfer (Kanfer, 1971; Kanfer, 1977; Kanfer & Karoly, 1972) has proposed a behavioural model of self-control which views the self-regulatory process as

a three-stage feedback system. First, the individual self-monitors, then self-evaluates, and then self-reinforces depending upon the outcome of the self-evaluation. Each of these three regulatory processes may be influenced by a number of factors, both overt and covert, environmental and internal.

Individual differences in the way an individual self-monitors, self-evaluates, or self-reinforces would, according to this model, result in individual differences in self-control behaviour. Studies have demonstrated inter-individual variability in self-evaluative, self-reinforcement, and self-punishment styles (Bellack, 1975b; Bellack & Tillman, 1974). Measurable differences in self-reinforcement and self-evaluative style have also been related to performance in self-control weight loss programs (Bellack, Glanz & Simon, 1976; Bellack et al., 1976; Rozenky & Bellack, 1974, 1976; Carroll, Yates & Gray, in press).

An important prediction of Kanfer's model concerns the interaction between the amount of external direction provided by a treatment and self-reinforcement or self-evaluative style. According to this model, high self-reinforcers should be most successful in treatment programs that emphasize self-control (as opposed to external control) because they are able to use self-reinforcement more often and more effectively to self-modify behaviour. On the other hand, low self-reinforcers should be more successful in programs emphasizing external control because

they rely more heavily on external sources of reinforcement for behaviour change. Rozensky and Bellack (1976) confirmed these predictions in a study evaluating the effectiveness of behavioural weight control. Most important, their study demonstrated an interaction between a subject predictor variable (self-reinforcement style) and a treatment variable (amount of external control).

Locus of control and behavioural self-control. Locus of control is a subject variable which has shown promise as a predictor of performance in self-control weight reduction programs (Balch & Ross, 1975; Bellack & Tillman, 1974; Chambliss & Murray, 1979; Chapman & Jeffrey, 1979; Chavez & Michaels, 1980; Saltzer, 1979; Wallston, Wallston, Kaplan & Maides, 1976). The most successful results were reported by Saltzer (1979, 1982) who developed a locus of control measure specific to weight reduction. Strickland (1978) reviewed research on locus of control and health-related behaviours. An important conclusion of this review was that congruence of locus of control expectancies and the structure of therapeutic endeavour appeared to enhance behaviour change. Specifically, when given the opportunity, internals reported a preference for more client control in varied treatments than externals. Internals responded more positively to non-directive approaches in which therapist intervention was minimal, while externals appeared to be more positively influenced by structured approaches. Studies

evaluating the relationship between locus of control and success in behavioural weight control programs have supported Strickland's conclusions. Wallston et al. (1976) reported an interaction between locus of control and type of treatment on a program satisfaction measure. Internals evaluated a self-directed program more positively, while externals evaluated a group program emphasizing external direction more positively. Weight losses were consistent with these findings, although the interaction was not significant. Similarly, Chambliss and Murray (1979) demonstrated a significant interaction between locus of control and treatment. Internals lost weight in a treatment emphasizing personal responsibility for change and gained weight in a treatment emphasizing external responsibility. The results were reversed for external subjects.

A possible link between locus of control and Kanfer's model of behavioural self-control was proposed by Bellack (1975). He noted a striking similarity between patterns of behaviour in self-control treatment programs exhibited by low and high self-reinforcers and that of internals and externals. He suggested that externals and internals differ in their ability to apply self-regulation procedures effectively. He reasoned that the greater one's tendency to administer self-reinforcement, the less dependent one should be on external consequence for behaviour, and hence more internally oriented. Conversely, the less effectively one self-reinforces, the more dependent one

should be on external reinforcement, and hence more externally oriented. He was able to demonstrate significant self-reinforcement differences between externals and internals. Internals consistently gave themselves higher self-evaluations, and administered more positive self-reinforcement and less negative self-reinforcement than externals. He concluded that external locus of control could be viewed as a self-regulation deficit, and suggested that externals are unable to evaluate their own behaviour adequately in the absence of external input, and therefore do not make effective use of self-reinforcement.

According to Kanfer's model, the establishment of a performance contract is a critical element in the self-regulatory process, and serves as the basis for self-evaluation of behaviour. Individuals highly skilled at implementing self-control procedures are more likely to establish appropriate performance contracts than those with self-control deficits. In support of this, Bellack (1975) and Bellack and Schwartz (1976) noted that even when individuals were provided with the same information upon which to formulate performance contracts, they exhibited differences in self-evaluative style. They suggested that externally oriented subjects were highly dependent on external input for their evaluations. Among the variables hypothesized by Kanfer (Kanfer & Karoly, 1972) to increase the probability of initiating behaviour that leads to fulfillment of a performance contract were the explicitness and clarity of the

contract (i.e., specifying goals in detail, providing performance standards, and outlining specific methods for achieving goals). Thus Bellack and Schwartz (1976) argued that for externally oriented subjects, performance criteria should be made as explicit and objectified as possible. For internals, however, only minimal external guidelines for performance should be necessary provided sufficient relevant information for formulating a performance contract are made available.

The foregoing discussion provides a model for understanding the interaction between locus of control or self-reinforcement style and treatment directiveness. In relatively unstructured or non-directive weight control programs (such as the "self-directed" or "self-control" programs described above), subjects are typically provided with information on behavioural control of eating, stimulus control, nutrition, etc., along with general recommendations for the minimal daily caloric intake and expenditure required to lose weight. The individual assumes responsibility for planning daily meals and for achieving other behavioural objectives. In other words, the individual is responsible in large part for formulating appropriate performance contracts and for effectively self-monitoring, self-evaluating, self-reinforcing behaviour. According to the literature reviewed above, such a program would be most appropriate, and presumably most effective for internally oriented individuals. Externals, on the other hand would require the same information, plus more

specific guidelines and structure for performance (e.g., daily meal plans, more detailed self-monitoring forms, daily exercise regimens, detailed instructions for stimulus control strategies). If left to their own devices they would likely develop inappropriate performance contracts and thus ineffectively self-regulate behaviour. A program such as the latter is more directive because it provides more external structure, directions, and guidance.

Present Study

The present study systematically examined the interaction between locus of control orientation, as measured by the Weight Locus of Control Scale (Saltzer, 1982) and the degree of treatment directiveness provided by a self-administered weight control program. Subjects were classified as either external or internal on the basis of their scores on the Weight Locus of Control Scale, and assigned to one of three treatment conditions: 1) a "directive" behavioural self-control treatment for obesity; 2) a "non-directive" behavioural self-control program; 3) an alternate treatment control (non-behavioural) which emphasized anxiety as the basis of overeating. The same manual (Pezzot-Pearce, 1980) was used as the basis for both the directive and non-directive behavioural conditions. The two forms differed only in the degree of directiveness with which basic information and recommendations were presented.

The present study was designed with two purposes in mind. The first was to examine the interaction between locus of control orientation and treatment directiveness as it relates to several outcome measures, including weight reduction. Second, and related to the first, this study was concerned with determining whether congruent treatment directiveness and locus of control conditions would result in improved outcome and improved cost-effectiveness.

Hypotheses

Comparability of treatment conditions. The first set of hypotheses concerned the relative efficacy of the two behavioural conditions versus the alternate (non-behavioural) condition, and the comparability of the directive versus the non-directive conditions.

- 1) Subjects utilizing the two behavioural manuals (directive and non-directive) were predicted to lose more weight at posttreatment and at each of the followup assessments than subjects utilizing the alternate (non-behavioural) manual.
- 2) It was predicted that there would be no differences in weight reduction on average (i.e., across all subjects within each condition) between the two behavioural manuals (directive and non-directive), at each of the assessment periods, nor on any of the other outcome measures (behaviour change/compliance, activity change, diet change, cost-effectiveness) at posttreatment.

Treatment by locus of control interactions. The second set of hypotheses constituted the major hypotheses of this study:

- 3) It was predicted that there would be a significant interaction between treatment directiveness and locus of control for each set of outcome measures and at each of the assessment periods. Related to this prediction, it was further predicted that congruent treatment/locus of control pairings would result in optimal outcomes as measured by all dependent variables, including cost-effectiveness. Conversely, incongruent treatment/locus of control pairings were predicted to result in relatively poor outcomes. The proposed congruent pairings were non-directive/internals and directive/externals. The proposed incongruent pairings were non-directive/externals and directive/internals.

Method

Subjects

One hundred and twenty subjects were recruited via newspaper, radio, and television advertisements. The selection process was as follows. Volunteers attended an informational meeting (10-30 participants per meeting) where the nature of the study, attendance requirements, and eligibility criteria were explained. Interested volunteers completed an application consisting of (a) a questionnaire requesting information pertinent to their eligibility (Appendix A), (b) the Weight Locus of Control Scale (Saltzer, 1982) (Appendix B), (c) the Multidimensional Health Locus of Control Scale (Wallston et al., 1978) (Appendix C), and (d) the Frequency of Self-Reinforcement Scale (Heiby, 1983) (Appendix D).

Eligible subjects were (a) 18 years of age or older; (b) at least 20% overweight based on 1959 Metropolitan Life Insurance Company norms (1960; see also Bray, 1976); (c) willing to commit themselves to a ten week program plus a 12 month followup, and (d) willing to place a refundable deposit of \$100.00 in the form of a cheque made out to a charity of their choice. Volunteers were not accepted if they were (a) participating in any other weight control programs; (b) suffering from any obesity-related disorder such as diabetes, thyroid

dysfunction, colitis, or ulcers, (c) taking medication which affected water retention, appetite, or metabolism, (d) pregnant or planning to become pregnant within the ensuing 14 months, (e) suffering from any heart condition or extreme circulation problem contraindicating physical activity, or (e) if their physician indicated for any other reason that they should not participate in the program.

The 1959 Metropolitan weight standards were utilized for subject selection only, in order to make the subject population comparable to that of Pezzot-Pearce's (1980) study, and to enhance comparability to other past and recent studies in this area which have typically utilized the 1959 norms. All calculated body change variables requiring an ideal weight standard were based, however, on the more recent 1983 norms (Metropolitan Insurance Companies of America, 1983). The midpoint of the medium frame desirable weight ranges was used to determine ideal weights for subjects (see Appendix E).

There were 134 eligible volunteers. The first 120 of these who could be contacted, who were still interested in participating, and who attended their first scheduled treatment meeting, were selected for the study.

Subjects had a mean pretreatment weight of 194.25 lb (88.11 kg), and were on average 56.56 lb (25.66 kg), or 40.72% overweight. Mean age was 38.28 years (range 19 yr to 68 yr). Average age of onset of obesity was approximately 19 years. All

but three subjects reported previous weight loss attempts ($M = 8$).

Therapist

The therapist was a senior, post-internship, Ph.D. clinical psychology student (author) who had previous experience in the behavioural control of obesity. Meetings consisted entirely of distribution of written treatment materials and questionnaires, data collection (e.g., weighing, collecting self-monitoring forms), and scheduling of further appointments. The written program constituted the sole basis for treatment, and the therapist served as a data collector.

Procedure

Subjects were randomly assigned to one of three groups from blocks stratified according to percentage overweight. Forty subjects were assigned to each group: 1) Non-directive manual, 2) Directive manual, 3) Alternate manual.

Pretreatment meetings. All subjects were met individually by the therapist in order to collect further pretreatment data and initiate treatment. Subjects completed a modified shortened version of the Stanford Eating Disorders Clinic Questionnaire (Agras et al., 1976, Appendix F), and an 11 item Values Survey (Appendix F; see Wallston & Wallston, 1981). They were also required return a physician's consent form (Appendix G), and to leave a refundable deposit in the form of a cheque made out to a charity of their choice. Attendance requirements for all

subjects consisted of attendance at a 5-week and 10-week (posttreatment) weigh-in, as well as attendance at two follow-up meetings (3- and 6-month). They were also required to return all weekly lessons and behaviour change data (whether completed or not) at the 5-week and 10-week meetings. It was strongly emphasized that refunds depended solely upon attendance requirements and not upon weight loss or behaviour change. Subjects signed a contingency contract outlining the above requirements (Appendix H).

Subjects were weighed on a physician's beam balance and weights were recorded to the nearest quarter pound (approximately one-tenth of a kg) after removal of shoes, outdoor clothing, and heavy jewelery. Height was recorded to the nearest quarter inch (approximately 1 cm).

Subjects received one of three written, multi-component, self-help manuals for weight loss at the pretreatment meeting (Appendices I, J, K). They were told that in-person contact had been found to be unnecessary to derive benefit from the manual and were instructed to complete one lesson a week for the succeeding ten weeks.

Five-week meeting. Subjects were weighed, completed records and assignments were collected, and any questions briefly answered. Posttreatment questionnaires were distributed in a sealed envelope, and subjects were instructed to complete them once they had completed all of the lessons in their manual.

Posttreatment (10-week) meeting. Subjects were weighed, and all assignments, energy and behaviour change data, and posttreatment questionnaires were collected. The posttreatment questionnaires consisted of the Weight Locus of Control Scale and a questionnaire assessing a subject's perceived directiveness of various components of the program (Appendix L).

Followup meetings. Subjects were weighed, and their next followup meeting scheduled.

Treatment Conditions

Non-directive condition. Subjects in the non-directive condition received a written multi-component behavioural self-help manual for weight loss adapted from Pezzot-Pearce's (1980) behavioural manual. Pezzot-Pearce's manual was modified for the purposes of this study into two forms, (a) a non-directive form, and (b) a directive form. The non-directive form (see Appendix I) was identical to Pezzot-Pearce's original manual except for modifications designed to reduce the amount of explicit direction for implementing treatment components. Specifically, recommendations for stimulus control strategies were modified to allow readers more responsibility for adopting behaviour changes. Recommendations for caloric intake and expenditure were left unchanged. For example, subjects calculated their own daily calorie goals, and planned their meals accordingly with the aid of a calorie book. Recommendations for activity increase consisted of a recommended weekly range of

increased expenditure, but no directions were provided regarding the choice or schedule of activities.

Apart from the above changes, the content and format of the non-directive manual were essentially identical to Pezzot-Pearce's manual. The manual was designed to allow subjects to lose weight at a rate of one to two pounds (approx. 0.5 to 1.0 kg) per week. It emphasized slow, but progressive changes in eating and activity behaviours which could be adopted permanently as part of the reader's lifestyle. Drastic measures such as starvation, rigid diets, and extended heavy exercise were strongly discouraged. The components of the manual included instructions and information on self-monitoring, stimulus control, self-reward, nutrition education, contracting, cognitive control, chaining, energy balance, meal planning, activity planning, and descriptions of the rationale underlying each component. A copy of a summary of Canada's Food Guide was added to the nutrition chapter in order to ensure that subjects had sufficient information to plan nutritionally complete and balanced meals.

Directive condition. Subjects in the directive condition received a written multi-component self-help behavioural manual for weight loss identical to the manual received by subjects in the non-directive condition except for modifications designed to increase the level of direction provided to readers for implementing treatment components (see Appendix J). For example,

unlike the non-directive manual, the directive manual provided a daily calorie intake goal along with daily recommended meal plans with limited choices within each food category. Similarly, specific directions for physical activity were provided, including recommended frequencies for activities, types of activities, and durations of activities. Subjects were given weekly assignments based on the treatment principles discussed in each lesson, and they were instructed to follow their assignments closely.

Alternate condition. The alternate treatment subjects received a self-help manual for weight loss which emphasized anxiety as a cause of overeating (Appendix K). This manual recommended relaxation procedures and insight into motivations as remedies for overeating. The alternate manual was the same as the alternate manual utilized by Pezzot-Pearce (1980) with two modifications. First, an activity component identical to the activity component of the non-directive manual was added. Second, a copy of Canada's Food Guide was added to the section on nutrition. The manual also provided minimal information on energy balance, and subjects were encouraged to try to achieve a negative energy balance.

Dependent Variable Measures

There were five types of dependent variables. These were (a) body change measures, (b) calorie change measures, (c) activity change measures, (d) compliance/behaviour change measures, (e) cost-effectiveness measures.

Body change. Body change dependent variables were computed at posttreatment, 3-month, and 6-month followup assessments. They were derived from weight and height data collected at pretreatment, and weight data collected at pretreatment, posttreatment, 3-month, and 6-month followup assessments. All weights were measured in pounds. The metric equivalent in kilograms was calculated using the exact conversion factor of 1 pound = 0.45359237 kg. These converted values have been reported in parentheses where applicable. Absolute weight lost, percent of body weight lost, and Weight Reduction quotient have all been reported in order to enhance comparability of this study with others. The Weight Reduction Quotient was utilized as the primary unit for analysis of weight change, as recommended by Wilson (1978). This index was developed by Feinstein (1959) and equals the percent of excess weight lost multiplied by relative initial obesity utilizing the following formula:

$$WRQ = \frac{\text{weight lost}}{\text{surplus weight}} \times \frac{\text{initial weight}}{\text{target weight}} \times 100$$

Calorie change. Subjects in the behavioural conditions were required to keep daily records of their calorie intake. A calorie score (CALSCOR) was calculated for each subject at posttreatment as follows. The mean recorded calorie intake was computed by summing calorie intake across program duration and dividing by the number of days complete records were kept (a record was considered complete only if calorie intake for the day

was totalled by the subject). The calorie score was the difference between mean actual daily intake and recommended daily intake. Positive values indicated an average daily calorie intake exceeding the recommended intake, and negative values indicated an average daily calorie intake below the recommended level. Maximum recommended daily intake was based on multiplying a subject's pre-treatment weight by 7 (minimum daily intake for all subjects not less than 1200 calories). This is a method recommended by LeBow and Perry (1977) which has been found generally to produce a weekly one to two pound (approx. 0.5 to 1.0 kg) weight loss. Subjects in the directive manual condition were provided with appropriate meal plans, based on their pretreatment weights, which met this guideline. Subjects in the non-directive condition performed their own calculations, as outlined above, and planned meals accordingly.

Activity change. There were three dependent measures of activity change calculated for all subjects:

- 1) Activity Score (ACTSCORE) - Subjects in all conditions were required to record participation in various physical activities, and to compute their daily and weekly calorie expenditures. An activity score was calculated by totalling calorie expenditures recorded by subjects each week and dividing this total by the number of weeks activity records were kept.

2) ACTGOAL - The number of days a subject achieved or exceeded his/her daily activity goal (calorie expenditure) during the treatment phase.

3) ACTDAYS - The number of days a subject recorded any extra activity during the treatment phase.

Compliance/behaviour change. Four measures assessed the extent to which subjects followed prescriptions for behaviour change, self-monitored (e.g., completed food and activity records), answered review questions, and totalled their daily calorie intake and expenditure.

1) Behaviour Score (BSCORE) - Subjects in all conditions were required to keep a daily log of their implementation of specific behaviour change and weight loss strategies as recommended in their respective treatment manuals. Adopting a strategy utilized by Pezzot-Pearce (1980), subjects awarded themselves a certain number of points for following recommendations: 5 points for following a recommendation all day; 3 points - most of the day; 1 point - some of the day; and 0 points for not following the recommendation at all. A total behaviour score for the 10 weeks was derived by summing the daily point totals.

2) RATINGS score - The number of days a subject complied with instructions to rate behaviour and award behaviour scores.

3) Self-monitoring compliance index (SELF-MONITOR) - An index of the extent to which a subject complied with self-monitoring instructions was calculated by totalling the number of days each

self-monitoring task was completed, and dividing the sum of all of these values by the maximum total a subject would have achieved if he or she had complied perfectly with all self-monitoring instructions. Thus the index represents the proportion of self-monitoring tasks completed by subjects. For the behavioural conditions the formula for calculating the self-monitor index was:

$$\text{SELF-MONITOR} = \frac{\text{CALDAYS} + \text{CALTOTAL} + \text{ACTWEEKS} + \text{ACTTOTAL}}{\text{MAXIMUM OF ABOVE TOTAL (154)}} * 100$$

where CALDAYS = # of days calorie records were kept

CALTOTAL = # of days calories were totalled,

ACTWEEKS = # of days activity records were kept

ACTTOTAL = # of days activity expenditures totalled

Subjects in the alternate condition did not keep records of calorie intake. Thus, the self-monitor index was calculated by:

$$\text{SELF-MONITOR} = \frac{\text{ACTWEEKS} + \text{ACT-TOTAL}}{\text{MAXIMUM (14)}} * 100$$

4) REVIEW - An index of the percentage of review questions completed by the subject by posttreatment.

Cost-effectiveness. A cost-effectiveness index devised by Jeffrey (1974b) and recently utilized by Yates (1978) was calculated at posttreatment and at each of the follow-up periods. As in Pezzot-Pearce's (1980) study, Jeffrey's index was inverted for the present study to permit comparability of the present findings with Pezzot-Pearce's. The index was calculated as follows:

$$\text{Cost-effectiveness index} = \frac{\text{mean weight reduction index}}{\text{mean treatment time per subject}}$$

The mean treatment time per subject was recorded in minutes. The index yielded a measure of mean unit of weight loss per minute of professional time spent in delivering service to a subject.

Perceived directiveness of treatment. Subjects were asked to assess how "directive" they perceived the different components of the program that they had followed. This was accomplished via a brief questionnaire (Appendix L). Directiveness was defined for subjects, with general examples, as reflecting the extent to which a treatment program guides or directs a person through the various steps, and the degree of choice one has in implementing treatment procedures.

Reliability measures

Weight was recorded independently by the experimenter and the subject at each assessment period. Reliability was determined by computing Pearson product-moment correlation coefficients between these pairs of weights for all subjects.

Reliability measures were also obtained for the behaviour scores of subjects. A spouse or family member was asked to independently estimate the subject's compliance with each behaviour recommended in the manual. These raters assigned points to the subject for each day using the same criteria that the subject was using to award points to himself/herself. Thus a similar behaviour score was derived from the ratings of the

independent observer. The two total behaviour scores were correlated using Pearson product-moment correlation coefficients. Correlations were computed for each treatment condition based on 17 pairs of ratings for subjects in the non-directive condition, 13 pairs (directive), and 17 pairs (alternate). These numbers are considerably lower than the total subjects in each manual condition because many subjects either lived alone, or did not have people living with them who would cooperate with doing the daily ratings.

Results

Pretreatment Analyses

Pretreatment Subject Characteristics

The mean pretreatment characteristics of the three treatment groups for body weight, pounds overweight, percent overweight, age, age of earliest onset of obesity, and number of previous weight loss attempts are shown in Table 1. A one-way multivariate analysis of variance (MANOVA) indicated that the three treatment groups were equivalent on these variables at pretreatment (Pillai's Trace = .05609, approximate $F(12, 208) = .50017$, $p = .913$). The mean values and distributions for the three conditions of other subject characteristics measured at pretreatment, and of the various measures of locus of control and self-control, are contained in Appendix N (Tables N-1 & N-2). There were no significant differences between the three groups on any of the variables assessed at pretreatment.

Subject Attrition

Eight subjects had dropped out of each condition by the 6-month followup for a total of 24 dropouts, or an attrition rate of 20%. Chi-square analyses of subject dropout by treatment group revealed that dropout was not associated with treatment condition at any of the assessment periods. Eleven subjects gave no specific reason for dropping out, six moved out of town, four had to drop out due to health reasons, one subject became pregnant, and two were referred elsewhere because they had an eating disorder.

Table 1

Mean Pretreatment Subject Characteristics

Characteristic	<u>n</u>	Treatment		
		Directive	Non-directive	Alternate
Weight (lb/kg)	40	197.18 (50.33)	194.28 (37.99)	191.30 (35.66)
Pounds overweight	40	59.35 (43.06)	55.38 (32.26)	54.95 (34.04)
Percent overweight	40	42.10 (27.65)	39.75 (22.77)	40.30 (23.17)
Age (years)	40	37.18 (10.91)	38.37 (9.53)	38.63 (9.87)
Age onset (years)	a	18.59 (11.34)	20.39 (10.41)	17.16 (9.97)
# previous attempts	b	8.11 (8.72)	7.14 (6.28)	8.95 (10.41)

Note. Standard deviations in parentheses. 1 lb = 0.45359 kg.

^an for directive, non-directive, and alternate groups = 39, 36, 37, respectively. ^bn for directive, non-directive, and alternate groups = 38, 36, 37, respectively.

Reliability

Pearson product-moment correlations for weight reduction measures were calculated on the basis of 396 pairs of independent assessments of body weight (two independent assessments at each of the five meetings). The resulting correlation between independent assessments was .98 ($p < .001$). The correlation between the total behaviour score awarded by subjects and the total score awarded by helpers was computed for each treatment separately. The resulting coefficients were: $r(13) = .768$, $p = .002$ (directive); $r(17) = .624$, $p = .007$ (non-directive); $r(17) = .806$, $p < .001$ (alternate).

Other Pretreatment Analyses.

Correlations among dependent measures. Although several indices of weight change were calculated for each subject, the Weight Reduction Quotient was utilized in the present study as the primary unit for analysis of weight change. The intercorrelations among absolute weight lost, weight reduction quotient, and percent weight lost were all highly significant ($p < .001$), and ranged from $r = .65$ to $r = .99$.

Other pretreatment analyses were (a) a principal components analysis of dependent variables to assess the appropriateness of the groupings of specific variables into sets; and (b) analyses to determine the usefulness of including measures of health and/or physical appearance value as independent variables. Details of these analyses are contained in Appendix M (Notes 1 &

2). Results confirmed the proposed grouping of dependent variables, and indicated that the addition of value measures did not enhance the interpretability of the results.

Posttreatment Analyses

Perceived Directiveness of Treatment Conditions

The mean directiveness ratings of each treatment component for each group are presented in Table 2. The manual-specific rating refers to a specific treatment component unique to each manual. A one-way multivariate analysis of variance indicated that the three groups differed significantly on the five measures of directiveness (Pillai's Trace = .24299, approximate F (10, 172) = 2.37868, $p = .012$). A planned multivariate contrast between the directive and non-directive conditions was highly significant (Pillai's Trace = .18407, approximate F (5, 85) = 3.83524, $p = .004$). Examination of the group means (Table 2) reveals that on all ratings except for the manual-specific rating, subjects in the directive condition rated treatment components as more directive than subjects in the non-directive and alternate conditions. Subjects in the alternate condition rated their treatment as the least directive. This latter finding is not surprising because alternate subjects received the least specific directions of the three groups for behaviour changes for weight control (only very basic nutritional and activity information was provided, and subjects were simply encouraged to try to achieve a negative energy balance, without specific suggestions as to how).

Table 2

Mean Directiveness Ratings of Treatment Components

Treatment Component	Treatment		
	Directive ^a	Non-directive ^b	Alternate ^c
Recommendations for Diet	4.32	2.72	2.69
Recommendations for Activity	4.58	4.07	3.75
Dealing with Problem Situations	4.65	4.55	4.16
Manual-specific components ^d	5.03	5.14	5.03
Overall rating of directiveness	4.52	4.17	3.72

^a_n = 31. ^b_n = 29. ^c_n = 32. ^dManual-specific components were not identical for each treatment condition. For the directive and non-directive conditions, subjects rated the directiveness of recommendations for food buying, food storage, food preparation, food service, and food cleanup. For the alternate condition, subjects rated recommendations for dealing with anxiety through relaxation exercises.

Univariate F tests were significant only for the diet directiveness rating ($F(2, 89) = 11.11408, p < .001$). Post-hoc comparisons between groups on this variable utilizing the Scheffe procedure ($\alpha = .05$) indicated that the directive behavioural group (mean rating = 4.3226) rated diet recommendations as significantly more directive than both the alternate group (mean rating = 2.6875) and the non-directive group (mean rating = 2.7241). The difference between the alternate and the non-directive groups was not significant.

Comparisons of Treatment Conditions

Details of the statistical procedures employed in this section, and supplementary data are contained in Appendix M (Note 3).

Weight loss measures. Table 3 presents the mean weight reduction quotient, absolute weight lost, and percent weight lost at each of the three assessment periods for each treatment condition. A one-way analysis of variance utilizing weight reduction quotient as the dependent variable at each time period revealed no significant treatment main effects at posttreatment ($F(2, 104) = .69632, p = .501$), 3-month followup ($F(2, 97) = .01063, p = .989$), or 6-month followup ($F(2, 93) = .74165, p = .479$). A summary of these analyses is presented in Table 4. A one-way multivariate analysis of variance utilizing all three measures of weight change would have resulted in identical conclusions (see Appendix N, Table N-3).

Table 3

Mean Weight Reduction Measures for Three Treatment Conditions at
Three Assessment Periods

Assessment		Weight Reduction Measure		
		Weight Reduction Quotient	Absolute Weight Lost ^a	Percent Weight Lost
Posttreatment				
Directive	35	33.89 (41.12)	9.41 (7.78)	4.76 (3.64)
Non-directive	35	28.83 (27.38)	9.67 (9.64)	4.83 (4.54)
Alternate	37	24.51 (31.38)	7.34 (8.67)	3.93 (4.75)
3-month				
Directive	32	29.38 (38.28)	8.73 (8.17)	4.33 (3.94)
Non-directive	34	28.98 (34.56)	10.79 (13.08)	5.24 (6.33)
Alternate	34	28.01 (44.49)	8.45 (11.87)	4.51 (6.48)
6-month				
Directive	32	15.19 (30.73)	4.94 (7.41)	2.36 (3.79)
Non-directive	32	24.03 (39.49)	9.84 (14.48)	4.68 (7.07)
Alternate	32	26.68 (47.71)	8.87 (12.36)	4.56 (6.55)

Note. Standard deviations in parentheses.

^aWeight loss in pounds. 1 lb = 0.45359 kg.

Table 4

One-way ANOVA Results Assessing Treatment Main Effects on Weight
Reduction Quotient at Each Assessment Period

Assessment	Source	df	SS	MS	F	p
Posttreatment	Between	2	1585.9133	792.9567	.6963	.501
	Within	104	118432.7532	1138.7765		
	Total	106	120018.6665			
3-month	Between	2	32.8995	16.4497	.0106	.989
	Within	97	150167.7229	1548.1209		
	Total	99	150200.6224			
6-month	Between	2	2316.5327	1158.2664	.7416	.479
	Within	93	145242.6206	1561.7486		
	Total	95	147559.1533			

A planned comparison of the behavioural versus alternate conditions indicated differences in mean weight reduction quotients to be not significant at posttreatment ($F(1, 104) = .99830, p = .320$), 3 month followup ($F(1, 97) = .01987, p = .888$), or 6-month followup ($F(1, 93) = .68315, p = .411$).

Contrary to the first hypothesis, subjects in the behavioural and non-behavioural conditions performed equally well with respect to weight reduction.

A second planned comparison between the directive and non-directive conditions on weight reduction quotient was not significant at posttreatment ($F(1, 104) = .39435, p = .531$), 3-month followup ($F(1, 97) = .00167, p = .968$), or 6-month followup ($F(1, 93) = .80014, p = .373$).

The test of the constant effect in the preceding overall ANOVA's was significant at posttreatment ($F(1, 104) = 79.37108, p < .001$), 3-month follow-up ($F(1, 97) = 53.48792, p < .001$), and 6-month follow-up ($F(1, 93) = 29.66118, p < .001$). These results indicate that subjects, on average, reduced their weight significantly from pretreatment to each of the assessment periods.

Treatment comparisons on other dependent variables. One-way multivariate and univariate analyses of variance were used to determine if the three treatment conditions differed significantly on behaviour change/compliance, calorie change, or activity change measures. Details of these analyses are found in

Appendix M. The three treatment conditions did not differ significantly on behaviour change/compliance measures (Pillai's Trace = .07025, approximate $F(8, 192) = .87375$, $p = .540$), nor did the two behavioural groups differ from each other on the calorie change variable ($F(1, 65) = 1.73485$, $p = .192$). The one-way multivariate analysis for the activity change variables, however, yielded a significant overall treatment main effect (Pillai's Trace = .25098, approximate $F(6, 156) = 3.73095$, $p = .002$). Only the planned contrast between the directive and the non-directive groups was significant, however, (Pillai's Trace = .20736, approximate $F(3, 77) = 6.71439$, $p < .001$). Univariate F tests and post-hoc comparisons (Scheffe procedure) revealed that the two behavioural groups differed significantly only on the ACTDAYS variable ($F(1, 79) = 10.86290$, $p = .001$). Subjects in the directive group recorded extra physical activity on more days ($M = 36.86$) than did subjects in the non-directive group ($M = 23.17$).

Weight Loss within Groups

A repeated measures analysis of variance (treatment X time) utilizing the MANOVA approach (O'Brien & Kaiser, 1985) examined the effects of the three treatment conditions on weight reduction quotients over time. The results of this analysis are presented in Table 5. They indicate significant changes in weight reduction from posttreatment to followup (time effect) which are dependent upon treatment condition (treatment by time interaction).

Table 5

One-way (treatment) Repeated Measures Analysis on Weight Reduction
Quotient (Multivariate Method)

Between-Subjects Design

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Constant	1	203458.16045	54.93620	.000
Treatment	2	260.53551	.03517	.965
Within	93	344428.8212		

Within Subjects Design (Multivariate tests)

Effect	Pillai's	<u>F</u> ^a	Hypoth.	Error	<u>p</u>
	Trace		<u>df</u>	<u>df</u>	
Time ^b	.11631	6.05431	2	92	.003
Treatment X Time ^c	.11944	2.95329	4	186	.021

Note. Multivariate method was utilized for tests of
 within-subjects components (SPSSX 2.1 MANOVA procedure).

^aApproximate F for Treatment by Time interaction; exact F for
 Time effect.

^bS = 1, M = 0, N = 45.

^cS = 2, M = -1/2, N = 45.

Tests of within group changes in mean weight reduction quotients from posttreatment to 3-month followup, posttreatment to 6-month followup, and 3-month followup to 6-month followup were conducted utilizing paired two-tailed t-tests with alpha set at .005 to control error rate for this set of analyses at approximately .045 ($9 \times .005$). None of the groups evidenced further significant weight reductions from posttreatment through either follow-up. These results have been summarized in Table 6. The same conclusions would have been made even if alpha had been considerably more liberal (.10). They indicate that most weight reduction occurred during the active treatment phase. The results of the repeated measures analysis, however, indicated significant differences between groups in patterns of weight reduction during followup, and an examination of the mean weight reduction quotients for each group confirms this (see Table 3). The non-directive behavioural group and the alternate group evidenced continued further weight reductions from posttreatment to the 3-month followup, and from the 3-month followup to the 6-month followup. Although these reductions were not significant (Table 6), they indicate that these two groups were at least able to maintain their weight reductions through to the 6-month followup. Subjects in the directive group, however, evidenced mean weight gain from posttreatment to the 3-month followup, and still further weight gain from the 3-month followup to the 6-month followup. The weight gain was not significant from

Table 6

Tests of Within Group Changes in Mean Weight Reduction Quotient
during Followup

Time Period	Treatment Condition		
	Directive	Non-directive	Alternate
Post. to 3-month	1.79 (31)	-0.29 (33)	-0.91 (33)
3-month to 6-month	3.25 (31)*	2.52 (31)	-0.21 (31)
Post. to 6-month	4.10 (31)**	0.83 (31)	-0.69 (31)

Note. Values are one-sample (paired) t - tests (two-tailed) with degrees of freedom for each t value in parentheses.

* $p < .005$. ** $p < .001$ (denotes significant weight gain).

posttreatment to the 3-month followup ($t(31) = 1.79, p = .083$), but was highly significant from the 3-month to the 6-month followup ($t(31) = 4.10, p < .001$), resulting in a net significant average weight gain (i.e., decrease in mean weight reduction quotient) from posttreatment to the 6-month followup ($t(31) = 3.25, p = .003$). Note that although subjects in the directive group regained weight during followup, their mean weight reduction quotient at the 6-month followup still represented a significant net weight reduction from pretreatment.

Inclusion of Alternate Condition in Subsequent Analyses

On the basis of the preceding results, the alternate treatment condition was retained in subsequent analyses as a third, less directive, but apparently effective treatment condition. Two points supported this decision. First, the preceding analyses indicated no differences in effectiveness on any of the dependent measures between the alternate treatment condition and the two behavioural conditions. Second, the results of the analyses of the directiveness ratings indicated that the alternate condition was rated the least directive of the three conditions, a finding consistent with the actual content of the alternate treatment condition. Thus, the results of analyses for the alternate condition were predicted to be most similar to the results for the non-directive behavioural condition.

Treatment by Locus of Control Interactions

Subjects were classified as internal or external on the basis of a median split of Weight Locus of Control scores. The interaction between locus of control and treatment was examined via two-way (3 X 2) fixed effects multivariate analysis of variance (3 treatment levels by 2 locus of control levels), except for hypotheses concerning weight change which were examined via two-way ANOVA utilizing weight reduction quotient as the dependent variable. The test of the interaction effect for each variable set was conducted with $\alpha = .05$. All pairwise comparisons between cell means pertaining directly to the hypotheses, and any within cell tests were conducted utilizing a Bonferroni adjusted alpha level resulting in a total error rate for each set of analyses of approximately .05 (Bird & Hadzi-Pavlovic, 1983; Cohen & Cohen, 1975; O'Brien & Kaiser, 1985; Ramsey, 1980). Details of the above procedures are found in Appendix M (Note 4).

Interaction effect on weight change. The results of the two-way ANOVA's for weight reduction quotient at each assessment period are presented in Table 7. The treatment by locus of control interaction was significant at posttreatment only ($F(2, 101) = 3.764, p = .026$). At the 6-month followup, the interaction approached significance ($F(2, 90) = 2.589, p = .081$). The cell means for each locus of control/treatment combination are presented in Table 8 (see Appendix N, Tables N-4 & N-5 for absolute weight loss and percent weight loss data). As

Table 7

Results of Two-way (treatment X locus of control) ANOVA for
Weight Reduction Quotient at each Assessment Period

Assessment	Source	df	MS	F	p
Posttreatment	Treatment	2	439.053	0.407	.667
	WLOC ^a	1	1571.462	1.456	.230
	Treatment X WLOC	2	4062.419	3.764	.026
	Error	101	1079.151		
3-month	Treatment	2	50.841	0.033	.967
	WLOC	1	646.621	0.425	.516
	Treatment X WLOC	2	3292.780	2.163	.121
	Error	94	1522.144		
6-month	Treatment	2	1747.987	1.149	.322
	WLOC	1	436.195	0.287	.594
	Treatment X WLOC	2	3939.902	2.589	.081
	Error	90	1521.518		

^aWeight Locus of Control Effect.

Table 8

Mean Weight Reduction Quotients for Specific Treatment/Locus of Control Combinations at Post., 3-month, and 6-month Assessments.

Assessment	Treatment	Locus of Control Orientation ^a	
		Internal	External
Posttreatment	Directive	16.050 (14)	45.786 (21)
	Non-directive	26.250 (22)	33.185 (13)
	Alternate	30.942 (19)	17.711 (18)
3-month	Directive	13.762 (13)	40.058 (19)
	Non-directive	27.818 (22)	31.108 (12)
	Alternate	35.006 (17)	21.012 (17)
6-month	Directive	-2.423 (13)	27.242 (19)
	Non-directive	25.110 (21)	21.964 (11)
	Alternate	33.394 (16)	19.969 (16)

Note. n in parentheses.

^aLocus of Control orientation based on Weight Locus of Control Scale score.

shown in the following sections, these data generally support the hypotheses. All mean comparisons were conducted with $\alpha = .005$ to control error rate to approximately .045 (see Note 4, Appendix M).

Weight change - posttreatment cell means: Tests of cell means (see Table 8) supported the hypothesis concerning congruent treatment-subject pairings for the directive and the alternate treatment conditions. In the directive condition externally oriented subjects lost more weight than internally oriented subjects ($t(33) = -2.21, p = .034$), and only the externals evidenced significant weight reduction from pretreatment to posttreatment (tests of within subgroup changes for externals: $F(1, 20) = 19.49869, p < .001$; internals: $F(1, 13) = 9.55854, p = .009$). In the alternate condition, it was the internals who lost more weight. Although this difference was not significant ($t(35) = 1.29, p = .204$), only the internals reduced weight significantly from pretreatment to posttreatment (internals: $F(1, 18) = 20.15478, p < .001$; externals: $F(1, 17) = 5.45796, p = .032$). Contrary to hypotheses, however, there was little difference between internals and externals in the non-directive condition ($t(33) = -0.72, p = .477$), and both groups lost significant weight from pretreatment to posttreatment (externals: $F(1, 12) = 17.10686, p = .001$; internals: $F(1, 21) = 21.13889, p < .001$).

Weight change - 3-month cell means. The results at the 3-month followup supported the hypotheses. Tests of within group changes indicated that in the directive condition only the externals lost significant weight from pretreatment to the 3-month followup (externals: $F(1, 18) = 18.88628, p < .001$; internals; $F(1, 12) = 2.67772, p = .128$). For the alternate group, only the internal subjects reduced weight significantly from pretreatment to the 3-month followup ($F(1, 16) = 12.87392, p = .002$; externals: $F(1, 16) = 3.17945, p = .094$). Similarly, in the non-directive condition internals evidenced significant weight reduction from pretreatment to 3-months ($F(1, 21) = 13.92283, p < .001$), but externals did not ($F(1, 11) = 9.35648, p = .011$). Although the tests of differences between the cell means were all non-significant ($p > .10$), externals had a larger mean weight reduction quotient than internals in the directive condition, while internals had the largest mean weight reduction quotients in the non-directive and alternate conditions.

Weight change - 6-month cell means. The same results as above were found at the 6-month followup. The following subgroups evidenced significant mean weight reduction quotients at the 6-month follow-up: directive/externals ($F(1, 18) = 21.28653, p < .001$); non-directive/internals ($F(1, 20) = 9.73997, p < .005$); and alternate/internals ($F(1, 15) = 13.64037, p = .002$). In the alternate and non-directive conditions, internal subjects reduced their weight more than

external subjects, although these differences were not statistically significant. In the directive condition, however, the external subjects had a mean weight reduction quotient of 27.242 compared to a negative mean weight reduction quotient of -2.42308 for the internal subjects. This difference was significant ($t(30) = -3.01, p < .005$).

The results of a repeated measures analysis of variance (treatment X locus of control X time) were consistent with all of the preceding analyses. These results are available in Appendix M, Note 5.

Figures 1 to 3 illustrate the interaction between treatment directiveness and locus of control for the weight reduction quotient at each of the assessment periods. The horizontal axis represents the three treatment conditions from least directive at the extreme left (alternate condition) to most directive at the extreme right (directive behavioural).

Interaction effects - other dependent variables. The treatment by locus of control interaction effect was significant for the set of behaviour change/compliance variables (Pillai's Trace = .18167, approximate $F(8, 188) = 2.34794, p = .020$), and approached significance for the set of activity change variables (Pillai's Trace = .14053, approximate $F(6, 150) = 1.88932, p = .086$). The test of the interaction for the calorie change variable was not significant ($F(1, 64) = .15245, p = .697$). Details of these analyses, can be found in Appendix M, Note 6.

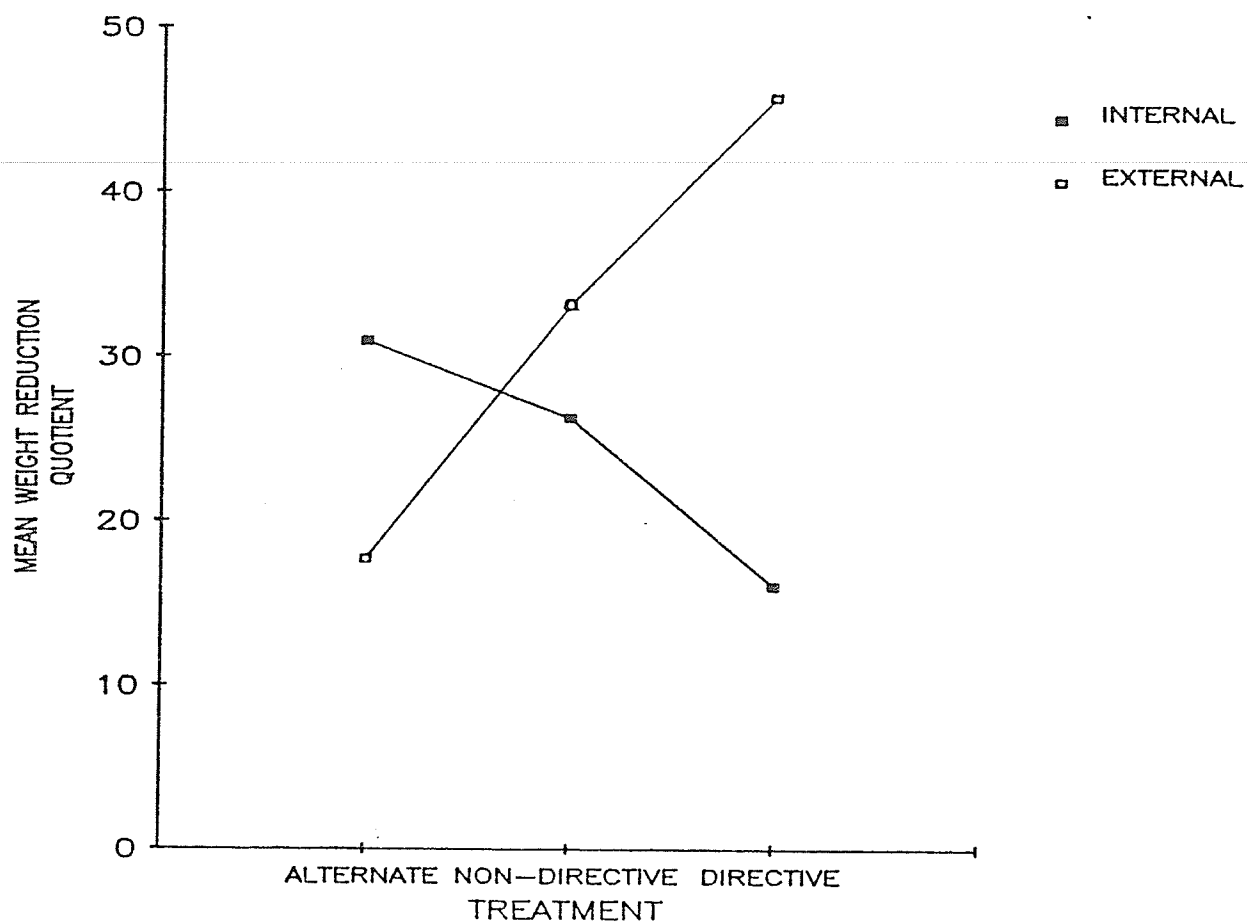


Figure 1. Mean weight reduction quotient at posttreatment versus treatment condition. The horizontal axis (treatment) represents the degree of treatment directiveness from least directive (extreme left) to most directive (extreme right).

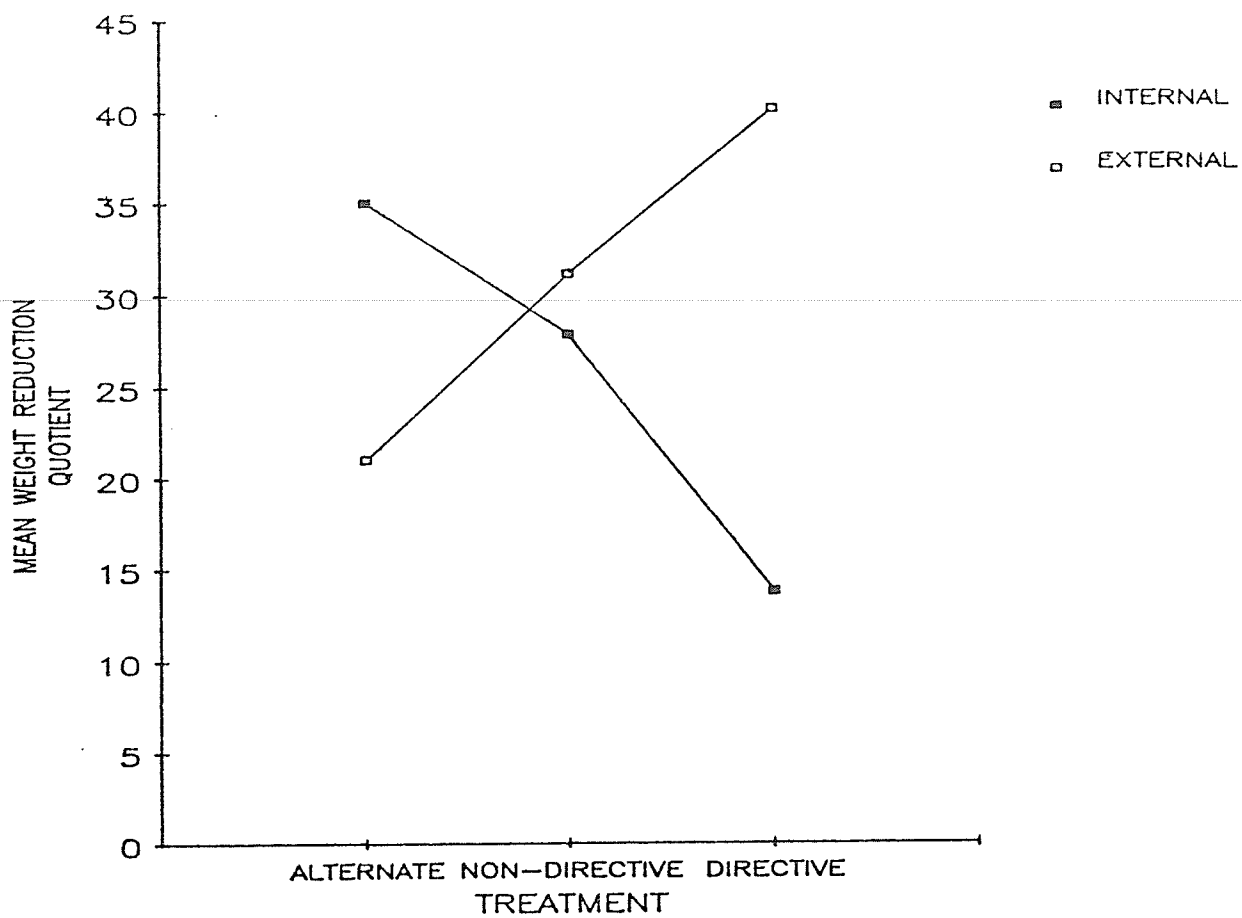


Figure 2. Mean weight reduction quotient at 3-month followup versus treatment condition. The horizontal axis (treatment) represents the degree of treatment directiveness from least directive (extreme left) to most directive (extreme right).

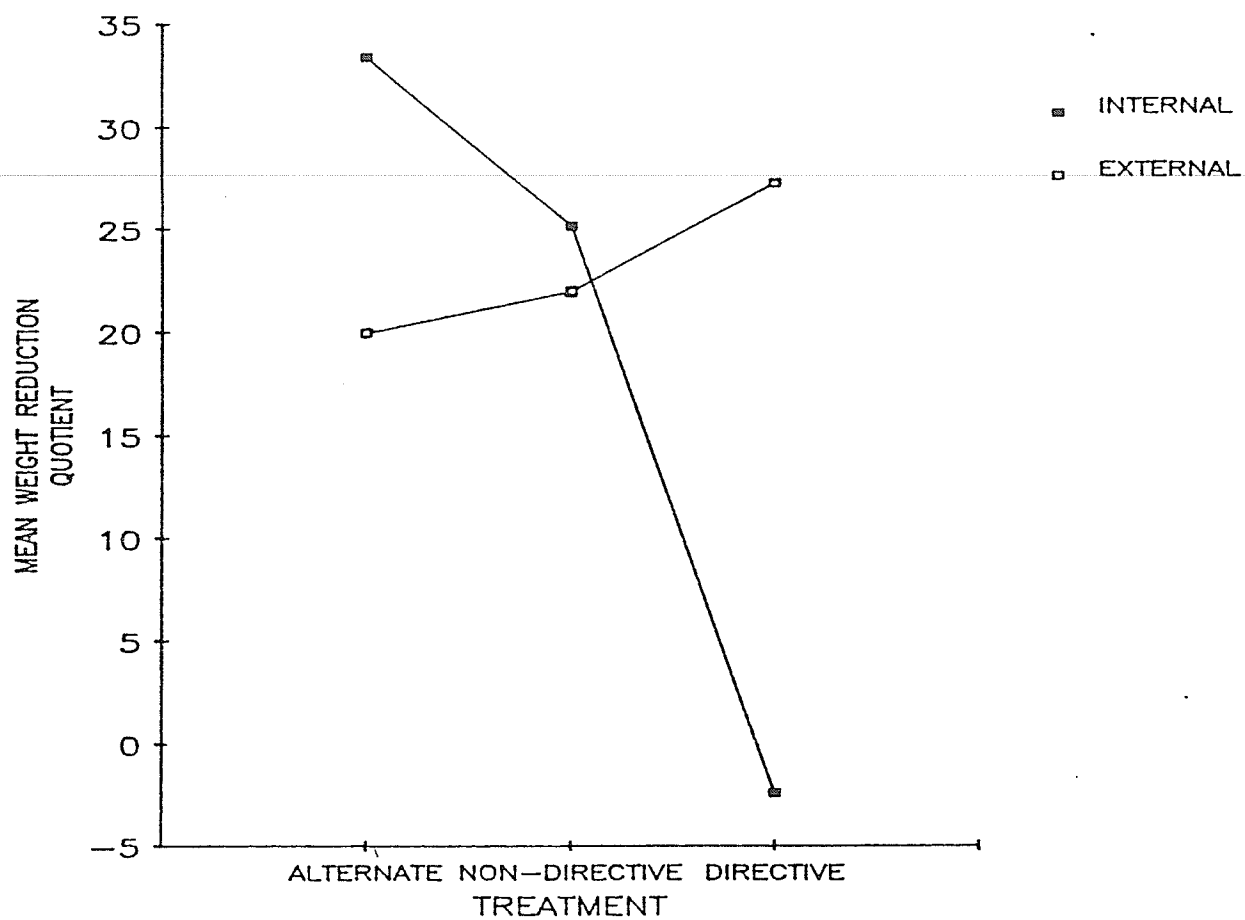


Figure 3. Mean weight reduction quotient at 6-month followup versus treatment condition. The horizontal axis (treatment) represents the degree of treatment directiveness from least directive (extreme left) to most directive (extreme right).

None of the differences between internally oriented subjects and externally oriented subjects within each treatment condition were significant for any of the behaviour change/compliance, activity change, or calorie change variables. Several trends, however, are worth noting. Consistent with predictions, externals had a higher self-monitoring score than internals in the directive condition, while the internals scored higher on average than externals in the non-directive and alternate conditions. Similarly, externals had the highest mean calorie score in the directive condition, while the internals evidenced the highest mean score in the non-directive condition. Externals also completed more review questions than internals in the directive condition, but not in the non-directive condition.

Trends in cell means for the behaviour score and the RATINGS variables were opposite to predictions. Thus, on both variables, the internals had better scores in the directive condition than the externals, while the externals had the better scores on these two variables in the two non-directive conditions. The differences between internals and externals on the activity change variables were mixed, and difficult to interpret (see Tables M-6 to M-10, Appendix M for details).

Treatment Group Contrasts for Interaction

As a supplement to the foregoing analyses, the results of three contrasts between specific treatment conditions have been summarized below. The three contrasts are 1) behavioural

(directive + non-directive) vs alternate; 2) directive versus non-directive behavioural; and 3) directive vs alternate. Table 9 provides the multivariate and approximate F statistics for the interaction effect for each variable set (univariate statistics for weight reduction analyses). Of particular interest is the finding that for each variable set except for activity change, the interaction effect was largest for the alternate versus directive contrast. This is a useful finding in view of the results reported earlier which indicated that the alternate condition was perceived by subjects as being even less directive than the non-directive behavioural condition. It suggests that the further apart two contrasted treatments are on a "directiveness" continuum, the more pronounced the interaction effect. Such a finding provides further support for the hypotheses of this study.

Weight Locus of Control Main Effects

Tests of Weight Locus of Control Main effects were conducted as part of all of the foregoing two-way analyses. These tests were non-significant for all sets of dependent variables examined. Probability levels for univariate and multivariate tests of this main effect ranged from $p = .230$ to $p = .845$, depending on the variable set being examined. Details of these tests can be found in Appendix M and in Table 7.

Table 9

Summary of Treatment Group Contrasts for Treatment X Locus of Control
Interaction Effect

Contrast	<u>df</u>	<u>F</u>	<u>p</u>
Weight Reduction - Posttreatment			
Behavioural vs Alternate ^a	1, 101	5.478	.021
Directive vs Non-directive ^b	1, 101	1.995	.161
Directive vs Alternate	1, 101	7.528	.007
Weight Reduction - 3-month			
Behavioural vs Alternate	1, 94	2.988	.087
Directive vs Non-directive	1, 94	1.346	.249
Directive vs Alternate	1, 94	4.314	.041
Weight Reduction - 6-month			
Behavioural vs Alternate	1, 90	2.437	.122
Directive vs Non-directive	1, 90	2.639	.108
Directive vs Alternate	1, 90	4.794	.031

(table continues)

Table 9 (continued)

Summary of Treatment Group Contrasts for Treatment X Locus of Control
Interaction Effect

Other Dependent Measures^c

Contrast	Pillai's	Approx.		
	Trace	F	df	p
Behaviour Change/Compliance ^d				
Behavioural vs Alternate	.05702	1.406	4, 93	.238
Directive vs Non-directive	.12621	3.358	4, 93	.013
Directive vs Alternate	.09957	2.571	4, 93	.043
Activity Change ^e				
Behavioural vs Alternate	.09062	2.458	3, 74	.070
Directive vs Non-directive	.05072	1.418	3, 74	.275
Directive vs Alternate	.07539	2.011	3, 74	.120

Note. Only the tests of the interaction effect are shown.

^aDirective behavioural manual + Non-directive behavioural manual versus Alternate manual contrast. ^bDirective behavioural manual versus Non-directive behavioural manual contrast.

^cMultivariate tests. $d_s = 1$, $M = 1$, $N = 45 \frac{1}{2}$. $e_s = 1$,

$M = 1/2$, $N = 36$.

Changes in Weight Locus of Control Following Treatment

Weight Locus of Control was assessed at pretreatment, and again at posttreatment. The mean scores at each of these assessments, and the results of paired (two-tailed) t-tests comparing pretreatment to posttreatment means are presented in Table 10. The results indicate that the mean scores for all treatment groups decreased following treatment suggesting a tendency for subjects to become more internally oriented. These changes, however, were not statistically significant.

Changes in Weight Locus of Control from pretreatment to posttreatment were highly correlated with weight reduction index at posttreatment ($r(90) = -.2843$, $p = .007$), 3-month followup ($r(88) = -.2854$, $p = .007$) and 6-month followup ($r(84) = -.2935$, $p = .007$) (two-tailed tests). The negative correlations indicate that higher weight reduction quotients (i.e., more "successful" subjects) were associated with decreases in WLOC scores (subjects became more internally oriented), while lower weight reduction quotients (less successful subjects) were associated with increases in WLOC scores (subjects became more externally oriented).

Program Compliance/Behaviour Change and Weight Reduction

The correlations between the various measures of behaviour change and program compliance, and weight reduction at each of the assessment periods are presented in Table 11. Correlations were computed for each treatment condition separately. The results indicate that for the two behavioural conditions, a

Table 10

Changes in Mean Weight Locus of Control Scores from Pretreatment to Posttreatment

Treatment	Mean WLOC Score		<u>t</u>	<u>df</u>	<u>p</u>
	Pretreatment	Posttreatment			
Directive	7.42	7.16	0.43	30	.669
Non-directive	6.14	6.00	0.30	28	.766
Alternate	7.06	6.34	1.39	31	.174
All Conditions	6.89	6.51	1.25	91	.214

Note. Paired (one-sample) t tests, two-tailed probabilities.

Table 11

Correlations Between Weight Reduction Quotient at Each Assessment Period
and Various Measures of Behaviour Change and Compliance

Treatment	Measure	Correlation Coefficients		
		Posttreatment	3-month	6-month
Directive	CALSCOR	.03 (33)	.004 (31)	.06 (31)
	ACTSCORE	-.01 (28)	.05 (28)	-.03 (28)
	ACTDAYS	.34 (34)	.45 (32)**	.37 (32)*
	ACTGOAL	.15 (28)	.30 (28)	.13 (28)
	S-MONITOR	.33 (34)	.35 (32)	.53 (32)***
	QUESTIONS	.43 (34)*	.45 (31)*	.57 (31)***
	BSCORE	.31 (34)	.43 (31)*	.45 (31)*
	RATINGS	.40 (34)*	.40 (31)*	.50 (31)***
Non-directive	CALSCOR	-.10 (34)	-.21 (33)	-.27 (31)
	ACTSCORE	.51 (24)**	.64 (24)***	.64 (22)***
	ACTDAYS	.62 (34)***	.61 (33)***	.49 (31)***
	ACTGOAL	.30 (24)	.45 (24)*	.51 (22)*
	S-MONITOR	.65 (35)***	.58 (34)***	.41 (32)*
	QUESTIONS	.34 (35)*	.19 (34)	.05 (32)
	BSCORE	.54 (35)***	.51 (34)***	.38 (32)*
	RATINGS	.54 (35)***	.52 (34)***	.40 (32)*

(table continues)

Table 11 (continued)

Correlations Between Weight Reduction Quotient at Each Assessment Period
and Various Measures of Behaviour Change and Compliance

Treatment	Measure	Correlation Coefficients		
		Posttreatment	3-month	6-month
Alternate	ACTSCORE	.03 (30)	.04 (29)	.16 (27)
	ACTDAYS	.16 (36)	.14 (34)	.27 (32)
	ACTGOAL	.16 (31)	.20 (30)	.37 (28)
	S-MONITOR	.17 (36)	.13 (34)	.20 (32)
	QUESTIONS	.002 (34)	-.07 (32)	.03 (31)
	BSCORE	.28 (36)	.31 (33)	.41 (31)*
	RATINGS	.09 (37)	.12 (34)	.19 (32)

Note. Pearson correlation coefficients between each measure (assessed at posttreatment) and weight reduction quotient assessed at each assessment period. n in parentheses.

* $p < .05$. ** $p < .01$. *** $p < .005$. All tests two-tailed.

number of the measures of behaviour change, activity change, and compliance were significantly correlated with weight reduction at posttreatment, and at the two followup periods. The correlation between diet change (CALSCOR) and weight reduction, however, was not significant. For the alternate treatment condition, only one measure (behaviour score) appears to have been related to weight reduction, and only at the 6-month followup.

Other Self-control Measures

None of the other measures assessed at pretreatment (the three subscales of the Multidimensional Health Locus of Control Scale: Internal Health Locus of Control, Chance Health Locus of Control, and Powerful-others Health Locus of Control; and the Frequency of Self-reinforcement Scale) interacted significantly with treatment at any of the three assessment periods. These results have been summarized in Appendix N. Only the Powerful-Others Health Locus of Control Scale (Table 29) yielded a significant main effect at any of the time periods (posttreatment: $F(1, 101) = 7.842, p = .006$; 3-month followup: $F(1, 94) = 4.183, p = .044$; 6-month followup: $F(1, 90) = 1.180, ns$).

Cost-effectiveness analyses

Treatment time for each treatment condition. The mean total treatment times in minutes (pretreatment, 5-week weigh-in, posttreatment) for each of the three treatment conditions were 34.00 (directive condition, $sd = 9.51, n = 35$), 31.88

(non-directive condition, $\underline{sd} = 7.89$, $\underline{n} = 34$), and 34.00 (alternate condition, $\underline{sd} = 8.22$, $\underline{n} = 36$). A one-way ANOVA indicated that the three groups received equivalent average treatment time ($\underline{F} (2, 102) = .7019$, $\underline{p} = .498$).

A two-way 3 X 2 (treatment group X locus of control) ANOVA was conducted at each assessment period utilizing the cost-effectiveness index calculated at each assessment. The tests of treatment main effects were non-significant at posttreatment ($\underline{F} (2, 99) = .606$, $\underline{p} = .548$), 3-month followup ($\underline{F} (2, 94) = .209$, $\underline{p} = .812$), and 6-month followup ($\underline{F} (2, 90) = .883$, $\underline{p} = .417$). Similarly, the locus of control main effect was non-significant at posttreatment ($\underline{F} (1, 99) = .703$, $\underline{p} = .404$), 3-month followup ($\underline{F} (1, 94) = .306$, $\underline{p} = .581$), and 6-month followup ($\underline{F} (1, 90) = .141$, $\underline{p} = .708$). The interaction effect was significant at posttreatment ($\underline{F} (2, 99) = 3.382$, $\underline{p} = .038$), but not at the 3-month followup ($\underline{F} (2, 94) = 2.292$, $\underline{p} = .107$), or at the 6-month followup ($\underline{F} (2, 90) = 2.543$, $\underline{p} = .068$).

One of the hypotheses of this study predicted that maximum cost-effectiveness would result from congruent treatment/subject pairings. The significant treatment by locus of control interaction supports this hypothesis at posttreatment. The mean cost-effectiveness indices for each treatment/subject pairing at each assessment period are presented in Table 12. As predicted, directive/externals had a higher cost-effectiveness index than directive/internals at posttreatment ($\underline{t} (33) = -2.08$, $\underline{p} = .047$),

Table 12

Mean Cost-Effectiveness Index for Specific Treatment/Locus of Control
Combinations (Cell Means)

Assessment	Treatment	Locus of Control Orientation ^a	
		Internal	External
Posttreatment	Directive	0.5597 (14)	1.6356 (21)
	Non-directive	0.9225 (22)	0.9455 (12)
	Alternate	0.9995 (18)	0.5322 (18)
3-month	Directive	0.3724 (13)	1.0880 (19)
	Non-directive	0.8555 (22)	0.8505 (12)
	Alternate	0.8758 (17)	0.5136 (17)
6-month	Directive	-0.0238 (13)	0.7010 (19)
	Non-directive	0.7155 (21)	0.5713 (11)
	Alternate	0.7698 (16)	0.4148 (16)

Note. n in parentheses.

^aLocus of control orientation based on the Weight Locus of Control Scale score.

3-month followup ($t(30) = -1.92, p = .065$), and 6-month followup ($t(30) = -2.52, p = .017$). Results for the non-directive group were mixed. At posttreatment and at the 3-month followup, non-directive/internals and non-directive/externals exhibited near identical mean cost-effectiveness indices ($t(32) = -0.07, p = .943$; $t(32) = 0.01, p = .989$). At the 6-month followup, the difference was in the predicted direction (non-directive/internals > non-directive/externals), but the difference was still small ($t(30) = 0.36, p = .722$). The hypothesis was upheld within the alternate condition. Alternate/internals had a higher mean cost-effectiveness index than alternate/externals at posttreatment ($t(34) = 1.48, p = .149$), at the 3-month followup ($t(32) = 1.02, p = .314$), and at the 6-month followup ($t(30) = 1.03, p = .311$) (all tests are two-tailed). Although in many cases, cell differences were not statistically significant, the trends largely supported the hypothesis that cost-effectiveness was enhanced by compatible treatment/subject pairings.

Discussion

The present findings generally support the hypothesis that locus of control interacts with treatment directiveness. The interaction was significant for weight reduction and cost-effectiveness at posttreatment, non-significant at the 3-month follow-up, and approached significance ($p < .10$) at the 6-month follow-up. The interaction was also significant for the behaviour change and compliance measures, approached significance ($p < .10$) for the activity change measures, and was non-significant for calorie change.

The results also support the hypothesis that matching locus of control expectancies to treatment directiveness (i.e. treatment-subject congruence) improves outcome. Congruent pairings (internals/non-directive, externals/directive, internals/alternate) enhanced weight reduction, weight loss maintenance, cost-effectiveness, self-monitoring, completion of weekly review questions, and calorie reduction. These were also the only groups to reduce weight significantly from pretreatment levels to each of the assessment periods. The only exception was the performance of subjects in the non-directive condition. There, differences in weight reduction between internals and externals did not become evident until the followup periods.

The results for specific subgroups on individual activity measures, and on two measures of behaviour change were, however, mixed, and thus inconsistent with hypotheses. It is unclear why this occurred for the behaviour change measures. The mixed results for activity measures may have been due to two factors. First, the activity forms utilized by the directive group were considerably different from those utilized by the other two groups. Thus the format of record-keeping may have been a confounding factor. Second, recent reports (see Klesges, Klesges, Swenson & Pheley, 1985) have found that self-reports of adult physical activity may be extremely unreliable and variable.

As predicted, there were no differences in outcome between the two behavioural conditions. Contrary to the first hypothesis, however, the non-behavioural alternate treatment was just as effective on all outcome measures as the behavioural treatments.

Treatment-Subject Congruence: Research and Clinical Implications

The results of the present study are consistent with previous studies in this area which reported an interaction between measures hypothesized to be related to behavioural self-control ability (e.g., locus of control, self-reinforcement style) and the amount of direction or structure emphasized by a treatment program (Carroll, Yates & Gray, in press; Chambliss & Murray, 1979; Rozensky & Bellack, 1976; Wallston et al., 1976). Overall, the latter studies suggest that matching subjects to treatments

consistent with their self-regulatory "styles" is a fruitful approach towards increasing treatment efficiency and effectiveness. The present study successfully utilized Kanfer's model of behavioural self-control along with an extensive literature relating this model to locus of control theory to generate specific predictions concerning optimal treatment subject pairings. The results clearly show that matching subjects to treatments congruent with their locus of control expectations results in superior outcomes.

Relationship between locus of control and self-control. The present findings support Bellack's (Bellack, 1975; Bellack & Schwartz, 1976) suggestion that locus of control is an indirect measure of self-regulatory ability, which can be understood in terms of Kanfer's model of self-control. Without the higher levels of direction provided by a directive treatment, externals fared poorly. On the other hand, internals performed well with relatively less direction, and were able to evidence significant weight reduction in the non-behavioural, alternate condition which provided only minimal guidelines for behaviour change and weight control. In addition, too much direction was detrimental to internally oriented subjects, as reflected by the relatively poor performance of the internals in the directive condition. This latter finding is consistent with Strickland's (1978) review of research on locus of control and health-related behaviours. She observed that, when given the opportunity, internals not only

responded more positively to non-directive approaches, but reported a preference for such approaches, while externals preferred more structure. Similar preferences were reported by Wallston et al. (1976).

Further support for the suggestion that locus of control reflects self-control abilities is derived from two observations during follow-up. First, differences in weight reduction between internals and externals in the non-directive condition were most pronounced at the 6-month followup. Second, internals in the non-directive and the alternate conditions maintained their weight losses better during followup than externals in any of the three conditions (internals in the directive condition, an incongruent pairing, lost an insignificant amount of weight at posttreatment which they were unable to maintain). The above observations have been noted by others (Chapman & Jeffrey, 1979; Kincey, 1981; Ross et al., 1983; Schreiber et al., 1979). They suggest that externals may rely too heavily on the external input and guidance provided during active treatment for behaviour change and reinforcement. Once treatment ends and this input is no longer available, externals are unable to successfully maintain necessary behaviour changes. Internals, on the other hand, rely more on their own self-regulatory skills (i.e., self-reinforcement, establishment of appropriate performance contracts) during treatment, skills which they are able to continue to utilize during followup to maintain behaviour

changes. Bellack (1975) suggests that this reliance upon outside input exhibited by externals may represent an inability to effectively self-evaluate, and hence self-reinforce, critical steps in the self-regulatory process. This inability forces them to rely on external input for developing appropriate performance contracts and self-evaluation criteria.

Treatment directiveness and long-term maintenance.

Short-term weight losses incurred in programs emphasizing external control of reinforcement have often been dramatic (e.g., Harmatz & Lapuc, 1968; Jeffery, Thompson & Wing, 1978; Jeffrey, Christensen & Pappas, 1973; Moore & Crum, 1969), but long-term effectiveness has been questioned because losses have generally not been maintained following treatment (Abramson, 1973; Foreyt, 1977; Loro, Fisher & Levenkron, 1979; Stuart, 1975; Wilson & Brownell, 1980). Again, this may occur because clients become too dependent on the therapist for support and reinforcement during treatment. (Abramson, 1977; Hall, 1972; Hanson, Borden, Hall & Hall, 1976; Jeffrey, 1974a). The present results suggest that this may be true, but only for some subjects. Subjects in the most directive condition (directive behavioural), on average, were the least successful of the three groups at maintaining weight losses during follow-up, a finding consistent with the above arguments. A look at the cell means, however, indicates that this overall poor maintenance is primarily due to the poor performance of the internal subjects. Although the externals

also regained some weight, they had lost more at posttreatment, and still exhibited among the highest mean weight reduction quotients six months later of all of the subgroups. These observations suggest that highly directive treatments may only be detrimental to weight loss maintenance for those subjects who are not suited to such treatments in the first place (a point discussed earlier). As Loro et al. (1979) suggests, internals may very well find such treatments overly intrusive. On the other hand, highly directive treatments may be the only effective alternative for subjects with self-control deficits.

Treatment and locus of control main effects. The two behavioural treatments did not differ from each other on average (i.e., across all subjects). This is not surprising because both conditions were essentially identical except for the directiveness with which treatment components were presented. When locus of control was taken into account, however, the two treatments were not equivalently effective. Outcomes for each condition depended greatly upon the locus of control orientation of subjects.

The interaction between treatment and locus of control also helps to explain the non-significant main effect for the Weight Locus of Control Variable. In the present study, Weight Locus of Control did not predict performance across treatments differing in directiveness. Within treatment conditions, however, Weight Locus of Control was very useful for predicting outcomes, again

emphasizing the importance of considering both treatment and subject variables (and their interaction). These results are thus not inconsistent with previous studies which have reported a significant relationship between Weight Locus of Control and outcome (e.g., Saltzer, 1982). In those studies, however, a single treatment was examined. The inclusion of more than one treatment requires that locus of control effects be interpreted in the context of treatment variables. Failure to consider the possible interaction between treatment and locus of control can result in misinterpretation of results.

A final note regarding the Weight Locus of Control effect concerns the finding that subjects became more internally oriented following success at reducing their weight, and more externally oriented following failure. This finding is consistent with locus of control theory (Saltzer, 1982; Strickland, 1978; Wallston et al., 1976). Successful subjects experienced success at reducing their weight primarily through their own efforts, and this enhanced their beliefs that their weight was primarily internally controlled. Unsuccessful subjects, however, experienced failure to control their weight through self-directed methods, thus enhancing beliefs that their weight was beyond their control.

Success of the non-behavioural treatment. The finding that the alternate, non-behavioural treatment was as effective as the two behavioural conditions is surprising. This same manual was

found to be generally inferior to the behavioural manuals utilized in Pezzot-Pearce et al.'s (1982) study. It is unlikely that the addition of nutritional information (Canada's Food Guide) and the expansion of the activity requirements were sufficient to make the present alternate condition equally effective as the behavioural programs. None of the activity measures were significantly related to weight reduction for the alternate condition. Further, only 32.3% of the alternate subjects reported that they had utilized any of the recommendations from Canada's Food Guide. Another possibility is that the monetary deposit may have attributed partly to the success of the alternate subjects. Black and Friesen (1983) found that subjects who left a \$25 deposit were able to lose significantly more weight in a self-directed, "do-whatever-you-want" treatment than subjects who were not required to leave a deposit. Weight losses were small, however (3.4 lbs), and individual variability large.

All of the preceding explanations for the success of the alternate condition focus on treatment variables. It is also possible, however, that subject variables are responsible. One hypothesis is that in the present study, self-control ability may have been a more important factor affecting outcome than the treatments themselves. Several points support this hypothesis. First, it was primarily the internals who performed well in the alternate condition. Externals lost insignificant amounts of

weight. The average weight reduction for all subjects in the alternate condition was significant, but this was due primarily to the strong performance of the internals. In other words, even in the absence of specific behavioural recommendations, some subjects were able to effectively lose weight, presumably by virtue of their strong self-control abilities. In Black and Friesen's (1983) study (see above), large individual variability was noted, and it is possible that had locus of control been assessed, internal subjects would have also accounted for most of the success in that extremely non-directive program.

The alternate treatment condition was one in which only high self-controllers could have been expected to do well (Bellack, 1975; Bellack & Schwartz, 1976; Kanfer & Karoly, 1972). Very minimal information was provided on energy balance, diet, and activity, and practically no direction concerning diet or behaviour change was given. Subjects in the alternate condition rated their program the least directive of the three groups. Consequently, it is possible that only those possessing strong self-control skills (internals) were able to effectively utilize the program. To the extent that Weight Locus of Control reflects self-control abilities, this explanation appears valid.

Self-control in self-administered treatments

The importance of self-control skills in the present study is likely due to the emphasis on personal responsibility for change in the self-administered treatments. The bulk of past research

in this area has emphasized the importance of treatment orientation (i.e., behavioural versus non-behavioural), but has examined more traditional, therapist-administered programs which; when compared to self-administered programs, place less emphasis on self-responsibility for program implementation. The present study suggests that in self-administered programs, where self-control skills are critical, both the treatment and subject are important, and that self-control factors may be more important than the actual treatment modality.

The present study suggests the possibility of "tailoring" self-administered treatment programs to fit the individual. Such an approach would obviously facilitate the provision of cost-effective treatments for weight loss to larger numbers of individuals. One problem with "bibliotherapy" treatments is that all readers receive identical treatments whether they, as individuals, require all of the components in those packages or not. Professionally administered individual treatments are better suited to tailoring treatment to an individual's needs. This is truly an advantage, but is not necessarily the most cost-effective means of service delivery for all individuals (Pezzot-Pearce et al., 1982). This study suggests one dimension along which treatments can be tailored (directiveness) to fit one individual characteristic (locus of control orientation). Tailoring treatment directiveness to self-control abilities may in fact already be a common practice in therapist-administered

programs. For example, it is quite possible that in many cases a therapist becomes more directive with a client who exhibits difficulties implementing self-control strategies. Conversely, therapists may provide less intensive direction and promote more client responsibility for treatment with those who exhibit a lot of "initiative", "motivation", and self-direction, and who appear to have little difficulty effectively administering treatment recommendations.

Future Research

The present study clearly warrants replication, and further studies should examine the interaction between other treatment and subject dimensions. The adoption of an "interactionist" approach to the development of assessment instruments for predicting response to weight reduction programs is strongly indicated. Empirical evidence now supports the superiority of an interactional model in personality assessment (see Magnusson & Endler, 1977; Mischel, 1973, 1977; Pervin, 1978). Rather than focusing solely on trait or situational determinants of behaviour, an interactional model views subject variables, situation variables, and their interaction as all being important.

Also consistent with the personality assessment literature (Endler & Okada, 1975; Goldfried, 1977; Goldfried & Kent, 1972; Mischel, 1977; Nelsen, 1977), the present study supports the development of assessment instruments specific to weight control

for use in weight reduction research. Consistent with Saltzer's findings (1982), the Weight Locus of Control Scale successfully predicted response to treatment where more generalized measures failed. Other studies have also reported greater success for weight control specific measures compared to global or non-specific measures in weight control research (Carroll et al., in press; Klesges, 1984; also see Brownell, 1984 for a review).

Future research should also begin to examine aspects of treatments besides content, such as directiveness of presentation, style, and format. The present results demonstrate that differences in the presentation of identical treatment strategies can have a powerful effect on outcome, depending on the individual. This helps to explain some of the contradictory results that have been reported concerning the effectiveness of behavioural treatment manuals. Most of those studies utilized different manuals, but only reported that the treatments were "behavioural".

Finally, future research could replicate the present study but utilize more extreme levels of directiveness. The present study examined only self-administered manuals. It is possible to imagine much greater differences in directiveness. For example, one could compare twice-a-week individual therapist contact emphasizing external reinforcement for change to a completely self-administered correspondence program (i.e., Cameron et al., 1985). Similarly, one could examine only subjects classified as

extremely high or extremely low self-controllers, on the basis of their scores on several indices of self-control. Both approaches should result in a larger interaction effect than observed in the present study, and even greater discrepancies between the performance of congruent and incongruent treatment-subject pairings.

References

- Abramson, E. E. (1973). A review of behavioral approaches to weight control. Behaviour Research and Therapy, 11, 547-556.
- Abramson, E. E. (1977). Behavioral approaches to weight control: An updated review. Behaviour Research and Therapy, 15, 355-363.
- Agras, W. S., Ferguson, J. M., Greaves, C., Qualls, B., Rand, C. S., Ruby, J., Stunkard, A. J., Taylor, C. B., Werne, J., & Wright, C. (1976). A clinical research questionnaire for obese patients. In B. J. Williams, S. Martin, & J. P. Foreyt (Eds.), Obesity: Behavioral approaches to dietary management (pp. 168-176). New York: Brunner/Mazel.
- Balch, P., & Balch, K. (1976). Establishing a campus-wide behavioral weight reduction program through a university health service: The use and training of health service personnel as behavioral weight therapists. Journal of the American College Health Association, 25, 148-152.
- Balch, P., & Ross, A. W. (1974). A behaviorally oriented didactic-group treatment for obesity: An exploratory study. Journal of Behavior Therapy and Experimental Psychiatry, 5, 239-243.
- Balch, P., & Ross, A. W. (1975). Predicting success in weight reduction as a function of locus of control: A unidimensional and multidimensional approach. Journal of Consulting and Clinical Psychology, 43, 119.

Barnstuble, J. A., Klesges, R. C., & Terbizan, D. J. (1986).

Predictors of weight loss in a behavioral program. Behavior Therapy, 17.

Bellack, A. S. (1975). Self-evaluation, self-reinforcement and locus of control. Journal of Research in Personality, 9, 158-167.

Bellack, A. S., Glanz, L., & Simon, R. (1976).

Self-reinforcement style and covert imagery in the treatment of obesity. Journal of Consulting and Clinical Psychology, 44, 490-491.

Bellack, A. S., & Schwartz, J. S. (1976). Assessment for self-control programs. In M. Hersen & A. S. Bellack (Eds.), Behavioral assessment: A practical handbook (pp. 111-142). New York: Pergamon.

Bellack, A. S., & Tillman, W. (1974). The effects of task and experimenter feedback on the self-reinforcement behavior of internals and externals. Journal of Consulting and Clinical Psychology, 42, 330-336.

Bird, K. D. & Hadzi-Pavlovic, D. (1983). Simultaneous test procedures and the choice of a test statistic in MANOVA. Psychological Bulletin, 93, 167-178.

Black, D. R. & Friesen, J. G. (1983). Deposit money: a component in a self-directed minimal intervention program for weight control. Behavior Therapy, 14, 333-340.

- Black, D. R. & Threlfall, W. E. (1986). A stepped approach to weight control: a minimal intervention and a bibliotherapy problem-solving program. Behavior Therapy, 17, 144-157.
- Bray, G. A. (1976). The obese patient. Philadelphia: W. B. Saunders Company.
- Brownell, K. D. (1982). Obesity: understanding and treating a serious, prevalent, and refractory disorder. Journal of Consulting and Clinical Psychology, 50, 820-840.
- Brownell, K. D. (1984). Behavioral, psychological, and environmental predictors of obesity and success at weight reduction. International Journal of Obesity, 8, 543-550.
- Cameron, R., Fisher, S., Shlegel, R. P., Schumilas, T., Horlick, L., Shepel, L. F., Rogers, T., & Killen, J. (1985, November). The refinement and evaluation of a correspondence weight control program: preliminary results. Paper presented at the Association for Advancement of Behavior Therapy Annual Convention, Houston, TX.
- Carroll, L. J., Yates, B. T., & Gray, J. J. (in press). Predicting obesity reduction in behavioral and nonbehavioral therapy from client characteristics: The Bellack et al. measure. Behavior Therapy.
- Chambliss, C. A., & Murray, E. J. (1979). Efficacy attribution, locus of control, and weight loss. Cognitive Therapy and Research, 3, 349-353.

- Chapman, S. L., & Jeffrey, D. B. (1979). Processes in the maintenance of weight loss with behavior therapy. Behavior Therapy, 10, 566-570.
- Chavez, E. L., & Michaels, C. (1980). Evaluation of the Health Locus of Control for obesity treatment. Psychological Reports, 47, 709-710.
- Cohen, J., & Cohen, P. (1975). Applied multiple regression/correlation analysis for the behavioral sciences. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Dilley, D., Balch, P., & Balch, K. (1979). A comparison of strategies for behavioral obesity treatment. Journal of Behavior Therapy and Experimental Psychiatry, 10, 193-197.
- Endler, N. S., & Okada, M. (1975). A multidimensional measure of trait anxiety: The S-R Inventory of General Trait Anxiousness. Journal of Consulting and Clinical Psychology, 43, 319-329.
- Feinstein, A. R. (1959). The measurement of success in weight reduction: An analysis of methods and a new index. Journal of Chronic Diseases, 10, 439-456.
- Fernan, W. (1973). The role of experimenter contact in behavioral bibliotherapy. Unpublished master's thesis, Pennsylvania State University.
- Foreyt, J. P. (1977). Therapist reinforcement techniques: Introduction. In J. P. Foreyt (Ed.), Behavioral treatments of obesity (pp.231-234). Oxford: Pergamon.

- Goldfried, M. R. (1977). Behavioral assessment in perspective. In J. D. Cone & R. P. Hawkins (Eds.), Behavioral Assessment: New directions in clinical psychology. New York: Brunner/Mazel.
- Goldfried, M. R. & Kent, R. N. (1972). Traditional versus behavioral personality assessment: a comparison of methodological and theoretical assumptions. Psychological Bulletin, 77, 409-420.
- Hagen, R. L., Foreyt, J. P., & Durham, T. W. (1976). The dropout problem: reducing attrition in obesity research. Behavior Therapy, 7, 463-471.
- Hall, S. M. (1972). Self-control and therapist control in the behavioral treatment of overweight women. Behaviour Research and Therapy, 10, 59-68.
- Hall, S. M., Hall, R. G., Hanson, R. W., & Borden, B. L. (1974). Permanence of two self-managed treatments of overweight in university and community populations. Journal of Consulting and Clinical Psychology, 42, 781-786.
- Hanson, R. W., Borden, B. L., Hall, S. M., & Hall, R. G. (1976). Use of programmed instruction in teaching self-management skills to overweight adults. Behavior Therapy, 7, 366-373.
- Harmatz, M. G., & Lapuc, P. (1968). Behavior modification of overeating in a psychiatric population. Journal of Consulting and Clinical Psychology, 32, 583-587.
- Heiby, E. M. (1983). Assessment of Frequency of Self-reinforcement. Journal of Personality and Social Psychology, 44, 1304-1307.

- Jeffery, R. W. & Gerber, W. M. (1982). Group and correspondence treatments for weight reduction used in the multiple risk factor intervention trial. Behavior Therapy, 13, 24-30.
- Jeffery, R. W., Snell, M. K., & Forster, J. L. (1985). Group composition in the treatment of obesity: Does increasing group homogeneity improve treatment results? Behaviour Research and Therapy, 23, 371-373.
- Jeffery, R. W., Thompson, P. D., & Wing, R. R. (1978). Effects on weight reduction of strong monetary contracts for calorie restriction or weight loss. Behaviour Research and Therapy, 9, 189-199.
- Jeffrey, D. B. (1974a). A comparison of the effects of external control and self-control on the modification and maintenance of weight. Journal of Abnormal Psychology, 83, 404-410.
- Jeffrey, D. B. (1974b). Some methodological issues in research on obesity. Psychological Reports, 35, 623-626.
- Jeffrey, D. B., Christensen, E. R., & Pappas, J. P. (1973). Developing a behavioral program and therapist manual for the treatment of obesity. Journal of the American College Health Association, 21, 455-459.
- Kanfer, F. H. (1971). The maintenance of behavior by self-generated stimuli and reinforcement. In A. Jacobs & L. B. Sachs (Eds.), The psychology of private events (pp. 39-57). New York: Academic Press.

- Kanfer, F. H. (1977). The many faces of self-control, or behavior modification changes its focus. In R. B. Stuart (Ed.), Behavioral self-management: Strategies, techniques and outcomes (pp. 1-43). New York: Brunner/Mazel.
- Kanfer, F. H., & Karoly, P. (1972). Self-control: A behavioristic excursion into the lion's den. Behavior Therapy, 3, 398-416.
- Kincey, J. (1980). Target setting, self-reinforcement pattern, and locus of control orientation as predictors of outcome in a behavioural weight loss programme. Behaviour Research and Therapy, 18, 139-145.
- Kincey, J. (1981). Internal-external control and weight loss in the obese: Predictive and discriminative validity and some possible clinical implications. Journal of Clinical Psychology, 37, 100-103.
- Kincey, J. (1983). Compliance with a behavioural weight-loss programme: Target setting and locus of control. Behaviour Research and Therapy, 21, 109-114.
- Klesges R. C. (1984). Personality and obesity: Global versus specific measures? Behavioral Assessment, 6, 347-356.
- Klesges, R. C., Klesges, L. M., Swenson, A. M., & Pheley, A. M. (1985). A validation of two motion sensors in the prediction of child and adult physical activity levels. American Journal of Epidemiology, 122, 400-410.
- LeBow, M. D., & Perry, R. P. (1977). If only I were thin. Winnipeg, Canada: Prairie Publishing Company.

- Lindstrom, L. L., Balch, P., & Reese, S. (1976). In person versus telephone treatment for obesity. Journal of Behavior Therapy and Experimental Psychiatry, 7, 367-369.
- Loro, A. D., Jr., Fisher, E. B., Jr., & Levenkron, J. C. (1979). Comparison of established and innovative weight-reduction procedures. Journal of Applied Behavior Analysis, 12, 141-155.
- Magnusson, D., & Endler, N. S. (Eds.). (1977). Personality at the crossroads: Current issues in interactional psychology. New York: Wiley.
- Metropolitan Insurance Companies of America. (1983). 1983 Metropolitan Height and Weight Tables. Source of basic data: 1979 Build Study, Society of Actuaries and Association of Life Insurance Medical Directors, New York: 1980.
- Metropolitan Life Insurance Company. (1960). Frequency of overweight and underweight. Statistical Bulletin, 41, 4-7.
- Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. Psychological Bulletin, 80, 252-283.
- Mischel, W. (1977). On the future of personality assessment. American Psychologist, 32, 246-254.
- Moore, C. H., & Crum, B. C. (1969). Weight reduction in a chronic schizophrenic by means of operant conditioning procedures: A case study. Behaviour Research and Therapy, 7, 129-131.

- Nelsen, E. A. (1977). Interactional psychology: Some emerging features of an integrated scientific discipline. In D. Magnusson & N. S. Endler (Eds.), Personality at the Crossroads. New York: Wiley.
- O'Brien, R. G., & Kaiser, M. K. (1985). MANOVA method for analyzing repeated measures designs: an extensive primer. Psychological Bulletin, 97, 316-333.
- Pervin, L. A. (1978). Current controversies in personality. New York: Wiley.
- Pezzot-Pearce, T. D. (1980). Effectiveness and cost-effectiveness of behavioral self-help manuals for the treatment of obesity: A study of degree of therapist contact and group versus individual format. Unpublished doctoral dissertation, University of Manitoba, Winnipeg, Canada.
- Ramsey, P. H. (1980). Choosing the most powerful pairwise multiple comparison procedure in multivariate analysis of variance. Journal of Applied Psychology, 65, 317-326.
- Ross, M. W., Kalucy, R. S., & Morton, J. E. (1983). Locus of control in obesity: Predictors of success in a jaw-wiring programme. British Journal of Medical Psychology, 56, 49-56.
- Rozensky, R. H., & Bellack, A. S. (1974). Behavior change and individual differences in self-control. Behaviour Research and Therapy, 12, 267-268.

- Rozensky, R. H., & Bellack, A. S. (1976). Individual differences in self-reinforcement style and performance in self- and therapist-controlled weight reduction programs. Behaviour Research and Therapy, 14, 357-364.
- Saltzer, E. B. (1979). Causal beliefs and losing weight: a study of behavioral intention theory and locus of control in the prediction of health-related behavior (Doctoral dissertation, University of California, Irvine, 1979). Dissertation Abstracts International, 40.
- Saltzer, E. B. (1982). The Weight Locus of Control (WLOC) Scale: A specific measure for obesity research. Journal of Personality Assessment, 46, 620-628.
- Schreiber, F. M., Schauble, P. G., Epting, F. R., & Skovholt, T. M. (1979). Predicting successful weight loss after treatment. Journal of Clinical Psychology, 35, 851-854.
- SPSS Inc. (1983). SPSS-X User's Guide. New York: McGraw-Hill.
- Strickland, B. R. (1978). Internal-external expectancies and health-related behaviors. Journal of Consulting and Clinical Psychology, 46, 1192-1211.
- Stuart, R. B. (1975). Behavioral control of overeating: A status report. In G. R. Bray (Ed.), Obesity in perspective (Vol. 2, part 2) (pp. 367-382) (DHEW publication #75-708, National Institute of Health). Washington D. C.: U.S. Government Printing Office.

- Stunkard, A. J., & Mahoney, M. J. (1976). Behavioral treatment of eating disorders. In H. Leitenberg (Ed.), Handbook of behavior modification (pp. 45-73). New York: Prentice-Hall.
- Tobias, L. L., & MacDonald, M. L. (1977). Internal locus of control and weight loss: An insufficient condition. Journal of Consulting and Clinical Psychology, 45, 647-654.
- United States Senate Select Subcommittee on Nutrition and Human Needs. (1977). Proceedings from hearings. Washington D.C.: U.S. Government Printing Office.
- Wallston, B. S., Wallston, K. A., Kaplan, G. D., & Maides, S. A. (1976). Development and validation of the Health Locus of Control (HLC) Scale. Journal of Consulting and Clinical Psychology, 44, 580-585.
- Wallston, K. A., & Wallston, B. S. (1981). Health locus of control scales. In H. M. Lefcourt (Ed.), Research with the locus of control construct: Vol. 1. Assessment methods (pp. 189-243). New York: Academic Press.
- Wallston, K. A., Wallston, B. S., & DeVellis, R. (1978, Spring). Development of the Multidimensional Health Locus of Control (MHLC) Scales. Health Education Monographs, 6(2), 160-170.
- Wilson, G. T. (1978). Methodological considerations in treatment outcome research on obesity. Journal of Consulting and Clinical Psychology, 46, 687-702.

- Wilson, G. T., & Brownell, K. D. (1980). Behavior therapy for obesity: An evaluation of treatment outcome. Advances in Behaviour Research and Therapy, 3, 49-86.
- Yates, B. T. (1978). Improving cost-effectiveness of obesity programs: Three basic strategies for reducing the cost per pound. International Journal of Obesity, 2, 249-266.

Appendix A

Screening Questionnaire

UNIVERSITY OF MANITOBA
WEIGHT CONTROL STUDY
INFORMATION QUESTIONNAIRE AND APPLICATION

On the following pages is a brief questionnaire concerning your past weight history, and your attitudes and beliefs about weight, health and a variety of other things which have been found to be related to people's abilities to follow different weight control programs. The questionnaire takes only a few minutes to fill out.

In order to be considered for participation in our treatment program you must complete this questionnaire and return it to us at the end of this meeting. The reasons for this are simple. We must score each questionnaire, and then enter the scores into a computer. On the basis of your scores on these questionnaires we will be putting together a treatment package for you. It takes a minimum of one week to score and analyse each application, so if we waited until you actually were ready to start the program to give you the questionnaire, then you would be delayed another week while we put together your program. Some of the questions are also part of our general research and are given to everyone entering our program. We hope that the information from these questionnaires will help us to continue to improve our treatment program.

It is important to realize that your answers to the following questions will not in any way determine whether or not you are accepted into our program. Your acceptance into the program will depend only on your present weight (you must be overweight), on your medical condition (you must be healthy), on your doctor's permission, and on your own willingness to participate. As long as you meet these conditions, and we still have space in our program, then you will be accepted. So please fill out this questionnaire carefully and honestly.

NOTE: We would like you to fill out the following pages even if you are still not sure whether or not you want to join our treatment. Filling out these pages does not obligate you to join us in any way. What it will do is to ensure that if you do decide over the next few days to join our program, we will be able to start you promptly and quickly with little delay. If you decide not to join our program then your questionnaire and application will be destroyed.

Thank you for your cooperation and interest.

This is a questionnaire designed to determine the way in which different people view certain important health-related issues. Each item is a belief statement with which you may agree or disagree. Beside each statement is a scale which ranges from strongly disagree (1) to strongly agree (6). For each item we would like you to circle the number that represents the extent to which you disagree or agree with the statement. The more strongly you agree with a statement, then the higher will be the number you circle. The more strongly you disagree with a statement, then the lower will be the number you circle. Please make sure that you answer every item and that you circle only one number per item. This is a measure of your personal beliefs; obviously, there are no right or wrong answers.

Please answer these items carefully, but do not spend too much time on any one item. As much as you can, try to respond to each item independently. When making your choice, do not be influenced by your previous choices. It is important that you respond according to your actual beliefs and not according to how you feel you should believe or how you think we want you to believe.

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1. If I get sick, it is my own behavior which determines how soon I get well again.	1	2	3	4	5	6
2. No matter what I do, if I am going to get sick, I will get sick.	1	2	3	4	5	6
3. Having regular contact with my physician is the best way for me to avoid illness.	1	2	3	4	5	6
4. Most things that affect my health happen to me by accident.	1	2	3	4	5	6
5. Whenever I don't feel well, I should consult a medically trained professional.	1	2	3	4	5	6
6. I am in control of my health.	1	2	3	4	5	6
7. My family has a lot to do with my becoming sick or staying healthy.	1	2	3	4	5	6
8. When I get sick I am to blame.	1	2	3	4	5	6

	Strongly Disagree	Moderately Disagree	Slightly Disagree ^{oo}	Slightly Agree	Moderately Agree	Strongly Agree
9. Luck plays a big part in determining how soon I will recover from an illness.	1	2	3	4	5	6
10. Health professionals control my health.	1	2	3	4	5	6
11. My good health is largely a matter of good fortune.	1	2	3	4	5	6
12. The main thing which affects my health is what I myself do.	1	2	3	4	5	6
13. If I take care of myself, I can avoid illness.	1	2	3	4	5	6
14. When I recover from an illness, it's usually because other people (for example, doctors, nurses, family, friends) have been taking good care of me.	1	2	3	4	5	6
15. No matter what I do, I'm likely to get sick.	1	2	3	4	5	6
16. If it's meant to be, I will stay healthy.	1	2	3	4	5	6
17. If I take the right actions, I can stay healthy.	1	2	3	4	5	6
18. Regarding my health, I can only do what my doctor tells me to do.	1	2	3	4	5	6

WLCS

This is a questionnaire designed to help us determine how different people view their weight. You complete it exactly as you did the previous questionnaire: circle one number for each statement depending upon how strongly you agree or disagree with a statement. The numbers you circle are found under each statement.

Again, this is a measure of your personal beliefs. Please try to answer according to what you truly think or believe, and not what you think you should believe. This will help us to choose the right treatment package for you. Your answers will not be used to decide whether or not you can join our program, so feel free to answer honestly and carefully.

1. Whether I gain, lose, or maintain my weight is entirely up to me.

1	2	3	4	5	6
STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE

2. Being the right weight is largely a matter of good fortune.

1	2	3	4	5	6
STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE

3. No matter what I intend to do, if I gain or lose weight, or stay the same in the near future, it is just going to happen.

1	2	3	4	5	6
STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE

4. If I eat properly, and get enough exercise and rest, I can control my weight in the way I desire.

1	2	3	4	5	6
STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE

Below are a number of statements concerning beliefs or attitudes people have. Indicate whether the statements are characteristic and descriptive of you by circling T, if the statement is somewhat or very true for yourself. Circle F if the statement is somewhat or very false for yourself. Please be as honest as possible, and answer all questions. Thank you.

- T F 1. When I fail at something, generally I am still able to feel good about myself.
- T F 2. I can stick to a tiresome task that I need to complete for a long time without someone encouraging me.
- T F 3. I don't often think positive things about myself.
- T F 4. When I do something right, I take time to enjoy the feeling.
- T F 5. I have such high standards for what I demand of myself that I rarely meet those standards.
- T F 6. I seem to blame myself when things go wrong and am very critical of myself.
- T F 7. There are pleasurable activities which I enjoy doing alone at my leisure.
- T F 8. I usually get upset when I make mistakes because I rarely learn from them.
- T F 9. My feelings of self-confidence and self-esteem fluctuate a great deal.
- T F 10. When I succeed at small things, I become encouraged to go on.
- T F 11. Unless I do something absolutely perfect, it gives me little satisfaction.
- T F 12. I get myself through hard things mostly by planning to enjoy myself afterwards.
- T F 13. When I make mistakes, I take time to criticize myself.
- T F 14. I encourage myself to improve by feeling good about myself or giving myself something special whenever I make progress.
- T F 15. If I didn't criticize myself frequently, I would continue to do things poorly forever.

- T F 16. I think talking about what you've done is being too boastful.
- T F 17. I find I feel better and do better when I silently praise myself for even small achievements
- T F 18. I can keep trying at something when I stop to think of what I've accomplished.
- T F 19. The way I keep up my confidence is by acknowledging any success I have.
-
- T F 20. The way I achieve my goals is by rewarding myself every step along the way.
- T F 21. Praising yourself is being selfish and egotistical.
- T F 22. When someone criticizes me, my self-confidence is shattered.
- T F 23. I criticize myself more frequently than others criticize me.
- T F 24. I have a lot of worthwhile qualities.
- T F 25. I silently praise myself even when others do not praise me.
- T F 26. Any activity can provide some pleasure regardless of how it comes out.
- T F 27. If I don't do the best possible job, I think less of myself.
- T F 28. I should be upset if I make a mistake.
- T F 29. My happiness depends more on myself than it does on other people.
- T F 30. People who talk about their own better points are just bragging.

INFORMATION SHEET

NAME: _____ BIRTHDATE _____
 last first month/day/yr

ADDRESS: _____ PHONE: _____

SEX: M F (circle)

YOUR PRESENT WEIGHT (Please give your best estimate) _____

YOUR PRESENT HEIGHT _____

Please list any medical problems or conditions _____

Please list any medications you are taking now: _____

Are you now involved in any other
weight control program? YES NO

If YES to the above, please specify what weight control
program you are currently involved in:

If you are a female, are you pregnant or planning
to become pregnant within the next 8 months? YES NO (circle)

Please list the names of anyone else you know who is joining, or who
is thinking about joining our program (in other words, anyone you
know who is attending this meeting or one of our other meetings). If
possible, we will try to put you on the same (or similar) program as
your friends. That way you and your friends will be able to discuss
your programs more easily should you ever get together with one
another.

Appendix B

Weight Locus of Control Scale

Weight Locus of Control Scale

94

PLEASE ENTER TODAY'S DATE: _____

This is a questionnaire designed to help us determine how different people view their weight. Circle one number for each statement depending upon how strongly you agree or disagree with a statement. The numbers you circle are found under each statement.

Again, this is a measure of your personal beliefs. Please try to answer according to what you truly think or believe, and not what you think you should believe.

1. Whether I gain, lose, or maintain my weight is entirely up to me.

1	2	3	4	5	6
STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE

2. Being the right weight is largely a matter of good fortune.

1	2	3	4	5	6
STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE

3. No matter what I intend to do, if I gain or lose weight, or stay the same in the near future, it is just going to happen.

1	2	3	4	5	6
STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE

4. If I eat properly, and get enough exercise and rest, I can control my weight in the way I desire.

1	2	3	4	5	6
STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE

Appendix C

Multidimensional Health Locus of Control Scale

MHLC

This is a questionnaire designed to determine the way in which different people view certain important health-related issues. Each item is a belief statement with which you may agree or disagree. Beside each statement is a scale which ranges from strongly disagree (1) to strongly agree (6). For each item we would like you to circle the number that represents the extent to which you disagree or agree with the statement. The more strongly you agree with a statement, then the higher will be the number you circle. The more strongly you disagree with a statement, then the lower will be the number you circle. Please make sure that you answer every item and that you circle only one number per item. This is a measure of your personal beliefs; obviously, there are no right or wrong answers.

Please answer these items carefully, but do not spend too much time on any one item. As much as you can, try to respond to each item independently. When making your choice, do not be influenced by your previous choices. It is important that you respond according to your actual beliefs and not according to how you feel you should believe or how you think we want you to believe.

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1. If I get sick, it is my own behavior which determines how soon I get well again.	1	2	3	4	5	6
2. No matter what I do, if I am going to get sick, I will get sick.	1	2	3	4	5	6
3. Having regular contact with my physician is the best way for me to avoid illness.	1	2	3	4	5	6
4. Most things that affect my health happen to me by accident.	1	2	3	4	5	6
5. Whenever I don't feel well, I should consult a medically trained professional.	1	2	3	4	5	6
6. I am in control of my health.	1	2	3	4	5	6
7. My family has a lot to do with my becoming sick or staying healthy.	1	2	3	4	5	6
8. When I get sick I am to blame.	1	2	3	4	5	6

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree
9. Luck plays a big part in determining how soon I will recover from an illness.	1	2	3	4	5	6
10. Health professionals control my health.	1	2	3	4	5	6
11. My good health is largely a matter of good fortune.	1	2	3	4	5	6
12. The main thing which affects my health is what I myself do.	1	2	3	4	5	6
13. If I take care of myself, I can avoid illness.	1	2	3	4	5	6
14. When I recover from an illness, it's usually because other people (for example, doctors, nurses, family, friends) have been taking good care of me.	1	2	3	4	5	6
15. No matter what I do, I'm likely to get sick.	1	2	3	4	5	6
16. If it's meant to be, I will stay healthy.	1	2	3	4	5	6
17. If I take the right actions, I can stay healthy.	1	2	3	4	5	6
18. Regarding my health, I can only do what my doctor tells me to do.	1	2	3	4	5	6

Appendix D

Frequency of Self-reinforcement Scale

PLEASE ENTER TODAY'S DATE: _____

Below are a number of statements concerning beliefs or attitudes people have. Indicate whether the statements are characteristic and descriptive of you by circling T, if the statement is somewhat or very true for yourself. Circle F if the statement is somewhat or very false for yourself. Please be as honest as possible, and answer all questions. Thank you.

- | | | | |
|---|---|-----|---|
| T | F | 1. | When I fail at something, generally I am still able to feel good about myself. |
| T | F | 2. | I can stick to a tiresome task that I need to complete for a long time without someone encouraging me. |
| T | F | 3. | I don't often think positive things about myself. |
| T | F | 4. | When I do something right, I take time to enjoy the feeling. |
| T | F | 5. | I have such high standards for what I demand of myself that I rarely meet those standards. |
| T | F | 6. | I seem to blame myself when things go wrong and am very critical of myself. |
| T | F | 7. | There are pleasurable activities which I enjoy doing alone at my leisure. |
| T | F | 8. | I usually get upset when I make mistakes because I rarely learn from them. |
| T | F | 9. | My feelings of self-confidence and self-esteem fluctuate a great deal. |
| T | F | 10. | When I succeed at small things, I become encouraged to go on. |
| T | F | 11. | Unless I do something absolutely perfect, it gives me little satisfaction. |
| T | F | 12. | I get myself through hard things mostly by planning to enjoy myself afterwards. |
| T | F | 13. | When I make mistakes, I take time to criticize myself. |
| T | F | 14. | I encourage myself to improve by feeling good about myself or giving myself something special whenever I make progress. |
| T | F | 15. | If I didn't criticize myself frequently, I would continue to do things poorly forever. |

- T F 16. I think talking about what you've done is being too boastful.
- T F 17. I find I feel better and do better when I silently praise myself for even small achievements
- T F 18. I can keep trying at something when I stop to think of what I've accomplished.
- T F 19. The way I keep up my confidence is by acknowledging any success I have.
- T F 20. The way I achieve my goals is by rewarding myself every step along the way.
- T F 21. Praising yourself is being selfish and egotistical.
- T F 22. When someone criticizes me, my self-confidence is shattered.
- T F 23. I criticize myself more frequently than others criticize me.
- T F 24. I have a lot of worthwhile qualities.
- T F 25. I silently praise myself even when others do not praise me.
- T F 26. Any activity can provide some pleasure regardless of how it comes out.
- T F 27. If I don't do the best possible job, I think less of myself.
- T F 28. I should be upset if I make a mistake.
- T F 29. My happiness depends more on myself than it does on other people.
- T F 30. People who talk about their own better points are just bragging.

Appendix E

Tables of Ideal Weights used for Study

TABLE OF IDEAL WEIGHTS

1983 METROPOLITAN HEIGHT AND WEIGHT STANDARDS^a

(mid-point of medium frame only)

MEN		WOMEN	
HEIGHT (inches) ^b	WEIGHT (pounds) ^c	HEIGHT (inches)	WEIGHT (pounds)
62	136	58	115
63	138	59	117
64	140	60	119
65	142	61	122
66	145	62	125
67	148	63	128
68	151	64	131
69	154	65	134
70	157	66	137
71	160	67	140
72	163	68	143
73	167	69	146
74	171	70	149
75	174	71	152
76	179	72	155

(indoor clothing weighing 5 lbs.
and shoes with 1" heels)(indoor clothing weighing
3 lbs. & shoes with 1" heels)Note. Weights based on lowest mortality, age range 25 to 29 years.^aMetropolitan Insurance Companies of America (1983), 1983Metropolitan Height and Weight Tables. Source of basic data: 1979Build Study, Society of Actuaries and Association of Life Insurance

Medical Directors, New York, 1980.

^b 1 inch = 2.54 cm. ^c 1 lb = 0.45359 kg.

TABLE OF IDEAL WEIGHTS
 1960 METROPOLITAN HEIGHT AND WEIGHT TABLE^a
 (mid-point of medium frame only)

MEN		WOMEN	
HEIGHT (inches)	WEIGHT (pounds)	HEIGHT (inches)	WEIGHT (pounds)
62	124	58	100
63	127	59	104
64	130	60	107
65	133	61	110
66	136	62	113
67	140	63	116
68	145	64	119
69	149	65	123
70	153	66	127
71	157	67	131
72	162	68	135
73	166	69	139
74	171	70	143
75	176	71	147
76	180	72	151

Note. 1 inch = 2.54 cm, 1 pound = 0.45359 kg.

^aMetropolitan Life Insurance Company. (1960). Frequency of overweight and underweight. Statistical Bulletin, 41, 4-7.

Appendix F

1) Modified Stanford Eating Disorders Assessment Questionnaire

2) Values Survey

* _____

WEIGHT AND SOCIAL HISTORY

NAME: _____

AGE: _____

WEIGHT HISTORY

- 1) Indicate the periods in your life when you have been overweight on the following table. Where appropriate, list your maximum weight for each period and number of pounds you were overweight. Briefly describe any methods you used to lose weight, (e.g., diet pills, diet) in that five year period. Also list any significant life events you feel were related to either weight gain or loss, (e.g., college tests, marriage, pregnancies, illness).

Age	Maximum Weight	# Pounds Overweight	Methods Used to Lose Weight	Significant Events Related to Weight Change
Birth				
0-5				
5-10				
10-15				
15-20				
20-25				
25-30				
30-35				
35-40				
40-45				
45-50				
50-55				
55-60				
60-65				

- 2) How do you feel your weight affects your daily activities?
(circle one)

No
effect
(1)

Some
effect
(2)

Often
interferes
(3)

Extreme
effect
(4)

- 3) How physically active are you? (circle one)

Very
Active
(1)

Active
(2)

Average
(3)

Inactive
(4)

Very
Inactive
(5)

- 4) A number of different ways of losing weight are listed below.
Please indicate which methods you have used by filling the
appropriate blanks.

	Ages Used	Number of Times Used	Maximum Weight Lost	Comments: Length of time weight loss maintained; success failure
TOPS				
Weight Watchers				
Streamliners				
Pills				
Supervised diet				
Unsupervised diet				
Starvation diet				
Behaviour mod				
Psychotherapy				
Hypnosis				
Other				

- 5) Which method did you use for the longest period of time?

SOCIAL HISTORY

6) Please describe your present occupation:

7) Circle the last year of school attended.

1 2 3 4 5 6 7 8
Grade School

9 10 11 12
High School

1 2 3 4
College

M.A.

Ph.D.

other _____

8) Approximate yearly income. (circle one)

(1) 0 - 5,000

(3) 10,000 - 15,000

(5) 20,000 - 25,000

(2) 5,000 - 10,000

(4) 15,000 - 20,000

(6) 25,000 + above

9) Marital Status (circle one)

1) Married

2) Single, never married

3) Separated

4) Divorced

5) Widowed

10) How would you describe your spouse's weight? (circle one)

Very
Overweight
(1)

Slightly
Overweight
(2)

About
Average
(3)

Slightly
Underweight
(4)

Very
Underweight
(5)

11) Describe your father's weight while you were growing up. (circle one)

Very
Overweight
(1)

Slightly
Overweight
(2)

About
Average
(3)

Slightly
Underweight
(4)

Very
Underweight
(5)

12) Describe your mother's weight while you were growing up. (circle one)

Very
Overweight
(1)

Slightly
Overweight
(2)

About
Average
(3)

Slightly
Underweight
(4)

Very
Underweight
(5)

VALUE SURVEY

DATE COMPLETED: _____

Below you will find a list of eleven values. We would like you to arrange them in order of their importance to YOU, as guiding principles in YOUR life.

Study the list carefully and pick out the one value which is the most important for you. Write the number "1" in the space to the left of the most important value. Then pick out the value which is second most important to you. Write the number "2" in the space to the left. Then continue in the same manner for the remaining values until you have included all ranks from 1 to 11. Each value would have a different rank.

We realize that some people find it difficult to distinguish the importance of some of these values. Do the best you can, but please rank all 11 of them. The end result should truly show how YOU really feel.

- _____ A COMFORTABLE LIFE (a prosperous life)
- _____ AN EXCITING LIFE (a stimulating, active life)
- _____ FREEDOM (independence, free choice)
- _____ PHYSICAL APPEARANCE
- _____ HAPPINESS (contentedness)
- _____ HEALTH (physical and mental well-being)
- _____ INNER HARMONY (freedom from inner conflict)
- _____ PLEASURE (an enjoyable, leisurely life)
- _____ SELF-RESPECT (self-esteem)
- _____ A SENSE OF ACCOMPLISHMENT (lasting contribution)
- _____ SOCIAL RECOGNITION (respect, admiration)

Appendix G

Physician's Consent Form

PHYSICIAN CONSENT FORM

I am aware that my patient, _____
is participating in a program for obesity at the University
of Manitoba. I am aware that this program may require some
restrictions in daily calorie intake, but that daily
recommended intake would not be less than 1200 calories, and
that the program may also involve gradual increases in
physical activity. According to my knowledge, there is no
medical reason that would prevent the above patient from
participating in this program.

Physician's signature _____

Date _____

Appendix H

Attendance Contract

ATTENDANCE CONTRACT

As part of my participation in a weight control study being conducted by Mr. Joseph Rallo at the University of Manitoba, I, _____, agree to place a \$100.00 deposit with Mr. Joseph Rallo in the form of a personal cheque made out to the following charitable organization _____. This cheque will be returned to me at the 6-month follow-up assessment provided I have met all of the following attendance requirements:

- 1) Attendance at a 5-week and 10-week treatment meeting, and a 3-month and 6-month follow-up assessment meeting.
- 2) Return of all Forms and Records provided as part of my treatment package at each of the 5-week and 10-week meetings, whether these have actually been completed or not.

I understand that if I meet the above requirements, my \$100.00 personal cheque will be returned to me at my 6-month meeting. I understand that if I fail to meet the above requirements, my personal cheque for \$100.00 will be forwarded by Mr. Rallo to the charity named above. I also understand that if I cannot make a meeting, I have the option to re-schedule meetings in advance by telephoning Mr. Rallo, and that all meetings will be scheduled at a mutually convenient time. I also understand that if I must withdraw from the study for medical reasons I can do so without penalty provided I furnish proof of such medical reasons from my physician.

Signature of Participant

Signature of Therapist

Appendix I

Non-directive Treatment Manual

CLIENT SUMMARY

NAME: _____ FILE # _____
first last # -m/sc-mp

FIRST INTERVIEW WEIGHT: _____ lbs./kg

STARTING WEIGHT: _____ lbs./kg

CHECK-UP APPOINTMENTS:

The following check-up appointments have been arranged for you in order for us to monitor your progress:

5 week appointment: _____

10 week appointment: _____

These meetings will take only a few minutes (no more than about 15 minutes). You will be weighed, your various records and forms collected, and your questions answered. These meetings are very important. If you cannot make it at the above times please call us for another appointment (Joe Rallo: 237-2815 weekdays/ 489-3943 evenings and weekends).

You should bring the following materials to each of your appointments:

- 1) your manual;
- 2) used FOOD RECORDS;
- 3) used ACTIVITY RECORDS;
- 4) used BEHAVIOUR RATINGS;
- 5) completed "Post-treatment Questionnaires" (for 10 week appointment only).

Meetings will be held at:

MANITOBA OBESITY CONTROL CENTRE,
Room P-502,
Fifth floor,
Duff Roblin Building,
University of Manitoba

This is the same place where you came for our first meeting when you were weighed and given your manual.

WEIGHT REDUCTION MANUAL

Prepared by

Joseph S. Rallo

This manual is an adaptation of the following weight reduction manual:

Pezzot-Pearce, T. D. Weight Reduction Manuals. Unpublished Doctoral Dissertation, University of Manitoba, 1980.

portions of which were collected from the following sources:

1. Richard L. Hagen, Janet P. Wollersheim, and Gordon Paul, Weight Reduction Manual. In R. L. Hagen, Group Therapy versus Bibliotherapy in Weight Reduction, Ph.D. Dissertation, University of Illinois at Urbana-Champaign, 1970, Published by University Microfilms International, Ann Arbor, Michigan.
2. Pearce, J. W. Therapist Manuals. Unpublished Doctoral Dissertation, University of Manitoba, 1980.
3. Janet P. Wollersheim. Behavioural Treatment Manuals, in Catalog of Selected Documents in Psychology, 1975.

If you have any questions during the course of your program, please contact me at:

Joe Rallo,

Phone 237-2815 (9:00 a.m. - 5:00 p.m. weekdays)
489-3943 (after 5:00 p.m. and on weekends)

***Note: This manual is for the exclusive use of individuals participating in our weight control program. Reproduction of this manual, or any part of it, by any means, is not permitted without the written permission of the authors.

September, 1984

INTRODUCTION

This manual is designed to teach you to lose weight and to keep it off. It is based on behavioural principles that have been shown to be effective in initiating weight loss. The treatment is a self-control treatment and as such, will teach you principles and methods which you can apply in your own environment in order to alter your eating and exercise habits. It will be solely up to you to learn and more importantly, apply and try the various techniques suggested in the manual.

This weight reduction manual is divided into 10 weekly lessons and can be used by you on your own at home. You are required to meet only periodically with us so that we can monitor your progress. This is discussed below. It is important that you complete one lesson a week. The results will depend on you and your involvement and adherence to the program.

You will need the following additional materials. If you do not already have them, purchase them now: 1) a good calorie book ("calorie counter") - there are a variety of inexpensive ones available at nearly all bookstores or magazine stands; 2) an inexpensive kitchen scale for weighing food portions; 3) a reliable bathroom scale.

The basic aim of our program is behaviour change and not just weight change. By this, we mean that we want to see livable changes in your eating and activity habits -- changes that will remain once the program is complete. Anyone can lose weight but few can keep it off. For instance, you can lose weight by simply not eating. However, at some point you will start eating again and will likely regain the weight which you lost. However, if you should slowly change the way you eat and the way you expend energy so that the changes become part of your everyday life-style, then you will be more likely to keep the weight off once you have lost it. Because we are interested in helping you to make enduring changes in your life-style, we do not place great emphasis on large weekly weight losses. Rather we prefer to see smaller but steady and enduring weight loss. Such losses are typically in the range of one pound per week.

Over the next 10 weeks, you will be working through 10 lessons. Each lesson will discuss various principles and techniques to be used in losing weight. Each lesson will be different but will include the following parts: discussion of principles and techniques, review questions to be filled out after reading the discussion (you are free to refer back to the discussion when answering them), and various daily records which will be discussed later.

As you may have already guessed, the following program is not easy and will involve much work on your part. We can tell you what to do and to try, but it will be up to you to try everything we suggest and to discover which of these things work best for you and then to follow through and do them for several months or longer. We cannot do the program for you.

As mentioned above, although this program is designed to be used by you at home, it is still important that we meet with you periodically to evaluate your progress. Therefore, we will meet with you briefly about halfway through the program and at the end of the ten week period when we will be weighing you, collecting some of your forms, and answering any questions you may have.

It is expected that once you complete the 10 weekly lessons you will have learned about a variety of techniques aimed not only at helping with weight control, but also at helping you to continue to lose weight in the future if necessary. Just as important, we will be discussing the problem of maintaining weight losses that you achieve. Keeping weight off is as difficult, if not more difficult than losing weight in the first place. This is why we have arranged 3 follow-up meetings with you to take place over the next 12 month period (at 3 months, 6 months and 12 months). These meetings are very important for the reasons outlined above, and therefore have become an attendance requirement in order for your deposit to be returned to you. These meetings will take only a few minutes and will be scheduled at a mutually convenient time.

So, as you can see, this is a comprehensive weight control program. We are interested in seeing each one of you obtain maximum benefit from this program, and that is why it is important that we meet with you from time to time to monitor your progress. As you proceed through your lessons, you will notice that some are longer than others. Regardless of length, all require your close attention in order to lose weight and to change your eating and activity life-styles.

LESSON 1

As already mentioned, we will be concerned with slowly changing your eating and activity habits in this program. We will suggest behavioural principles to you which will be helpful in making these changes. A behavioural or otherwise called "learning" approach is necessary since your eating and activity habits which contribute to your weight problem have been learned through the years. They must be unlearned so that better habits may take their place and thus result in weight loss. Again, it will be up to you to work hard at making these changes. At first they will be difficult and will often feel artificial, but after a time they will become easier to do.

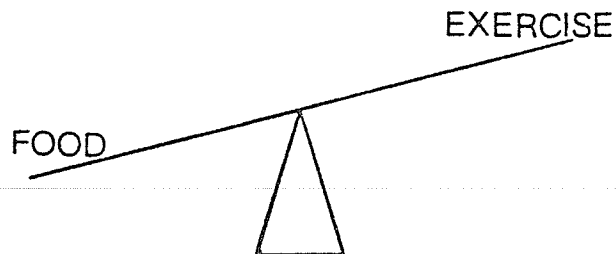
ENERGY BALANCE

Behaviour factors are not the only cause of obesity. In fact, obesity is a complex condition involving behavioural, physiological, glandular, metabolic, genetic, sociological, and economic factors. It is not exactly known how all of these factors operate and interrelate. Physical causes can seldom be found for obesity, and even when they can, they are often secondary. For most people, behavioural factors seem to be the primary causes. The real culprit in obesity is the energy balance in your body. This is the balance of the energy you take in by eating and the energy you expend in physical activity. Thus your behaviour at the table and your behaviour in physical endeavours has a direct bearing on how fat or slim you will be.

The energy in your body is measured in terms of calories. All foods contain certain numbers of calories depending upon their composition. When you take in more calories in your food than your body needs for activity, growth, cell metabolism, digestion, respiration, and so on, the body converts the unused portion to fat. Since this conversion takes place at the rate of about 3,500 calories per pound of fat, for every extra 3,500 calories you take in, you become one pound fatter. For instance, if you take in only 100 calories more than you need each day, at the end of one year you will have gained about 12 pounds. 100 calories is the equivalent of a piece of toast with a teaspoon of butter on it. Such a small difference can have a big effect over time. Energy balance is thus extremely important in both gaining and losing weight.

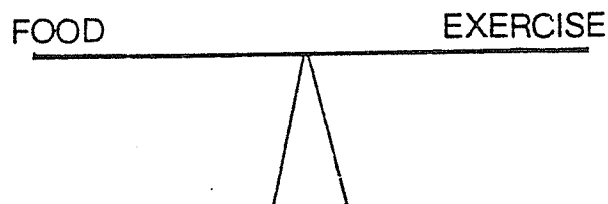
Basically three things can happen in your energy balance. First, as just described above, you can have a positive energy balance where you take in more calories than you expend or use up. This can come from either eating too much food or from reducing your usual activity. In either case the excess calories are being stored as fat and you will gain weight.

Weight Gain - Positive Energy Balance



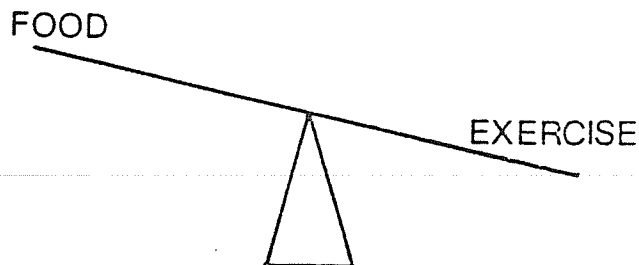
Second, you can have an energy balance where the calories you take in equal the calories you expend and where you in fact neither lose nor gain any weight. Those people who can maintain their weight at a constant level are doing nothing more than eating in such a manner that gives them enough energy for their activities yet not too much that they gain weight nor not enough so that they lose weight.

Weight Maintenance - Energy Balanced



Third, you can have a negative energy balance where you take in fewer calories than you use up through your activities. This can happen from eating less or exercising more than you usually do. In either case, over a period of time, your body will begin to use its fat stores for energy and you will lose weight and slim down.

Weight Loss - Negative Energy Balance



Right now, you are likely in a period of positive energy balance where you have been slowly gaining weight over the past years. If you have not been gaining weight but have not been losing it either, then you will be in a state of energy balance. What we want you to go into now is a state of negative energy balance where you are taking in fewer calories than you are using up. This is the aim of nearly any weight reduction scheme. In order to get you to reduce your negative energy balance state, we will be asking you to reduce your calorie intake (that is, the food you eat) and to increase your activity level. Since this is a lot to ask of you in the first week, we will begin by reducing your intake level this week and in a couple of weeks we will begin asking you to slowly increase your activity level.

CALCULATING YOUR DAILY CALORIE GOAL

Our program allows you to calculate your own personal daily calorie goal. It will be based upon your weight, so that what you eat will be determined by how much you weigh right now. In order to lose 1 to 2 pounds per week, most people find that multiplying their initial weight by 7 will give them the number of calories that they should take in daily. Thus if you weigh 180 pounds, then 180×7 gives you the number of calories you should take in daily. For someone weighing 180 pounds, then, their daily calorie intake should be 1260 calories. Of course, as you lose weight, you will have to multiply your weight by 7 in order to get your daily calorie limit so that you will continue to lose at the same rate. This re-calculation should not be necessary during the first 10 weeks of the program, unless your progress at the 5 week evaluation meeting suggests otherwise. We strongly recommend that you never reduce your intake below 1200 calories as this might cause dizziness, fatigue, and other physical symptoms. If you find that you are having trouble losing weight in the future, and you are down to the 1200 calorie level, then we suggest that you increase your energy expenditure by perhaps taking a walk during the day or going bowling, swimming, or some other activity.

By now you have probably guessed that you are going to have to calorie count. This is definitely the case. Without knowing exactly how many calories you are taking in, it is very hard to begin to develop a negative energy balance. You will also not only be recording numbers of calories, but will have to record various other information concerning your eating behaviour including time, occasion, feeling, and anything else special about the meal. Included in your manual are enough of these recording sheets to last for the 10 weeks of the program. These will be discussed in the next section.

Your Personal Meal Plan

During this program you will be guided in developing a sound, nutritional meal plan which should help you to lose weight gradually. Using the daily calorie limit which you calculated in the last section as a guide, you will plan what you will be eating each day. This will, of course, require some initial extra effort on your part, but if you apply that effort now, you will find that your meal planning becomes less of a chore as the weeks go by. What follows is a description of the food records you will be keeping, and some tips on planning your meals.

FOOD RECORDS

Your FOOD RECORDS can be found in the "Meal Plan Package" given to you along with this manual. Although the food record form looks complicated, it is not really as bad as it looks although it does become a chore to fill out. Even though it does tend to be a lot of work, filling out this form daily is a necessity as only through it can you get a complete understanding of your eating habits. This understanding is essential if changes in your eating habits are to be made.

Each food record form can be used to record up to four meals - this includes snacks. At the top you enter the day and the date. Under MEAL you circle whether the meal is breakfast, lunch, dinner, or snack (B,L,D,S). You also indicate the number of the meal in the day by entering 1, 2, 3, 4, or more. Then in each box you record the food you ate during the meal, the quantity, the calories in it, and any special preparation (for example, frying). Fill in this information for each meal before you have the meal and total the calories for the meal. As you eat each meal or snack add up the calories you have already had in the day under TOTAL CALORIES THUS FAR TODAY. This will let you know how many calories you have left to eat before you reach your limit for the day. For each meal, record the time you begin eating, your feeling (such as being tired, angry, happy, or the like), and any other comments you have to make. If you have more than four meals in a day, then use two forms labelling with the day and date and continuing the meal numbers as 5, 6, 7, and 8. An example of a filled-in sheet is on the next page. If you are ever in doubt about the calorie value of a food, it is better to overestimate its value than to underestimate it.

PLANNING

When trying to stay within your calorie limit for the day, it will help greatly if you plan what you are going to eat at the beginning of the day. You may specify the exact foods and amounts and write them down, or you may simply say that you will allow yourself, for example, 250 calories for breakfast, 350 for lunch, 500 for dinner, and 100 for snacks.

Although you are to stay within a certain calorie limit each day, we are not going to give you any special diet. Rather you are to plan your daily meals so that they are nutritious and yet are within your calorie limit. Putting the responsibility on you is a major

"SAMPLE"

124

Food Record Form

My goal today is 1050

Day Wednesday Date September 6/78

Meal <u>B</u> <u>L</u> <u>D</u> <u>S</u> #today <u>1</u>					Meal <u>B</u> <u>L</u> <u>D</u> <u>S</u> #today <u>2</u>				
	Type	Qty	Cal	Prep		Type	Qty	Cal	Prep
Food 1	grapefruit	1 med	45	fresh	Food 1	bologna	1 oz	95	
Food 2	egg	1	75	poached	Food 2	cheese	1 oz	92	
Food 3	wheat toast	1	68	toasted	Food 3	butter	1 tsp	33	
Food 4	coffee (no cream			(dry)	Food 4	wheat bread	1	68	
Food 5	or sugar)				Food 5	tea + 1 lump			
Food 6					Food 6	sugar	23		
Food 7					Food 7				
Food 8					Food 8				

Total Cal for Meal 188

Time Begin Eating 7:35

Feeling: tired

Remarks: in a hurry, late
couldn't eat slowly

TOTAL CALORIES

THUS FAR TODAY 188

Total Cal for Meal 311

Time Begin Eating 12:10

Feeling: great

Remarks: chatty and
enjoyable

TOTAL CALORIES

THUS FAR TODAY 499

Meal <u>B</u> <u>L</u> <u>D</u> <u>S</u> #today <u>3</u>					Meal <u>B</u> <u>L</u> <u>D</u> <u>S</u> #today <u>4</u>				
	Type	Qty	Cal	Prep		Type	Qty	Cal	Prep
Food 1	apple	1 med	80	fresh	Food 1	hamburger	4 oz	248	broiled
Food 2	coffee (no cream or				Food 2	potato	5 oz	92	baked
Food 3	sugar)				Food 3	green beans	1 cu	13	canned
Food 4					Food 4	lettuce	few	neg.	fresh
Food 5					Food 5	T.I. dressing		50	(2 tsp)
Food 6					Food 6	brownie	1 1/2 in.	58	baked
Food 7					Food 7	coffee	1 cu	-	black
Food 8					Food 8				

Total Cal for Meal 80

Time Begin Eating 4:30

Feeling: famished

Remarks: felt like I could eat
a horse before had

TOTAL CALORIES the apple

THUS FAR TODAY 579

Total Cal for Meal 461

Time Begin Eating 5:45

Feeling: relaxed

Remarks: nice meal as kids at
friends for a birthday

TOTAL CALORIES party

THUS FAR TODAY 1040
(10 cal under goal - great!)

part of our program. If we planned your meals for you or gave a special diet, then when we were gone, you would still not have learned how to control your own meals. It is important, however, for you to eat a well-balanced diet. For your information we have provided you with some guidelines from Canada's Food Guide. They indicate the minimum number of servings from each of the four basic food groups necessary to ensure a balanced diet. You may find this information useful in helping you to plan your meals.

As you spend time planning your meals and staying within your calorie limit, do not think of yourself as being on a "diet", a diet that you will go off of once the formal program ends! Rather make changes in the way you eat so that you can live with them for years. Thus do not say that you will never have ice cream again, but instead say that you will have ice cream only two times a week and then plan and allow for having a certain amount of ice cream on two days during your week. Planning and thinking in this way will make living much easier if you know that you can have your favorite foods but in small amounts and at fewer times.

One other note about planning. A big advantage of this program is that it allows you to choose your foods with very few restrictions, except in quantity. This means that your family can usually continue to eat what they like, only in different amounts from you. When planning your meals, you might want to involve your family in the planning. This will not only make the program run smoother all around, but can actually be a good family experience. Of course, this may not be relevant to everyone, and others may be in the habit of planning meals by themselves anyway. Whatever fits for you is fine. However, if you are not the one who usually plans or prepares the meals, then doing your meal planning in cooperation with whoever does do the planning is essential.

FOOD ENJOYMENT

While you certainly will be eating less while you are losing weight on our program, you should be enjoying the food you eat even more than you did before. It is not the purpose of the program to make eating an unenjoyable event. Rather, the aim of the program is to make eating an enjoyable event and to add to the pleasure you experience in eating by teaching you to eat on purpose like a gourmet who enjoys his or her food with all of his or her senses.

One who eats a lot and often indiscriminately, just stuffing food into one's mouth, often does not really appreciate the eating experience. By changing your eating habits you can "eat less but enjoy it more". You can learn to enjoy your food by looking at it, enjoying its color and its aroma. Most importantly, you can learn to eat slowly and enjoy each small mouthful, enjoying its texture and its taste. Get the most out of your food by chewing it thoroughly and tasting it with the left side of your tongue, then the right side, and then the back before you swallow.

Any food taken to the mouth should be taken on purpose and should be thought about and relished as it goes in. It helps to slow down.

Eat a variety of foods from each group every day

Energy needs vary with age, sex and activity. Foods selected according to the guide can supply 1000-1400 calories. For additional energy, increase the number and size of servings from the various food groups or add other foods.

bread and cereals **3-5 servings**

whole grain or enriched. Whole grain products are recommended.

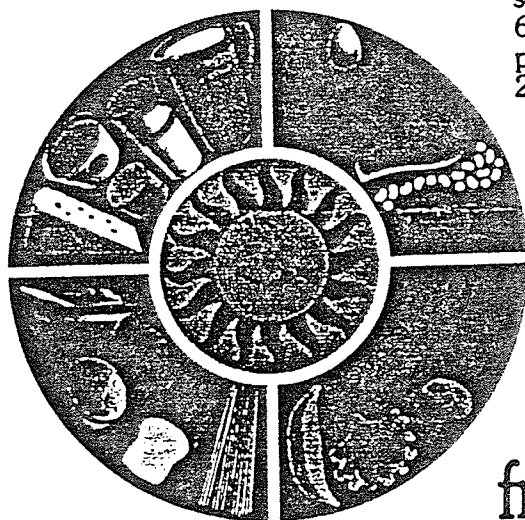
Examples of one serving

1 slice bread
125 to 250 mL ($\frac{1}{2}$ -1 cup) cooked
or ready-to-eat cereal
1 roll or muffin
125 to 200 mL ($\frac{1}{2}$ - $\frac{3}{4}$ cup)
cooked rice, macaroni,
spaghetti

meat and alternates **2 servings**

Examples of one serving

60 to 90 g (2-3 ounces) cooked lean
meat, poultry, liver or fish
60 mL (4 tablespoons) peanut butter
250 mL (1 cup) cooked dried peas,
beans or lentils
80 to 250 mL ($\frac{1}{3}$ -1 cup) nuts or
seeds
60 g (2 ounces) cheddar,
process or cottage cheese
2 eggs



milk and milk products

Children up to 11 years	2-3 servings
Adolescents	3-4 servings
Pregnant and nursing women	3-4 servings
Adults	2 servings

Skim, 2%, whole, buttermilk, reconstituted dry or evaporated milk may be used as a beverage or as the main ingredient in other foods. Cheese may also be chosen.

Examples of one serving

250 mL (1 cup) milk, yoghurt or
cottage cheese
45 g (1 $\frac{1}{2}$ ounces) cheddar or
process cheese

In addition, a supplement of
vitamin D is recommended
when milk is consumed
which does not contain
added vitamin D.

fruits and vegetables **4-5 servings**

Include at least two vegetables.

Choose a variety of both vegetables
and fruits — cooked, raw or their juices.
Include yellow or green or green leafy
vegetables.

Examples of one serving

125 mL ($\frac{1}{2}$ cup) vegetables or
fruits
125 mL ($\frac{1}{2}$ cup) juice
1 medium potato, carrot,
tomato,
peach, apple, orange or
banana

That is one of the secrets to full enjoyment of eating. There are several procedures which can help you learn to eat more slowly in order to enjoy your food better. Some of these are (1) taking small mouthfuls, (2) chewing food thoroughly before swallowing, (3) laying down silverware after each bite and only picking it up after chewing and swallowing. You can probably think of a few more yourself. The main point is to slow down and enjoy! What we would like you to do this week is to try three new behaviours for slowing down and enjoying your food more, and see how they work for you. You can try the three above examples, or some which you think up yourself. At first, doing them may seem rather artificial, but do not let this stop you. Try them, for only by trying will you be able to lose weight.

Because it is important for us to know which of our suggestions you find useful, each day you will rate how much you followed the behavioural recommendations for that week. Each week these recommendations will change. The Behaviour Rating Form is fairly straightforward. It includes the examples we gave above for slowing eating, if you decide to try those ones, and some extra space in case you think of some of your own.

You have now read the basic part of Lesson 1 and it is now up to you from here. First, answer the review questions to see what you got out of the preceding discussions. The questions are by no means comprehensive but do hit on some of the main points in the lesson. Then decide your daily calorie allotment and begin planning to meet it and start keeping daily records of everything you eat on the FOOD RECORD FORM. Remember to save your used FOOD RECORDS, as we will be collecting them at each of our meetings. Finally, at the end of each day, rate how you were able to follow the specific recommended behaviours for this week. This should keep you busy for the week and help you get into the program. Remember, it is up to you as to how well the program will work for you. If you do not expend the necessary amount of work, you will not lose weight.

WEEKLY WEIGH INS

One final thing which we would like you to start this week is a weekly weigh in and recording of your weight. In order to get accurate weights, it will be necessary for you to use a fairly reliable bathroom scale. Then, weigh yourself once a week (usually on the last day of the week for each of your ten weekly lessons) in the following way. Always weigh yourself at the same time of the day on the scale, which you will place on a level, non-carpeted floor. Always place the scale in exactly the same place (mark the floor with tape if necessary) and try to wear the same amount of clothes. When you obtain your weight, then enter it on the sheet which follows along with the date, whether you gained or lost during the week, how much you gained or lost for the week, and your total change from the beginning of the program. It may be a good idea to take this sheet out of the manual and post it somewhere so that you may refer to it and not forget to weigh yourself once a week. Do not weigh yourself more than once a week as your weight will fluctuate on a day-to-day basis and you may become discouraged if you should go up a tiny bit on a day or two during the week.

Also, weight loss usually does not proceed evenly, and some weeks may show more loss than others even though you have followed the program just as well on each of the weeks. Do not become alarmed. If you follow the program closely and stick to your calorie limit, you should lose weight at a fairly even average pace.

[illegible]

REVIEW QUESTIONS - LESSON 1

You are to answer the questions below as clearly as you can in the space provided. Feel free to go back to the material in the lesson if you do not remember an answer.

1. What is the real culprit in obesity and how can it be changed so that people begin to lose weight? _____

2. About how many calories more do you have to burn up than take in in order to lose one pound of fat? _____

3. In order to lose about 1 to 2 pounds per week, I should reduce my calorie intake to how many calories? (Hint: Weight x 7) _____
I plan to set my daily intake goal at _____ calories.

4. Why must you keep good records of your calorie intake?

5. Why should you not think of yourself as being on a diet?

6. What should be the place of "eating pleasure" in the life of a person involved in this weight reduction program? _____

7. List four habits that you can establish which will help you to enjoy your food more. _____

BEHAVIOUR RATINGS - LESSON 1

For each of your behaviours which you are to rate this week, there are seven boxes, one for each day of the week. They are labelled with the first letter of the day's name. Each day award yourself a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you were able to do that behaviour during the day. At the end of the week, add up how many total points you earned for all behaviours and for all days combined. You can try the three behaviours suggested below, or some of your own ideas for slowing down and enjoying your food more. REMEMBER, FOR THIS WEEK TRY ONLY 3 NEW BEHAVIOURS.

	S	M	T	W	T	F	S
1. I took small mouthfuls.	___	___	___	___	___	___	___
2. I chewed my food thoroughly before swallowing.	___	___	___	___	___	___	___
3. I laid my silverware down after each bite and only picked it up after chewing and swallowing.	___	___	___	___	___	___	___
Other: _____							

Other: _____							

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

LESSON 2

You have now kept food records for a week. Were you amazed at how fast those calories add up? Now you know where those pounds have been coming from! As you continue to keep track of your food intake, you will become aware of when and how much you eat so that you will be able to know when to stop. Without knowing when or how much you eat, you would not be able to exert control over your eating behaviour.

SHAPING OF BEHAVIOUR

After a week of trying to stay below a calorie limit, you may at times be thinking "Oh, what's the use? I can't just change everything at once". Do not become alarmed - we do not want to see you change everything at once. If you try to change everything at once, you will likely fail. Instead we are going to teach you about shaping or making small livable changes in your behaviours. Shaping is a word which has particular relevance for this program. It refers to small yet realistic changes in behaviour. Shaping is a process of gradual change, with each change more closely approximating or becoming like the desired end behaviour.

Your task is to establish patterns of eating and activity which will lower your weight and then later maintain your weight at a desirable level. If you attempt to change these patterns overnight, the chances of failure are greater than they would be if you make these changes in small but realistic steps. Sure, it would be nice to lose five pounds in one week. To do this, you might have to live on 200 calories a day. But living on 200 calories is nearly impossible and you would soon get so discouraged with such a diet that you would give it up and gain back all the weight the next week - the end result would be nothing accomplished.

So begin by setting realistic goals for yourself. Decide that you will meet these goals. After having success on these goals, then go on to goals which require more self-control. Here are some concrete ways to get started using shaping to help you lose weight:

1. Set goals only for each day and each moment. That is, set short-term goals something like this - I won't have any snacks this morning, or, I will not eat chips when I am watching television tonight. Setting these kinds of goals will make you more likely to succeed rather than if you say that you will not have any snacks all week.
2. List situations in which you eat most often and cut out eating in some of these situations, first concentrating on situations in which it will be easiest not to eat. The food records you keep will provide a great deal of assistance in this procedure.
3. Before attending social events, determine beforehand just how much you will eat (for example, only 12 peanuts and 1 coke, only 2 glasses of wine).

4. List the situations in which you eat less and further decrease and finally eliminate eating in these situations altogether (for example, no refreshments at movies or ball games).
5. Limit between meal eating to certain specific foods. For example, afternoon coffee snacks can be limited to diet cola or coffee with an artificial sweetener. When you go out with others to have a snack, you can order a salad or a dish of fruit. If a place does not have diet pop, order a regular beverage and drink only half of it. Waste the 25 cents - it is better to do that than be fat. Also before you go, think about how many calories you can take in without going over your calorie limit and plan for the day.
6. List the activities and situations in which you do not eat and then do these activities more often (for example, if you tend not to eat when you are bicycle riding, then bicycle ride more often).
7. Control between meal snacking by gradually lengthening periods of abstention, working first with the periods of the day that cause the least difficulty in temptation to overeat. When you have succeeded in abstaining for a specific length of time, allow yourself some kind of reward. If the reward is food, the kind and amount would be decided ahead of time.

If you should have a bad meal or a bad day where you just cannot stay within your calorie limit, do not let that blow the whole program. Such things do happen once in a while. Whatever you do, do not let that make you give up. If you do overeat at a particular time, return to working with the techniques as soon as possible. Usually one indiscretion will not destroy your weight control program. Failure occurs when you let one indiscretion lead to another indiscretion and another and another. Setting small goals will help prevent this cycle by making it easier for you to be successful at each step.

CONTROLLING STATE OF DEPRIVATION

As you move along in the program and become more aware of the times and situations in which you eat, you may notice that there are times when you feel more hungry and times when you feel less hungry. You can use these fluctuations in your feelings of hunger to your advantage. For instance, you can arrange to have highly desirable foods available only when hunger is low. For example, eat desserts only at the end of a meal when you are full. Conversely, allow yourself only less desirable foods when hunger is high as in having Rye-Krisp only for between meal snacks. Also you can anticipate situations in which you will be highly tempted to overeat. Before you go into the situations, you can reduce your hunger just enough to get you through them successfully. For instance, if you know that you are going to a party, then you may have 6 ounces of juice or milk so that you will not be as hungry when you get there and, therefore, will not overeat. Also, if you find yourself eating a lot when you are cooking a meal, then have a light snack before you start cooking and you will taste less.

It is important too, to not limit your calorie intake too much (and not below 1200 calories). If you do, you will lose weight too fast and produce a level of deprivation which will then make you want to eat even more. If your self-control is still not well developed, you will start to eat more and defeat the whole purpose of your calorie restriction. Also, do not limit your diet to one specific food such as protein because this will make your craving for other foods higher. A well-balanced diet is best since it will satisfy your hunger the most.

In all then, control your hunger and let it work for you. Do not let yourself get excessively hungry since this will make it very difficult for you to control your eating when you do get into a tempting situation. One way to help control hunger is quite simple - have your meals on a regular basis. In fact, this is one of the behaviours which we would like you to try this week. We would also like you to try setting at least one short-term goal concerning your eating each day and additionally pick out one situation in which you seem to have a lot of problems with eating and try to change it using shaping. One might be eating while watching television. Looking over your food records for the week might help you find a problem situation if you cannot think of one offhand.

Other things which you must do this week include answering the review questions, filling out the food records, filling in the behaviour ratings, your weekly weigh in, and making a graph of your weight. Your graph is started for you on the next page and shows your first interview weight and your weight just before you began the program. Each week draw a dot for your weight at the right place and join the dots week by week to see how you are doing weight-wise. It might be good if you posted your chart somewhere where you can see it every day.

We will want you to do one other thing this week and that is to have someone else in your household become a little bit involved in your program. They are not to do the program with nor criticize the way that you are doing in the program. Rather they are to help with the behaviour ratings. We want you to ask someone in your house to rate how frequently they think that you are able to do the behaviours we ask of you each day. Their form is exactly the same as yours. When both of you are filling in your ratings, do not do this together. Rather you fill in yours and they fill in theirs. This is a little check for our purposes so that we may have some idea as to how other people see you as trying the different things that we suggest. It is not intended to show that you are being good or bad because it is entirely up to you as to how closely you will follow our recommendations. If you want to lose weight, you will follow them closely. If you do not want to lose weight, you will not follow them as much.

REVIEW QUESTIONS -- LESSON 2

You are to answer the questions below as clearly and as briefly as you can in the space provided. Feel free to go back to the material in the lesson if you do not remember an answer.

1. Why will "shaping" be an important concept for you to use in this weight reduction program?

2. List three concrete ways in which you can use shaping which you think may be particularly helpful in your own situation. (Then try to use them during the coming week)

3. What are two ways in which you can let your hunger work for you?

4. Before going into a situation where I know that I will be highly tempted to overeat, what should I do?

BEHAVIOUR RATINGS - LESSON 2

I rate myself:

Each day award yourself a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you were able to do that behaviour during the day. At the end of the week, add up how many total points you earned for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. I ate each meal on a regular basis.	—	—	—	—	—	—	—
2. I was able to set at least one short-term goal today.	—	—	—	—	—	—	—
3. I was able to use shaping today on my problem situation which is _____	—	—	—	—	—	—	—

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 2 (HELPER)

Each day award your friend a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you think your friend was able to do that behaviour during the day. For each of your friend's behaviours which you rate this week, there are seven boxes, one for each day of the week. They are labelled with the first letter of the day's name. Award the points at the end of each day and do not wait until the end of the week to write them down. Please do it daily. It only takes a minute. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend ate each meal on a regular basis.	—	—	—	—	—	—	—
2. My friend was able to set at least one short-term goal today.	—	—	—	—	—	—	—
3. My friend was able to use shaping on his or her problem situation.	—	—	—	—	—	—	—

Total points for the week —

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

Note: You will be asked to rate different behaviours for nearly all of the remaining lessons. We appreciate your help. Also, when you make your ratings, do not do them in collaboration with your friend in the program although you may inquire at the beginning of the week as to what the problem situation is that your friend is working on. Do not criticize how your friend is following the program or nag him or her either, as this may harm his or her weight reduction attempts. Thank you again for your help.

LESSON 3

You are now two weeks into our program. How are you doing? Is it getting easier to think out your day and plan ahead of time for each day so that you can better deal with situations in which you are likely to be very tempted to overeat? Are you able to make at least one short-term goal each day (sometimes even more than one) and to use shaping in problem situations? Can you use fluctuations in your hunger to your advantage and are you slowing down and enjoying food more? By no means do we expect you to be a master at doing all of these things yet. However, we do expect you to be thinking about them, reviewing them, and trying them often so that they will become natural behaviours for you to do. It is a lot of work but it pays off.

STIMULUS CONTROL OF BEHAVIOUR

By now you may have been noticing specific patterns in your eating patterns because you have been carefully watching everything you eat and recording it down. Perhaps you may have noticed that you only eat when you are in the kitchen. More likely, however, it is probably the case that you have noticed that you eat in many different places and at different times. In fact, you may have noticed that you are irresistibly drawn into overeating when you are in such places as a pizza place, a shopping mall and are walking near the hot dog stand, or are outside your house and the Dickie-Dee ice cream boy comes around. The control that such situations have over your hunger (either real or imagined) is almost amazing and indeed psychologists have a name for it which is stimulus control. This simply means that whenever you are in the presence of a certain stimulus (it can be a situation, a person, or a certain time of the day), a certain behaviour is more likely to take place than if you were in a different situation. The stimulus seems to control the behaviour which in your case is eating. You must note, however, that the control is never totally complete and that by exerting your own willpower, and by using the techniques outlined in this program, you can lessen the control of the stimulus.

The important thing about stimulus control is that you can turn it around and use it in several ways so that instead of making you eat, it can help you stop or not even start eating in certain situations. One way you can use stimulus control is to narrow the range of the stimuli in your environment which have been associated in the past with eating. As these stimuli become less frequent in your life, you will find yourself eating less. Let us outline some examples which will give you ideas on how to narrow the range of eating stimuli in the environment. If you find that you cannot pass up the ice cream stand on the way home from shopping, then take a different route home so that you will not see it. Money is often an important stimulus for buying food. Therefore, do not carry money with you unless you are specifically planning to make a purchase. No money, no unplanned-for food. Also, the presence of food is often a strong stimulus for eating. Consequently, do not keep tempting, fattening foods around such as desserts, candy, chips, or pop.

To many people, eating has become strongly associated with such stimuli as watching television, reading, watching a movie, etc. You can eliminate the control that these situations exert over your eating by making eating a distinctive process - a "pure activity". When you eat, you should do that and nothing else. Remember what was pointed out to you in Lesson 1 about eating like a gourmet. You should fully enjoy the sight, smell, texture, and taste of your food. You can do this properly only if you separate eating from all other activities. For example, you can specify that you will never eat unless you are sitting at a table. Or, you may want to specify that eating can occur only in certain places, for example, in the dining room or kitchen but not in the living room. By specifying the stimuli under which you will allow yourself to eat, you will find that you are less tempted to eat under other circumstances. Limiting eating to only certain situations as just described is a second way of having stimulus control work for you. You may also do some things such as limiting snacks to very specific foods such as apples, vanilla wafers, celery sticks or carrot sticks. If you plan that you can only have certain things then it will be easier to refuse the temptation to have other things.

Generally, if a situation is a particular problem, just avoiding it is a very effective method of stimulus control. However, there are some situations which you just cannot avoid. To handle these you can use stimulus control in a third way. Here you must systematically change your normal behaviour in the situation, eating, to another behaviour. For instance, if you always eat when you go to a friend's house for coffee, then take along some knitting so that your hands are busy and you are less likely to eat. Or, if coffee break at work presents a problem, do not go for coffee but take a 10 minute walk instead.

At this point, it would be good to remind you again of the principle of shaping which was introduced in the last lesson. The excess stimuli which have become associated with eating in your life do not have to be cut out all at once. We would like you to start by making eating a "pure activity". During the next week you should try to eat only in a very specific spot and without engaging in other activities such as watching television, reading, or the like. You are to eat and that is all you are to do. You may, however, talk as much as you like to others who are eating with you at the table and are to enjoy your food as much as possible. You will be recording the frequency with which you are able to do this on your behaviour rating scale.

FOOD BUYING STRATEGIES

Since many problems with overeating stem from availability and handling of food in a home, we will deal over the next few lessons with concrete ways in which you may change your habits about buying, storing, preparing, eating, and cleaning up after meals in your home. We will begin with the buying of food this week. Since just having certain foods in your home can be a powerful stimulus for eating (just talked about under stimulus control section), then the

buying of food becomes an important step where you can start controlling the stimuli for eating. If you do not buy certain foods, you will not eat them. Buying food is the first step in the whole process of eating and your buying habits will greatly affect your eating habits. Following are six ways which may help you limit the amount of food that you buy:

1. Buy groceries from a shopping list. You will be less likely to buy things that you did not plan for.
2. Prepare your weekly shopping list after a meal. Your hunger will not have as great an influence on what you think you need to eat.
3. Do grocery shopping after a meal. Your lessened hunger will make you less likely to buy food which is not on your list.
4. Buy groceries once a week or at least on a regular basis. You will be less likely to buy things when you are hungry and if you do not shop as often you will not see the foods which you might be tempted to buy as much.
5. Buy food for specific meals and try to buy just enough so that leftovers are minimized. If you do not have leftovers, you will not be tempted to eat them. Your planning skills are very important here.
6. Buy food that requires at least some preparation. You will be less likely to be tempted to snack on it.

The above are some helpful ways of limiting the amount of food you buy. Even though you may already be doing some of these things already, you might want to try some or all of the above suggestions this week, or some others that you may think of on your own. You will be rating how often you tried some or all of the above suggestions each day this week. Your helper will also have to rate how frequently he or she thinks you were able to do these behaviours and how frequently you were able to make eating a pure activity each day for the following week.

For this week you have these things to do: answer the review questions, fill out the food records, fill out behaviour ratings daily (both you and your helper), have your weekly weigh in, and enter this week's weight in your graph. Always have your weekly weigh in on the same day each week. Since this manual is yours to keep, feel free to write notes in it or mark sections that you find are particularly useful to you in your weight loss attempts.

REVIEW QUESTIONS - LESSON 3

You are to answer the questions below as clearly and as briefly as you can in the space provided or on the back side of the page if you need it. Feel free to go back to the material in the lesson if you do not remember an answer.

1. What is meant by "stimulus control of eating behaviour? _____

2. What are three ways in which you can use stimulus control to your advantage so that instead of making you eat, it can help you to not eat? _____

3. Buying food is the first step in the process of eating. Briefly list ways in which you can change your food buying habits so that you do not buy food that you do not need. _____

BEHAVIOUR RATINGS - LESSON 3

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week. IMPORTANT: Because it is important that you not try to change too many things at once, please LIMIT THE NUMBER OF NEW FOOD BUYING STRATEGIES TO ONLY 6. So, if you think of some others yourself, do not do them plus all 6 of our suggestions, do only 6 altogether (plus making eating a pure activity).

	S	M	T	W	T	F	S
1. I made eating a "pure activity".	___	___	___	___	___	___	___
2. When I bought food, I bought groceries from a shopping list.	___	___	___	___	___	___	___
3. I prepared the weekly shopping list after a meal.	___	___	___	___	___	___	___
4. I did grocery shopping after a meal.	___	___	___	___	___	___	___
5. I bought groceries according to a schedule.	___	___	___	___	___	___	___
6. I bought food for specific meals and bought just enough to minimize leftovers.	___	___	___	___	___	___	___
7. I bought food that requires at least some preparation.	___	___	___	___	___	___	___
Other: _____	___	___	___	___	___	___	___
Other: _____	___	___	___	___	___	___	___

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 3 (HELPER)

My helper rates me:

Each day award your friend a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined. If your friend has thought up some additional behaviours, please be sure to ask him or her what they are at the beginning of the week, and write them in below beside "other".

	S	M	T	W	T	F	S
1. My friend made eating a "pure activity".	_____	_____	_____	_____	_____	_____	_____
2. When my friend bought food, he/she bought groceries from a shopping list.	_____	_____	_____	_____	_____	_____	_____
3. My friend prepared the weekly shopping list after a meal.	_____	_____	_____	_____	_____	_____	_____
4. My friend did the grocery shopping after a meal.	_____	_____	_____	_____	_____	_____	_____
5. My friend bought groceries according to a definite time schedule.	_____	_____	_____	_____	_____	_____	_____
6. My friend bought food for specific meals and just enough to minimize leftovers.	_____	_____	_____	_____	_____	_____	_____
7. My friend bought food that requires at least some preparation.	_____	_____	_____	_____	_____	_____	_____
Other: _____	_____	_____	_____	_____	_____	_____	_____
Other: _____	_____	_____	_____	_____	_____	_____	_____

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

LESSON 4

PLANNING PROBLEMS

By now you must be getting pretty used to planning or at least trying to plan your food intake and manage situations which have been problems in the past or situations that come up unexpectedly. How do you think you are doing? Do not be alarmed if your days still do not work out as perfectly as you plan them. It usually takes a while before you can handle every situation that comes up. Right now it is especially important to look at the cases in which your plans do not seem to work. Keep an eye out for situations in which you just cannot seem to follow your plan and try to see what is happening. For instance, are there situations that come up unexpectedly for which you just have no more calories available in your limit? You might handle this by setting up a slush fund in which you allow 100 to 200 calories a day in your plan for such unexpected situations as maybe an unexpected visit from a friend or a drink out with your friends - anything which you cannot anticipate beforehand.

Another situation that sometimes poses problems in your plans is an invitation to a wedding or a wine, cheese, and lots of other goodies party. You might get around this by purposely planning to have 100 or 200 calories (no more) than your limit on that day and then reduce your intake by 100 the day before and 100 the day after to make up for it. Certain friends may also make your plans very hard to follow by always insisting that you eat and then making you feel guilty if you refuse. You might help this situation by simply but forcefully stating that you are watching your calories and just cannot have the food. Tell them that they are free to eat but that you would much appreciate it if they would not try to get you to eat too. Plans may also be too hard to follow if you are taking too big of steps in your shaping process. Are you setting goals that are just impossible for you to meet, at least at your present stage? Maybe you should set your goals a little lower and try to take smaller steps. Just remember, when your plans just do not seem to work, stop and analyze the situation so that you can see what is going wrong and how you can change it so that things go right.

REWARDING YOURSELF

The reason that many weight control programs fail appears to be largely because the rewards of weight reduction come very slowly while food is immediately rewarding because of the taste and other things. As long as the reward value of the food overpowers the rewards that come so slowly with weight reduction, then it is likely that food will win out and you will overeat. It is, therefore, necessary that you find rewards that you can give to yourself when you do behaviours that lead to weight loss.

You may set up short-term contracts with yourself so that you will reward yourself when you do a behaviour that leads to weight loss. Here are some examples, but try to make up contracts that mean the most to you: If you have a salad for lunch, then let yourself read a good book for an hour in the afternoon; If you can eliminate

all evening snacking this week, then you will allow yourself a piece of pizza at the party on Saturday night; or If you keep all of your lunches under 300 calories this week, then you will go shopping on Thursday morning. You may also set up longer-term contracts that will sometimes involve another member of the family or a friend. You may get your husband or wife to take you to a movie minus the children after you have lost 10 pounds, or you might treat yourself to dinner out after every 10 pound weight loss. You must be very careful in rewarding yourself with food treats. If these treats are not carefully planned for in your calorie limit for each day, your food rewards might work against your program. In general, however, if you are very careful in planning your intake you should be able to plan these rewards right into your program.

Another way in which you can use self-rewards which helps greatly in your weight loss attempts is to develop reinforcements which remove you from situations in which you are tempted to eat. It is good to substitute non-eating behaviours into situations where you normally would eat, but it is even better to substitute non-eating behaviours that you really like to do. If you tend to watch television and eat on Friday nights, you can arrange to go to a movie or a hockey game or something that you really enjoy (You decide that you will not eat while you are there of course).

ACTIVITY INCREASE

By now you must be wondering whatever happened to the activity part of our program. Well, it is finally here and if you are like most people who are trying to lose weight, you probably let out a big groan and said "Oh no!". Do not worry. We are not going to have you out jogging daily or whatever other horrible things you can dream up. Instead, you are going to use shaping to slowly increase your activity level. Try to pick activities that you like or that you think you may like. If you learn to do enjoyable activities, they will become part of your life. If you pick activities that you do not like, then you most surely will quit them as soon as the program is over. Just as in planning changes in your eating behaviour, you must plan for changes in your activity habits that you can live with for the rest of your life. So be careful and plan for changes that are liveable and even enjoyable.

Many people think that they should not exercise because: 1) they think that physical activity has little effect on energy output; 2) and that whatever effect it does have on increasing output, is outweighed by the increased food intake that accompanies increased activity. Both of these beliefs are false. Physical activity does indeed have an effect on energy output. This has been measured both directly and indirectly and can be translated into how much of an activity is needed to burn a pound of fat. For example, moderate walking for 36 hours will burn one pound of fat. This might seem hopeless but remember that the 36 hours does not all have to be at one time. Walking one hour per day will give you 30 to 31 hours a month which will be almost one pound burned. Over one year this will add up to almost 10 pounds. Another example is swimming. One hour of swimming is approximately 670 calories in energy expenditure.

This means that 5 hours of swimming will add up to one pound. On a regular basis this can contribute significantly to energy output and weight loss.

Because these seemingly small amounts of exercise do add up, rather small changes in our daily habits can have a great effect on weight control. Remember that brisk walking one hour daily will take off approximately 10 pounds in one year and that the converse holds true too - if you usually walked one hour daily and then quit, you could gain 10 pounds in one year just from that small change. By adding or subtracting one hour of brisk walking daily, you really do not alter your appetite enough that it would affect how much you ate. You probably would continue to eat the same amount as before.

The second false belief that most people have is that physical activity increases food intake. There is a small amount of intake increase with activity but only to certain points. Above the normal range of activity, exhaustion occurs and both appetite and food intake go down. This is not a stable state and cannot be endured for too long. Below the normal range is the sedentary range. Here even though activity is decreasing, food intake stays the same and may possibly even increase. The best way then to use activity in weight loss, is to increase your activity slowly in little progressive steps. Do an amount that makes you work a bit but not so much that you get really played out. Start activities that you will enjoy and can do regularly. Calisthenics usually is not much fun and only lasts for a few days. Walking, swimming, cycling, cross-country skiing, are much more enjoyable and are especially good if you can get others to do them with you. They can become social events and thus will be more likely to remain in your lifestyle.

Over the next week, we would like you to slowly begin increasing your activity. Again, we would like you to keep records of these extra activities just as you keep record of your food intake. Remember that we would like you to keep track of the extra activity which you do which is over and above that which you normally do. A sample activity sheet is on the next page. The sheet is much easier to fill out than the food record form. You are to enter the day and date in the left hand margin and then in the boxes indicate what activity you did on that day, how many minutes, and how many calories you expended. At the bottom, add up the total number of extra calories you burned up in these activities for the whole week. On the page following is a listing of common expenditures for various activities. Use these in computing how many calories you burn up. The figures in the table are for a 150 pound person. If you weigh more or less than this, you will have to make some small adjustments in the calories you compute. For each 15 pounds that you are over 150 pounds, add 10% to your calorie score. For each 15 pounds that you are under 150 pounds, subtract 10% from your calorie score. These adjustments are made simply because it takes more calories to move around more weight, and less calories to move around less weight.

"SAMPLE"

ACTIVITY RECORD

Day/Date	Activity	Minutes	Calories Used
Wed. Sept. 6	Walking (5 calories)	10 minutes	50
Thurs. Sept. 7	None		
Fri. Sept. 8	Dancing (4 calories) (out for three hours but maybe danced only 30mins.)	30 minutes	120
Sat. Sept. 9	Walk to store (3.5 calories) (there and back)	6 minutes	21
Sun. Sept. 10	Bicycling with husband (5 calories)	20 minutes	100
Mon. Sept. 11	None - tired		
Tues. Sept. 12	Walk (5 calories) (with sister who is on on diet too)	20 minutes	100

Total Calories Used for Week 391

Goal for Week - 350 calories

Remarks: Those walks paid off!

CALORIE EXPENDITURES FOR PROLONGED ACTIVITIES

Type of Activity	Approximate Calories Used Per Minute by a 150 lb. Person*
Aerobics	
Moderate pace	7
Fast pace	10
Badminton	6
Baseball	5
Basketball	
Moderate play	7
Fast play	9
Biking	
Leisure (5 m.p.h.)	5
Fast (13 m.p.h.)	11
Bowling	4
Calisthenics	
Moderate	7
Fast	10
Canoeing	
Slow/leisurely (2.5 m.p.h.)	3
Faster (4 m.p.h.)	7
Dancing	
Moderate	4
Moving Fast	6
Square	8
Football	9
Gardening	
Light	4
Heavy	7
Golf	
Foursome	4
Twosome	6
Ice Skating	
Slow to medium pace	7
Fast pace	10 (plus
Jogging	(see Running)
Lawn Mowing	4

ACTIVITY LIST - CONTINUED

Ping-pong (table tennis)	4	
Roller-skating		
Slow - moderate	7	
Fast	10	
Rowing a boat	10	
Running		
Take your time jog (5 m.p.h.)	10	
Faster pace (7.5 m.p.h.)	15	
Really moving (10 m.p.h.)	20	
Stationary Cycling		
Moderate speed	7	
Fast speed	10	
Skiing		
Cross Country		
Leisurely pace	10	
Moderate pace (5 m.p.h.)	12	
Fast pace (8 m.p.h.)	17	
Down Hill		
Leisurely	4	
Moderate to vigorous pace	8 - 12	
Water-skiing	8	
Skipping Rope	10	
Snowshoeing	9	
Soccer	9	
Stair-climbing (up and down combined)	10	
Squash/Racquetball/Handball	11	
Swimming		
For fun	4	
Moderate (30 yds. per minute)	7	
Fast (40 yds. per minute)	10	
Tennis		
Recreational	7	
Fast	10	
Volleyball	4	
Walking		
Stroll (2 m.p.h.)	4	
Brisk pace	7	

****Note:** Calorie expenditures are for 150 lb. person. Add 10% for each 15 pounds that you are over 150 pounds, and subtract 10% for each 15 pounds that you are under 150 pounds.

For this week, we want you to use up 50 to 150 calories more than you usually do each day. This means a minimum of 350 calories to burn up each week (50 x 7). Try to do a bit each day. This will make it much easier than if you try to use up all of the extra calories on one day. Many people find that walking is an excellent way to get their exercise. It does not put stress on your system and if you do not like people to see you exercising, then they will never know that you are if you are simply out walking.

Now that you are all set to increase your activity level in addition to cutting down your calorie intake, one final point must be mentioned as to why you should do this. When people diet only, they lose more muscle or lean tissue and less fat tissue. When people exercise in addition to watching their diets, they lose more fat and less lean tissue. Since we want you to lose fat and not lean tissue, it is important that you incorporate activity in your program - activity that you will keep doing once the program is over.

FOOD STORAGE

Although this lesson is already long, we are going to add one more step in our concrete discussions of ways to handle food in your home so that you will be less likely to eat when you are not supposed to. Already you should be making some changes in the way you buy food as discussed last week. Now even when you get your planned-for food home, you may have problems trying to keep yourself from eating it. One thing which helps is to keep tempting foods out of sight. If you cannot see the food you may be less tempted to nibble at it. It is a simple case of stimulus control again. The sight of food is often a stimulus for eating it. Thus if you cannot see it you are less likely to eat it. Some examples of ways to keep tempting foods out of sight (and out of mind) are: 1) Put all foods away from clear sight; 2) Store problem foods (if you have to have them in the house) in inaccessible as well as out-of-sight places such as the back of the bottom cupboard, the top shelf where you need a chair to get it, or even in the basement; 3) Store all refrigerator food in non-see-through containers to take them out of your sight. There may be a few others you can think of yourself. For this week, we would like you to practice three new behaviours designed to keep food in your home out of sight. You may use the three examples above, or try some of your own.

With the three new food storage behaviours to practice, you now have five behaviours to rate how frequently you are able to do them each day. The other two are to reward yourself for one behaviour each day and to do one extra bit of activity each day. For this week you have the following things to do: answer the review questions, fill out the food records, fill out your activity record for the extra activities that you do, fill out behaviour ratings daily (both you and your helper), have your weekly weigh in, and enter this week's weight in your graph.

REVIEW QUESTIONS - LESSON 4

You are to answer the questions below as clearly and as briefly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. Why should you reward yourself for doing behaviours that lead to weight loss? _____

2. What are three ways in which you can reward yourself for weight loss behaviours? _____

3. Why is it necessary to increase activity as well as reduce calorie intake when trying to lose weight? _____

4. When you increase your activity level, what are some points that you should take into account when planning this increase?

5. When you are cutting down on the amount of food you eat, the way you store food in your home is important because _____

BEHAVIOUR RATINGS - LESSON 4

I rate myself:

Each day reward yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week. As in previous lessons, we do not want you to change too much at once. Therefore, try ONLY 3 NEW FOOD STORAGE STRATEGIES this week. You can try our examples below (# 3,4,5), or others you may think of, but if you do think of some of your own, remember to try a total of three altogether.

	S	M	T	W	T	F	S
1. I rewarded myself today for doing behaviours that will lead to weight loss.	___	___	___	___	___	___	___
2. I did more activity than I usually do.	___	___	___	___	___	___	___
3. I put all foods away from clear sight.	___	___	___	___	___	___	___
4. I stored problem foods in inaccessible as well as out-of-sight places.	___	___	___	___	___	___	___
5. I stored all foods in the refrigerator in non-see-through containers.	___	___	___	___	___	___	___
Other: _____	___	___	___	___	___	___	___
Other: _____	___	___	___	___	___	___	___

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 4 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend rewarded him/herself for doing behaviours that will lead to weight loss.	—	—	—	—	—	—	—
2. My friend did more activity than he/she usually does.	—	—	—	—	—	—	—
3. My friend put all foods away from clear sight.	—	—	—	—	—	—	—
4. My friend stored problem foods in inaccessible as well as out-of-sight places.	—	—	—	—	—	—	—
5. My friend stored all foods in the refrigerator in non-see-through containers.	—	—	—	—	—	—	—
Other: _____	—	—	—	—	—	—	—
Other: _____	—	—	—	—	—	—	—

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

NOTE: Remember that when you are doing your ratings, that you are not to nag or criticize your friend as this may make it harder for him or her to lose weight.

LESSON 5

MOTIVATION

During the past 4 weeks you should have been losing weight if you have been following the program. You probably noticed a fairly large loss in the first few weeks. Now you may have slowed down a bit in your rate of loss. This is to be expected in almost any program and in fact you may sometimes find that you do not lose any weight for a few weeks. This is called a plateau and as long as you are not gaining, just keep on following the program and you will start dropping soon. If you start to gain, then carefully examine what you are doing. Are you following the program closely or have you stopped doing some of the behaviours? Are you eating differently and exercising differently? What has changed? Has your motivation to lose weight gone down? All of these things may happen to you at some point in the program and will make it difficult to lose weight. Watch for them and handle them as they come up.

Although you may not be having problems with motivation yet, you likely will at some time during your weight loss program. It may not be in these first 10 weeks but as you continue doing the program after so that you will get down to your goal weight, you will likely experience some problems with motivation - especially as you near your goal weight. This happens because the weight that you have already lost has made you look almost as good as you want to look. The social distress that you were feeling at your heavy weight may be almost gone and consequently you may not be as highly motivated to turn down that doughnut with coffee or to leave the dinner table when you are full. You must, however, keep doing these things. If you do not, you will regain that lost weight.

There are, of course, behaviours that you can do which will help keep up your motivation to do these behaviours which are necessary for you to first lose weight, and second to keep it off. One way to keep yourself doing these behaviours is to make them part of your life as we have stressed repeatedly already. Establish long-lasting patterns of eating which will become habitual. It is hard to practice some of these behaviours but it is easiest to do them at the beginning of a program. So, practice them a lot now. You will soon find out which ones you can live with. Once you practice these behaviours such as planning, enjoying your food, weighing yourself weekly, shaping your behaviour by setting little reachable goals, using your hunger to your advantage, using stimulus control to your advantage, handling your food in your home in such a way that it presents the least temptation possible, and rewarding yourself for doing these behaviours, you will find that they will become habitual and natural feeling. A second way to help you keep up your motivation is to set up long-term contracts with yourself or others. This was discussed in the last lesson where we suggested that your husband or wife maybe take you to a movie after a loss of 5 or 10 pounds. Be sure to specify what you must do to get the reward and what the reward will be. If you set up the long-term contract when you are highly motivated, it will carry you through when your motivation goes down.

ACTIVITY

Last week you were told to start increasing your activity in little steps. As well, you were asked to do a minimum extra daily expenditure of 50 calories, which is a total of 350 calories for the week. This was the equivalent of about an hour's brisk walk for most people. How was it? Did you manage OK? This week you are to try to do a bit more. Try to do 100 - 250 extra calories worth of exercise each day. This means a minimum expenditure of 700 extra calories for the week (100 x 7). It should not be hard. Remember to split it up onto different days and it will not seem half as bad. Keep records of these extra activities again.

In addition to these more major planned activities, you can also add to your energy output in many little ways - ways that you do not even need to record and which, when added together, can account for a considerable amount of energy expenditure even though each of them individually do not account for much. You can add on energy output in many ways because our way of life is basically a lazy one. Our modern world spends billions of dollars each year just so people can avoid activity. We try to save exercise in the ways that we move from place to place: the long walk gave way to the bicycle, the bus, and now the car; and the trek from a parking place to a store has given way to parking-lot-at-the-door shopping centers. And once we arrive where we are going, stairs have been replaced by escalators and elevators to make certain that we use as little energy as possible. In industry, machines are doing most of the hard work which is good in several ways but bad in others because jobs require less effort and thus fewer calories and are less interesting. And exercise is decreasing at home as well. Many machines help with housework - the electric vacuum cleaner, dishwasher, clothes washer and dryer, and mixer. Even ice cream freezers are electric as are ice crushers and can openers. All work against men and women who are trying to watch their weight. And downstairs or out in the garden, we are no better off. We use electric drills and saws instead of a brace and bit and handsaw, and gasoline or electric lawn mowers and hedge cutters instead of human powered tools.

All of these gadgets take away chances for useful exercise, and people actually feel left out if they do not think that they own enough machines of this sort. While this may be good for industry, it is surely a problem for the individual. Now you must start thinking about spending your own energy instead of saving it as all of our modern conveniences want you to. You could begin by throwing out all of your electric appliances and your car but this would be rather silly. You can, however, change the ways you use them. Take your car - do you have to drive it two blocks to post a letter? Walk instead, it is probably almost as fast. Do not fight for a parking spot outside the door of your grocery store. Park at the end of the lot and walk the few extra steps. Walk to the next bus stop when waiting for the bus. When your electric appliances wear out, get a good quality manual one where you will use a bit of exercise or even have both now and give preference to using the manual one. Do not try to save steps around the house - use them instead.

In stores, walk up the stairs instead of the escalator ride, or if it is several floors, take the elevator or escalator only part of the way and walk the last couple of floors. Wherever you can use up energy. It means less fat for you to carry around.

For the coming week, try to use up energy in these little ways and in any other little way that you can think of. This will be the only new behaviour you have to work on and to rate how often you can do it this week, so you can really concentrate on it. It will be hard to do as you are so used to trying to save steps. Work hard and it will become much easier. Those little increases here and there will add up quite dramatically.

NUTRITION

Instead of giving you any more new behavioural things to do this week, the remainder of this lesson will be devoted to a discussion of nutrition and its importance in weight reduction. Just continue trying all of the things that you were introduced to in the past four lessons so that they will become natural and part of your life.

Nutrition is important to everyone and should be watched carefully when you are trying to lose weight. Your body will suffer if you are not taking in the proper nutrients, especially on a limited calorie intake. In order for you to stay healthy, your body needs carbohydrates, protein, fat, vitamins, minerals, and water. These all work in combination with each other so it is important to include all of these in your diet.

Carbohydrates are our main source of quick energy. All plants contain carbohydrates which we refer to as sugars and starches. Although carbohydrates do have some other functions, their main function is to provide energy. The caloric or energy value of plants depends on the fiber and water content of the plants. Plants with a low fiber or water content are higher in calories than those with a high fiber or water content. Recently, refined carbohydrates or sugars have been implicated as a factor in heart disease. Although high levels of refined sugars may not be desirable, it is important to have some carbohydrate in the diet, including weight reduction diets.

Protein furnishes calories and can be used for energy or for building and repairing body tissue. It cannot be used for both purposes at the same time, however, so we need calories from other sources to meet the energy needs of the body. Our most important sources of protein are animal products such as meat, fish, poultry, eggs, milk, and cheese. Dried peas and beans and peanut butter are also good protein sources.

Fat is our most concentrated source of calories. A given amount of fat supplies over twice the calories that the same amount of carbohydrate or protein would. This is why we have to watch the amount of fat we eat when cutting down on calories. This does not mean, however, that all fat must be cut out of the diet. Since all

animal products contain fat, we would have to greatly limit our protein in order to eliminate fat from the diet. Also fat is important because it has a high filling value, it increases the palatability of foods, and it is a carrier of the fat-soluble vitamins.

Vitamins and minerals do not furnish calories to the diet but are important in regulating and controlling many body processes. They are found in many different foods. Water is also a very important nutrient. It makes up a large percentage of our body, carries nutrients to body cells, and carries waste away from the cells.

Nearly all nutrients except vitamins, minerals, and water contain calories. It is impossible to talk about weight control without discussing calories since proper weight maintenance is dependent upon a balance between energy output (activity) and energy intake (calories). We are concerned with two primary aspects of calories in our program - the caloric value of foods and the caloric needs of the body. The caloric values of foods have been determined in the laboratory and indicate the amount of energy in the foods. One gram of pure carbohydrate yields 4 calories, one gram of fat yields 9 calories, and one gram of protein yields 4 calories. Using these basic figures we can easily determine the caloric value of any food by looking at its composition and then using these figures. The caloric needs of the body depend on several factors and can be classified into two main areas which are the basal metabolic rate (BMR) and the muscular work, activity, and movement of the body. The BMR is the number of calories needed by the body for maintenance of its basic functions. The BMR is affected by several factors which are growth (increases BMR), sex (men have a higher BMR than women due to body composition), pregnancy (increase), and age (decreases with age). The BMR stays fairly constant per person, however, and the muscular work and activity is what causes variations in a person's daily caloric needs.

When you want to lose weight, you must create a negative energy balance in your body by taking in fewer calories in your food than you need for your daily activity (BMR plus other muscle work). Even though you reduce the amount of food that you take in when you are losing weight, you must be very careful to maintain a balanced diet by including carbohydrates, protein, fat, vitamins, minerals, and water in your food intakes each day. To maintain the best balanced diet your diet should be high in protein and low in carbohydrates and fat but by all means do not cut out all carbohydrates and fat from your diet. Following are seven handy questions which you should ask yourself about your diet:

1. Are you eating too much food? (your food record sheets should tell you this).
2. Are you eating too much fat? (it has the most calories per gram).
3. Are you eating too much sugar? (only gives you calories but no nutrients).

4. Are you eating too many empty calorie foods? (like sugar, these only give you calories, but no nutrients).
5. Are you eating too many highly processed foods? (these often have sugar added and also lose nutrients the more they are processed).
6. Are you eating too few fruits and vegetables? (if so, then you are missing many valuable nutrients).
7. Are you eating enough different foods? (you may miss out on many important nutrients if you are not, and you may also end up eating more because you are only eating what you like).

For this week you have the following things to do: answer the review questions, fill out the food records, fill out your activity record, fill out behaviour ratings daily (both you and your helper), have your weekly weigh in, and enter this week's weight in your graph.

Also, sometimes when you are trying to lose weight, others in your home may be making it harder for you to lose weight by their comments to you and by their own eating behaviours. If this is happening, ask these people to not interfere with your program. It is important that others are not making it more difficult for you to lose weight. If they are not helping you, it is important that they are not hindering you either. Therefore, please tell them that we are asking them to not interfere with your program either by their behaviour or by their comments.

REVIEW QUESTIONS - LESSON 5

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. What are two things that you can do so that you can carry through with your program if your motivation drops down? _____

2. Why does modern living make it hard for people to lose weight and how can you get around this problem? _____

3. Which contains more calories - a gram of carbohydrate or a gram of protein? _____

4. Sugar, either pure or in processed and junk foods, should not be overeaten because _____

BEHAVIOUR RATINGS - LESSON 5

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points you earned during the week.

S M T W T F S

1. I was able to add in little
extra activities during the
day.

Total points for the week _____

All of the time = 5 points
Most of the time = 3 points
Some of the time = 1 point
None of the time = 0 points

Did I find this hard to do, and why? _____

BEHAVIOUR RATINGS - LESSON 5 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend.

S M T W T F S

1. My friend was able to add in
little extra activities
during the day.

Total points for the week _____

All of the time = 5 points
Most of the time = 3 points
Some of the time = 1 point
None of the time = 0 points

ND-1984/2

LESSON 6

ULTIMATE AVERSIVE CONSEQUENCES

In Lesson 4 we told you that many weight control programs fail because the rewards for losing weight come very slowly while food is immediately rewarding. People, therefore have problems resisting food. We consequently had you begin to reward yourself for doing behaviours which would lead to weight loss so that you would do them despite the rewarding value of food. Another problem that people have in resisting food is that the undesirable consequences of overeating are often far removed from the actual act of overeating. Thus not only is food immediately reinforcing, but the harmful consequences of overeating are a long way down the road and the good effects and rewards for losing weight are often a ways down the road as well. When you are overeating, you are seldom thinking about the harmful consequences that may befall you later. We want you to change this by thinking about some of the things that may happen to you because of your overeating when you are actually in the process of overeating. We want you to think about these ultimate aversive consequences (UAC's) at the time that a stimulus to eat inappropriately presents itself. Thinking about the UAC will serve to punish thoughts about overeating and will make you less likely to overeat.

The use of UAC's is really another form of stimulus control. Before when we discussed stimulus control, we said that you might control a situation by not making snacks available or by avoiding situations in which you are likely to overeat. However, sometimes you cannot totally avoid a situation or a problem food. By using UACs, you can alter the situation enough that you will be less likely to eat. Just the thought of the long-term consequences of overeating can so change your feelings about eating the food in question, that it may no longer seem attractive to you.

The UACs or ultimate aversive consequences of overeating are many. On a general level, obesity is related to a number of undesirable physical, psychological, and social consequences. Physical problems which are often noted in the obese include respiratory difficulties, cardiovascular dysfunctions, diabetes, kidney disease, toxemia, menstrual abnormalities, and arthritis of the spine and lower extremities. Psychological problems which sometimes seem to come with obesity include feelings of inferiority, inadequacy, and shame. Socially it has been said that obesity often throws a dark shadow over a person's relationships with others because many view the fat person in our culture as being sloppy, irresponsible, and ungainly. Unfortunately, the fat person may often agree himself or herself with such evaluations. Although such problems do not occur in every obese person, they do occur often enough to cause many obese people problems and feelings of inadequacy.

This week we would like you to make up a list of 10 UACs which

are particularly applicable to you. Although the above statements are potent, they are too generalized and abstract to be of use to you when you use them to stop you from overeating when you are tempted to do so. You are not to write such generalized statements as "Overweight women die younger". Instead, make up a list of UACs which are specific to your situation and mean the most to you. The examples below show you how specific your statements must be to be of the most help to you:

"When I wear shorts, my legs look like hams."

"My husband is embarrassed to be with me because I am fat."

"Some people don't seem to want to be my friends."

"People gawk when I go to the pool in my bathing suit."

"My mother-in-law's subtle sarcasm came through with 'You sure do love to eat, don't you, Betty'."

"My wife must feel like she's going to bed with a walrus."

Statements of actual or imagined social rejection, sarcastic treatment, critical references to bodily contours or proportions, extreme personal sensitivity to over excess weight, demeaning inferences concerning professional incompetence or carelessness can all be effective. These statements about one's self are not easy to write. It will be a very humbling experience, but it is extremely important that your UACs hit you right between the eyes. Be honest. This list is just for you. No one else needs to see it so be as frank and honest as possible.

When you have written up your list of 10 UACs, carry it with you at all times. Read the list over at the first indication that you are tempted to eat inappropriately. Suppose you are downtown shopping and you walk by a snack bar which advertises strawberry pie with whipped cream. Let us say that you stand there for a few seconds trying to decide whether or not to indulge yourself. This is the time for you to pull out your list of UACs and read them over. Do not trust your memory. Carry the list with you at all times and use it whenever you are tempted to eat inappropriately. It might be useful when you are grocery shopping and are thinking about buying something that is not on your list. Be sure to use this list only when you are tempted to eat inappropriately. You are not to rehearse this list before appropriate or planned for eating.

We would also like you to do another thing this week for each of the next seven days only. The request may seem a little silly but will make the ultimate aversive consequences of overeating hit home to you. Often overweight people can wear clothes that make them look quite attractive because the rolls of fat are well hidden by carefully chosen clothes. At times, however, you must get into a bathing suit or a pair of shorts and it is then that you feel the aversive consequences of your weight. For each of the next seven days, you are to stand before a mirror nude or in your underclothes

each night for several minutes. You are to look closely at your appearance, even if you find the experience aversive. Then, write down some negative response you had. These responses are to reflect your spontaneous reaction when you see yourself and are to be as emotionally charged as possible. Some examples are: "Good grief. Do I really look like that?", "I could stick an encyclopedia between the folds and never see it", "How can my partner want to crawl into bed with that?". Write your responses at the bottom of your UAC list so that when you are tempted to overeat, you will read the UACs and your responses to seeing yourself nude or nearly so. You will find as you read these, that you will be able to visualize yourself as you looked, and you will experience strong motivations to not eat even though you are very tempted.

FOOD PREPARATION

We have already dealt with concrete ways in which you can buy and store food so that you will be least tempted to overbuy and overeat. This week we will look at ways in which you can prepare food so that you will be least tempted to overeat. For example, try to prepare the exact amount of food that you need. That way you can avoid leftovers which would only tempt you to eat. Or, prepare low calorie foods whenever possible (when you have a choice between foods, always try to pick the one with fewer calories). Another way of preparing food which will minimize temptation is to cook with lids whenever possible. You will not see the food and thus will be less likely to pick at it. Sample cooking dishes only as you need to. Remember that anything extra must be counted on your meal record form.

The above are some concrete suggestions on how you can prepare food so that you will be less tempted to overeat. You may be able to think of some others yourself. For the next week we would like you to try the four suggestions above (or others you may think of yourself).

For your extra activities, keep the same goals that you had last week. These were to do between 100 - 250 extra calories worth of exercise each day. This means a minimum expenditure of 700 extra calories for the week (100×7). Also keep working in little extra activities into each day such as walking to post a letter, parking at the other end of the parking lot, standing instead of sitting when you are talking on the phone, and the like.

This week you have the following things to do: answer the review questions, fill out the food records, fill out your activity record, make up your UAC list, view yourself each evening in the mirror and record your reactions on your UAC list, fill out behaviour ratings daily (both your and your helper), have your weekly weigh in, and enter this week's weight in your graph. Remember too, that the benefits which you will get out of this program will depend on the degree to which you actually follow it and participate in it.

REVIEW QUESTIONS - LESSON 6

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. Why are the aversive consequences of overeating often too weak to stop one from overeating? _____

2. How can a list of UACs help one exert control over the urge to eat?

3. Cooking with lids is an example of stimulus control. How does it help?

BEHAVIOUR RATINGS - LESSON 6

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week. Remember, if you think of some of your own food preparation ideas enter them below under "Other". Be sure to decide upon a total of ONLY 4 new food preparation strategies to do (either our 4, or some combination of our ideas plus yours.)

	S	M	T	W	T	F	S
1. I used my UAC list when I was tempted to eat inappropriately.	___	___	___	___	___	___	___
2. I prepared the exact amount of food that was needed for meals.	___	___	___	___	___	___	___
3. I prepared low calorie foods.	___	___	___	___	___	___	___
4. I cooked with lids.	___	___	___	___	___	___	___
5. I sampled cooking dishes only as I needed to.	___	___	___	___	___	___	___
Other: _____	___	___	___	___	___	___	___
Other: _____	___	___	___	___	___	___	___

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

Rate the following behaviour as well, but do not add it into your total points for the week:

6. I observed myself in the mirror either nude or nearly nude for several minutes. _____

I had the most problem with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 6 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend used his/her UAC list when he/she was tempted to eat inappropriately.	_____	_____	_____	_____	_____	_____	_____
2. My friend prepared the exact amount of food that was needed for meals.	_____	_____	_____	_____	_____	_____	_____
3. My friend prepared low calorie foods.	_____	_____	_____	_____	_____	_____	_____
4. My friend cooked with lids.	_____	_____	_____	_____	_____	_____	_____
5. My friend sampled cooking only as he/she needed to.	_____	_____	_____	_____	_____	_____	_____
Other: _____	_____	_____	_____	_____	_____	_____	_____
Other: _____	_____	_____	_____	_____	_____	_____	_____

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

LESSON 7

By now many of the behaviours which we have been asking you to do should be becoming much easier for you to do. You should be making livable changes in your eating and activity habits. These changes should be part of your new life-style and should be resulting in a slow but sure weight loss. You should now be aware of which situations make it more likely that you will eat and should be able to change or avoid these situations so that you will not eat what you have not planned for. Planning for eating and activity should also be easier at this point even though it still will involve work and steady dedication to the program.

DEVELOPMENT OF INCOMPATIBLE BEHAVIOURS

As just mentioned, you should now be aware of which situations present particular problems when it comes to overeating for you. We have already said that you could avoid these situations or if that is not possible you could change the situation perhaps by making food less visible or in other ways already discussed in the past six lessons. Another way in which you can lessen your urge to overeat in various situations is by taking part in activities that are incompatible with eating. By incompatible activities we mean activities which are hard to do when you are eating. Thus, when you do the activity, you will be less likely to eat.

You often may face situations which you know are just terribly tempting in regards to eating but which you simply cannot avoid due to business, social, or other assorted reasons. When you must face these situations, you can now substitute another behaviour instead of eating. To have the greatest effect in stopping you from eating, these new behaviours which you do should be behaviours which you really enjoy doing. If you substitute behaviours which you do not like to do, you will be unlikely to do them consistently and instead will eat, which you do enjoy very much.

Here are some examples as to how you may substitute activities into your day which are incompatible with eating. If you generally go out to dinner on Friday evenings, you could substitute going to a movie instead. There you will be less likely to eat than if you went to a restaurant. You could also substitute a sports activity like swimming or ping pong or anything else you enjoy. In place of coffee and a sweet roll, sandwich, or cake in the afternoon, you might substitute sitting down with a good book for half an hour, or doing the laundry, the ironing, some yard work, or other chores. If you have a job, you might go for a 10 minute walk instead of going for coffee. Even when you are in a situation where everyone else is eating you can substitute incompatible activities. You can talk, or suck on a low calorie candy or life-saver. In either case, if you are doing these things you will be less likely to stuff high calorie foods into your mouth. Always try to tailor the behaviours you select to do in place of eating to your own specific life-style. The above are just examples. Choose behaviours which you know you will like. It may take some thinking.

As mentioned above, when choosing behaviours to substitute in place of eating, choose ones which you know you will like. The practice of substituting behaviours incompatible with eating is most effective if you select activities that you enjoy. You may even want to save highly rewarding and enjoyable activities to be done when there is an especially strong tendency to overeat. The main thing is to do something that blocks eating. Choose a highly desirable incompatible behaviour so that you will not mind doing it - you will find that you will not miss eating much at all.

There is another type of activity which you can do which is incompatible with eating although the "incompatibility" does not immediately meet the eye. In this activity you tell your friends that you are on a weight program and that you are off desserts or whatever for a week. Then, if you do eat in the presence of these friends, you may lose a bit of face. By telling your friends of your goal, you have altered the situation in which you normally would eat so that you will be less likely to eat when you are in their presence. Actually, this procedure is very much like the ultimate aversive consequences procedure which you practised last week. You can use this same procedure in many spontaneous situations. You will be less likely to eat dessert if you announce to your table companions that you have given up desserts for a week. Your friends will help matters by not offering desserts once they know that you are not eating them. Similarly, when offered a snack at a party, you can respond, "No thank you. I have given up all in-between-meal snacks this week". Such statements will establish rules in the situation which will help you overcome the temptation to overeat.

There is yet another incompatible behaviour which you can do to block eating and which is especially helpful when you are away from home. If you have trouble buying and eating "goodies" when you are shopping or are downtown, you can avoid this by not taking money, especially small change along. Without money to buy tempting food during excursions, your outside eating will be reduced. This principle can also apply to all restaurant and cafeteria eating. If you plan to eat out and you want to control how much you eat before facing the inviting menu or buffet line, take only enough money to allow minimal food buying. You do not eat what you cannot buy. Think about it and try it.

FOOD SERVICE

Last week we dealt with ways in which you could prepare food so that you would be least likely to overeat. This week we shall have you practice ways which will help you to keep from overeating by altering the way you serve food at the table even before you begin to eat it. There are many ways to do this, and the following are just some examples:

1. Serve food in covered, non-see-through serving dishes so that you will be less likely to be tempted to eat more than you have planned for.
2. Put on the table only what is needed for that meal. If you limit what you put on, you will be less likely to overeat.

3. Serve yourself last so that you will not take a big share.
4. Keep food away from you at the table. If it is not close, you will not see it as much and will be less likely to reach for it.
5. Serve yourself completely once: no seconds. If you do not allow yourself seconds, then you will be able to limit your calorie intake.

The above examples are all designed to make it less tempting for you to take more food than you need at a meal. This week we suggest that you try 5 food service alterations each day. Again, you may substitute some of your own, or use the 5 examples above.

For your extra activities this week, your goals will be increased somewhat from last week's goals. This week do between 150 - 350 extra calories worth of activities a day. This means a minimum expenditure of 1050 calories for the week (150×7). Keep working on the little extra activities which you can do during the day as well, such as carrying in the groceries one bag at a time, standing instead of sitting while doing the ironing, parking at the other end of the parking lot, shovelling the snow yourself, and the like.

This week you have the following things to do: answer the review questions, fill out the food records, fill out your activity record, fill out behaviour ratings daily (both you and your helper), have your weekly weigh-in, and enter this week's weight in your graph.

REVIEW QUESTIONS - LESSON 7

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. When you are substituting an incompatible behaviour in place of eating, what kind of behaviour should you choose and why?

2. Give three examples of how you might substitute behaviours that are incompatible with eating into your everyday life.

3. List three behaviours which you can do when serving food which you think will help you the most in keeping from overeating.

BEHAVIOUR RATINGS - LESSON 7

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week. If you decide to substitute some of your own food service techniques, then enter them below, but remember to do a total of only 5 food service techniques each day.

	S	M	T	W	T	F	S
1. I was able to substitute a behaviour that was incompatible with eating today.	___	___	___	___	___	___	___
2. I served food in covered, non-see-through containers.	___	___	___	___	___	___	___
3. I put on the table <u>only</u> what was needed for that meal.	___	___	___	___	___	___	___
4. I served myself last.	___	___	___	___	___	___	___
5. I kept food away from me at the table.	___	___	___	___	___	___	___
6. I served myself completely only <u>once</u> : no second helpings.	___	___	___	___	___	___	___
Other: _____	___	___	___	___	___	___	___
Other: _____	___	___	___	___	___	___	___

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problem with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 7 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend was able to substitute a behaviour that was incompatible with eating today. _____	_____	_____	_____	_____	_____	_____	_____
2. My friend served food in covered, non-see-through containers. _____	_____	_____	_____	_____	_____	_____	_____
3. My friend put on the table <u>only</u> what was needed for that meal. _____	_____	_____	_____	_____	_____	_____	_____
4. My friend served him/herself last. _____	_____	_____	_____	_____	_____	_____	_____
5. My friend kept food away from him/herself at the table. _____	_____	_____	_____	_____	_____	_____	_____
6. My friend served him/herself completely only <u>once</u> : no second helpings. _____	_____	_____	_____	_____	_____	_____	_____
Other: _____	_____	_____	_____	_____	_____	_____	_____
Other: _____	_____	_____	_____	_____	_____	_____	_____

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

CHAINING

In this lesson we do not intend to introduce a number of new techniques and approaches. You are to continue practising many of the techniques which we have already introduced (especially the ones that you have found to be very effective in stopping yourself from overeating). However, we do think that the following discussion of chaining may be very useful to yourself in helping you gain a better understanding of the purpose behind many of the things that you are doing.

All of us have problems writing the correct year during the month of January, and we often type "ting" instead of "tin" because we are so used to performing the sequence of behaviours which lead to typing "ing". These common mistakes illustrate the power of chaining. Each behaviour is a stimulus as well as a behaviour and the stimulus value of the behaviour exerts stimulus control over other behaviours which follow. Thus the process of writing "198" becomes the stimulus for writing a "4" (for 1984) instead of a "5" (for 1985). Thus chaining may be defined as a series of responses in which one response produces the stimuli for the next response.

The concept, of course, relates to chains of behaviour which terminate in eating, and the principles involved in building and breaking chains of behaviour. Chaining can also be used to increase activity.

Lengthening the chain. In Lesson 1, we discussed taking small bites, laying down your fork between bites and not putting more food on the fork until the food in your mouth has been chewed slowly and swallowed. While doing this, of course, you should completely relish and enjoy your food. All of these actions involve lengthening the chain of behaviours which will terminate in food consumption. The longer the chain, of course, the less food you will eat. You can further slow down your rate of eating (and thus decrease the amount you eat) by interrupting your eating with periods of conversation or by holding the food on the fork for increasingly longer periods before placing it in your mouth. Remember that in order for you to successfully establish a long-lasting habit, you should use the principle of shaping. If you do not regularly talk much while you eat, a few breaks for conversation while eating may be introduced at first, and then these can be increased in frequency. Similarly, you can practice holding food on your fork for longer and longer periods of time. You will recall the principle outlined in Lesson 2 regarding using periods of hunger to your advantage. With this in mind, you might practice interruption procedures at first near the end of the meal when you are not as hungry. Then, gradually move these interruption procedures toward the front of the meal (shaping).

The main application in "lengthening the chain" involves having many steps in the sequence of actions which have to occur between the desire to eat and the actual eating. Thus, if you decide that you will do all of your snacking only at a certain fountain or ice cream

stand which is some distance from where you live, you will be less likely to snack. Another idea is to allow yourself only 25 cents a day for snacks, thus forcing yourself to save 3 days for an ice cream cone or 5 to 7 days for a hamburger.

You can also use the technique of lengthening the chain to help yourself to do more activity. If you find that despite all your good intentions, you just cannot seem to do the activities you plan for, then you can lengthen the chain involved in going for a walk for instance. Perhaps you get a block up the street and turn around and come back. You can lengthen this chain by setting up your walk around little errands you must do where doing one will lead to the next. You may walk to post a letter and then go and drop some clothes off at the cleaners. On the way home you may stop for a newspaper and check in to see how a friend is doing with his gardening. Your walk will be more pleasant and seem more useful to you.

Eliminating parts of a chain. You will recall that we have already suggested that you not have snacking food around and that you not carry money with you unless you have in mind making particular purchases. Also, by walking a route such that you cannot stop for food or by going to a movie instead of to a restaurant you can reduce the probability of eating. All of these suggestions involve both "stimulus control" (Lesson 3) and "eliminating parts of a chain". This logically follows since the various parts of the chain are stimuli which exert control over behaviours which follow.

At times, however, you will find that you have been lax in establishing stimulus control and you will realize that you are very near the end point in a chain of behaviours which will terminate in overeating. Is it possible to break the chain at this point? It certainly is! Let us suppose that Saturday night is a problem if you do not have a planned activity. According to an earlier lesson, the best way to deal with this is to make sure you have an activity planned. Suppose, however, that your plans do not work out and you end up staying home. Soon you are out to the refrigerator during a television commercial. You open the door of the fridge, look to see what is in there, take out some ham, put it on the cupboard, get out the other ingredients and proceed to make a sandwich. Now even though the end of the chain leading to eating is near, any of these behaviours could have been interrupted so that eating would not occur. You could have refused to open the refrigerator door. You could have refused to take anything out. You could have put all the food away again before making the sandwich. If you have not interrupted up to this point you still can even when you are lifting it up to take a bite. Simply put it in a bag and give it to someone else saying that you are trying to lose weight. Even if you take one bite, you can still break the chain. Refuse to take another bite and give or throw the sandwich away. You see it is possible at any and all points in an eating chain to eliminate some part of the chain by performing some alternative behaviour (putting food back, throwing it away, etc.). It is never too late until the food is swallowed. You will find many situations in which it will be handy to keep this in mind. If you find yourself with a handful of popcorn, throw it in

the wastebasket and leave the room. If you have taken a second helping even after you have eaten enough, refuse to pick up the fork.

For this week, we would like you to each day try to interrupt a chain of behaviours which typically leads to eating. You can interrupt the chain early, or late, but the earlier the better. Always remember that you are in command and can stop the eating process at any point.

One other thing about chaining as it relates to activity. People sometimes have rather elaborate steps which they must go through before they are ready to actually do an activity. The end result is that they usually never get around to doing the activity. In order to insure that the activity does get done, it may be necessary to cut out some of the steps so that the person will be more likely to do the activity. Perhaps you may have this kind of problem. Whenever you plan to go for a walk, you say that you will not go until you do the dishes, make the beds, have supper ready to be prepared, and sweep the floor. Once you start doing these things you decide as well to do a load of laundry and dust the living room. By the end of all this, you do not have any time left for a walk (the family will be home in 5 minutes) and you are tired. Result - you do not get to do your needed and planned-for walk. To make sure you get your walk in, cut out some of the steps which you must do before you allow yourself to go for a walk. Maybe decide to do the dishes and make the beds. Leave the rest for when you get back from your walk.

EATING BEHAVIOUR

Last week we made suggestions as to how you might serve food at the table so that you would be least tempted to eat. This week we shall deal with a few suggestions as to how you actually should eat at the table. Many suggestions could be made in this area and fortunately you should already be practising a number of them. These were the suggestions made for increasing your enjoyment of food in Lesson 1. These included taking small mouthfuls, chewing the food thoroughly before swallowing, and laying down your silverware after each bite and only picking it up after chewing and swallowing. This week we want you to add two more behaviours to these:

1. Leave the table as soon as you are finished or remove your plate and utensils from where you are sitting so that you will not be tempted to eat more.
2. Get into the habit of leaving a small amount of food on your plate. It shows you that you are making progress since you no longer feel compelled to eat everything you see.

Practice these behaviours for the coming week.

Your goals for extra activities this week are the same as those for last week. This week do between 150 - 350 extra calories worth of activities a day. This means a minimum expenditure of 1050 (150 x 7) calories for the week. Keep working on the little extra activities which you can work into your day as well such as taking

the stairs instead of the elevator, walking to post a letter, going to the basement to get something instead of sending your son or daughter, and purposely parking a block away from the store even though you could park right outside the door.

The things which you have to do this week are: answer the review questions, fill out the food records, fill out your activity record, fill out behaviour ratings daily (both you and your helper), have your weekly weigh in, and enter this week's weight in your graph.

REVIEW QUESTIONS - LESSON 8

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. Chaining may be defined as a series of responses in which one response produces stimuli which exert control over the next response. Give an example from your own experience of a series of behaviours which terminates in eating which illustrates chaining.

2. Describe a way in which you can lengthen an eating chain.

3. If you eliminate parts of an eating chain, you will be less likely to eat in the end. Why?

4. Why is it a good idea to leave the table as soon as you are finished?

BEHAVIOUR RATINGS - LESSON 8

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I was able to interrupt a chain of behaviours leading to eating.	—	—	—	—	—	—	—
2. I left the table as soon as I was finished.	—	—	—	—	—	—	—
3. I left a small amount of food on my plate.	—	—	—	—	—	—	—

Total points for the week _____

All of the time = 5 points
Most of the time = 3 points
Some of the time = 1 point
None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 8 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for the week.

	S	M	T	W	T	F	S
1. My friend was able to interrupt a chain of behaviours leading to eating.	___	___	___	___	___	___	___
2. My friend left the table as soon as he/she was finished.	___	___	___	___	___	___	___
3. My friend left a small amount of food on his/her plate.	___	___	___	___	___	___	___

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

LESSON 9

MAKING HUNGER A STIMULUS FOR SATISFACTION

By this point in your program you should periodically be feeling hungry even if you never before felt this way. In Lesson 2 we told you how to use feelings of hunger and of being full to your advantage so that you could control how much you ate. Now we are going to talk about feelings of hunger and of how slight feelings of being hungry are good since they can indicate to you that you are losing weight.

When you feel hungry you generally interrupt these sensations as signals for eating. At times, of course, food is not available. At other times food may be available but you refuse to eat because you want to lose weight. Either way if you cannot eat you probably feel deprived and unhappy. For most of us, these are the only two reactions we have ever experienced to feeling hungry: 1) "it's time to eat ... good!" or 2) "how terrible it is that I cannot eat now."

It is possible, however, to experience a third reaction to feelings of hunger - the happiness and satisfaction of knowing that you are losing weight when you feel a bit hungry. We can think of hunger as being produced in part by a negative energy balance in the body although it may also be caused by certain stimuli which in the past were related to eating (for example, being at your grandmother's). Whenever you are hungry generally at least some degree of negative energy balance is present. Thus whenever you feel hungry, you are losing weight. Realizing this can bring you a lot of satisfaction. You may find this hard to believe, but hunger can actually become a pleasurable experience, while a full feeling can be unpleasant if it signals overeating and certain knowledge that you are storing fat instead of losing fat. You should learn to associate the feeling of hunger with pride for self-control and the satisfaction of making progress in weight reduction. Thus last week's suggestion that you leave a bit of food on your plate is good. It should indicate that you are not totally full. It is a good idea, in fact, to get up from the table when you are a tiny bit hungry. If you get up full or very full, then you are likely to have overeaten. Of course, you should not get up when you are noticeably hungry because then you will have a hard time resisting food which you come across later in the day.

PLANNING

By now you should have realized that planning is an important part of losing weight. Without some idea of how you are going to regulate calorie intake and expenditure, you will have a harder time sticking to a program. Your plans do not have to be written down but you do have to have them. You must know or have some idea of how you will handle an unexpected eating situation, and you must have a plan of action when you are going to a banquet or a party. It will be good for you to read the small section on planning in Lesson 4 to reacquaint yourself with some problems that happen in planning and how you might deal with them. Even though you may never be able to plan every calorie in food and activity for a day, it is important to

have plans and try to stick to them. If you plan too much for yourself, take smaller steps so that you can reach your planned goals (shaping). Be careful too, to watch for times when your plans just do not seem to work. See how you can change the situation so you can meet your plans. Find out what is going wrong and try to change it so that things go right.

All of this talk applies not only to planning what you eat but also must include planning what kind of activity you will do. In fact, many people so dislike activity that it may be more important for them to stress activity planning than eating planning, although they must do both. Since many people do not like activity, they must plan for and make time for it. Otherwise it is almost guaranteed that time will run out in their day and none will be left for activity. Again as with eating, you do not have to write your plan down. You do, however, have to decide at the beginning of the day just what activity you will do for the day and then you must plan your day around it. With activity it is also a good idea to have some general idea as to what activities you will do throughout the week. If you plan ahead of time, you will not be left on the last day of the week with all of your extra activity calories left to expend. If you leave everything to the last day, you will be unlikely to do all of it or if you do it you will not enjoy it because you will be doing so much and may get played out. As with eating planning, you must also investigate what is happening if your plans do not seem to be working out and you cannot follow them. Perhaps you leave your activity until late in the evening and then find you are too tired to do it. You must then find some time earlier in the day to do it. Maybe before supper or maybe at work during your noon break. Perhaps you just get bored - then find someone else to do the activity with you. Whatever the problem, analyze it, think of a way to change, and try it so that you can follow your plans.

FOOD CLEAN-UP

This is our last week on suggestions in our series on how you may reduce eating by changing the ways in which you buy food, store food in your home, prepare food, serve food, and eat food. The final step is food clean-up. Food clean-up can also affect eating just as the five ways of handling food already discussed can. Basically, if the food is left around and not immediately put away, then it will present a temptation for you and make you more likely to eat. A couple of suggestions for food clean-up that may help reduce temptation include: having someone else scrape the dishes and store the leftovers (in non-see-through containers of course), and trying to scrape plates and serving dishes directly into the garbage can as soon as possible and in one rapid process. Once the leftovers are all mixed up in the garbage can, they will certainly be less tempting to eat. Perhaps you can think of some other ways to make food clean-up a less tempting process. This week we would like you to try two such food clean-up procedures, either the two mentioned above, or some of your own.

Your goal for extra activity is increased by a small amount again this week. For this week, do between 200 - 500 extra calories worth

of expenditure a day. This means a minimum extra expenditure of 1400 calories for the week (200×7). Do not be alarmed with this increase. It will be the last one which we give you and is a goal which you should aim for over the next several months. If you would like to, you can set your goals higher over the next several months. Do not, however, go below this goal which we have given you today.

This week you have the following things to do: Answer the review questions, fill out the food records, fill out your activity record, fill out behaviour ratings daily (both you and your helper), have your weekly weigh in, and enter this week's weight in your graph.

REVIEW QUESTIONS - LESSON 9

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember the answer.

1. Why can feeling a bit hungry become a pleasant experience?

2. Why should you be careful to not get up from the table when you are feeling quite hungry even though a bit of hunger is fine and even recommended?

3. Why is planning an important part of a weight reduction program?

4. Why is food clean-up an important part of your meal when you are trying not to overeat?

BEHAVIOUR RATINGS - LESSON 9

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total points that you earned during the week. For the food clean-up suggestions, either try our two suggestions below, or one or two of your own for a total of only two new food clean up procedures each day this week.

	S	M	T	W	T	F	S
1. I got up from the table a bit hungry.	—	—	—	—	—	—	—
2. I had someone else store the leftovers from the meal.	—	—	—	—	—	—	—
3. I scraped the plates and leftovers that were being thrown away directly into the garbage immediately after the meal.	—	—	—	—	—	—	—
Other: _____	—	—	—	—	—	—	—
Other: _____	—	—	—	—	—	—	—

Total points for the week _____

All of the time = 5 points
Most of the time = 3 points
Some of the time = 1 point
None of the time = 0 points

I had the most problem with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 9 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many points you awarded your friend for the week.

	S	M	T	W	T	F	S
1. My friend got up from the table a bit hungry.	—	—	—	—	—	—	—
2. My friend had someone else store the leftovers from the meal.	—	—	—	—	—	—	—
3. My friend scraped the plates and leftovers that were being thrown away directly into the garbage immediately after the meal.	—	—	—	—	—	—	—

Total points for the week —

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

This is the last week that you will be rating behaviours for your friend. Thank you very much for all your help.

LESSON 10

In this lesson you will not be asked to do anything new nor will you have to do behaviour ratings. Instead, we will discuss how you can keep losing weight until you reach your goal weight and then how you can stay at that weight once you have reached it.

After nine weeks in this program, you may now be at your goal weight. However, if you had 20 or more pounds to lose, which is probably the case, then you must continue to follow the program until you reach the weight you want to be. As mentioned throughout your lessons, losing weight is not an easy business and it is very easy to slip back into your old eating and activity patterns. Thus, it is very important that you continue practising what you have learned in this program. Do not forget about it once the program is over or you most surely will gain back the weight which you lost. Keep working at all of the behaviours which we have taught you, especially the ones that have worked well at keeping you from overeating and under-exercising. Make the behaviour changes a part of your everyday living so that you will do them naturally.

One certain way for you to keep losing is to continue to set calorie limits for intake and expenditure. Then stick to them. Make plans as to how you will structure your day so that you can stay within your limits. Make plans as to how you will handle problem situations that come up. If you have problems remembering everything that you learned over the past nine weeks, go back to your lessons and look them up. An index of topics covered in each lesson is on the last page of this lesson and will help you look things up. If you are still having problems remembering things, it might pay to work through the lessons again. Just start at the beginning and work right through them. Do the parts of them that you found helpful but do keep track of your calorie intake and extra activity expenditure. We will not be giving you more sheets to keep these records on. Instead, get yourself a scribbler and keep track in it something like we did on the food record forms. Note down the day, time, what you ate, and the calories involved for the meal, and the total calories for the day. Keep track of your calories expended in activity as well. Your records do not have to be as elaborate as those we have been keeping over the past nine weeks. They must, however, show you your calorie intake and expenditure so that you can regulate your weight loss. From now until you have reached your goal weight, you should be losing at the rate of around one pound per week. If you still have another 50 to 100 pounds to lose, it still means a long time on the program. Do not get discouraged. It took a long time to put all of that weight on and it is healthiest to take it off slowly. Always be making changes in your daily eating and activity habits that you can live with. Only by doing so will you lose weight. If the changes you make are too big or too hard to follow, you will soon drop them and go back to your old habits and gain weight.

Once you have reached your goal weight, do not give up the program either. Keep those changes that you have made in your eating and activity habits. That has been the goal of this program. If you

do not make permanent changes, you will begin gaining when you go back to your old habits. If you find yourself gaining, go back and be careful to follow the program. Keeping weight off is hard work (maybe more than taking it off) and requires careful attention. That is why permanent changes that you automatically come to do are so important in making a program able to be followed for extended periods of time. If a program is not livable, then it will not be followed over a long period of time. It is, therefore, up to you to make the program as livable as you can.

Following are some specific things which you can do to help you to continue losing and then to keep it off:

1. Decide what weight you would like to be and then keep working until you reach that weight. How fast you do it is not important.
2. Weigh yourself weekly probably for the rest of your life. You will then know how you are progressing. If you are gaining, then it means that you must be more careful in following the program. Are you taking in too many calories each day or are you not spending enough calories in activity or is it a combination of both? Take stock and do something about it now before it gets away on you and you end up giving up.
3. Keep on with your extra added activities. As mentioned in Lesson 9, aim for doing between 200 - 500 extra calories worth of activity a day. This means a minimum goal of 1400 calories worth of expenditure a week (200×7). If you keep at this level, it will become easier and easier to do. If you drop and then try to go up again, you will find the activity harder to do. Activity is very important to keep up because of the critical role it plays in fat loss.
4. Keep up with working small changes into your daily activity patterns. Stand whenever you can instead of sitting, walk instead of standing, go a bit further than you normally would, and the like. These little increases will add up if you do them day after day for a long time.
5. Continue to use the techniques that have helped while you were in the program. Remember our focus on establishing new eating and activity patterns. The techniques and procedures you learned here should become permanent patterns in your life. We want you to continue losing weight, and most importantly, to keep it off for good. This means that you continue with these new behaviours. If you have problems remembering some of the things to do, feel free to go back to the lessons. Work through them again and again until they become part of your life-style.

The formal part of this program is now finished. Hopefully, you have learned how to control your weight effectively, and you will be able to continue to apply what you have learned in the months to

come. In order for us to be able to evaluate how well this program has worked for you, and whether it will continue to be useful for you in the future, we will be meeting with you periodically in the months to come. Our first meeting should be coming up shortly, and should have already been arranged. Please refer to the "Client Summary" page at the very beginning of this manual. Your next appointment with us is your "10 Week Appointment", where you will be weighed and various other measures taken. This meeting should take no more than about 15 minutes. You should have completed all of the "Post-Treatment Questionnaires" handed out at our last meeting (if you do not have these, please call us immediately).

You should bring the following materials to your next appointment:

- 1) This manual (it is yours to keep, but we would like you to bring it to this next meeting.)
- 2) Used FOOD RECORDS,
- 3) Used ACTIVITY RECORDS,
- 4) Used Behaviour Ratings,
- 5) Completed "Post-Treatment Questionnaires".

If for some reason you do not have your next appointment, or you cannot make it at that time, be sure to call me immediately. My phone number is at the beginning of this manual. Remember, these meetings are very important not only for us to evaluate this program, but also for you if you want to try to continue losing weight, or keeping it off. That is why your attendance at these meetings is necessary for your deposit to be returned to you.

We will also be arranging your three month followup meeting when we next meet. We look forward to seeing you.

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Appendix J

Directive Treatment Manual

CLIENT SUMMARY

NAME: _____ FILE # _____
first last #-m/sc-mp

FIRST INTERVIEW WEIGHT: _____ lbs./kg MEAL PLAN: _____

STARTING WEIGHT: _____ lbs./kg

CHECK-UP APPOINTMENTS:

The following check-up appointments have been arranged for you in order for us to monitor your progress:

5 week appointment: _____

10 week appointment: _____

These meetings will take only a few minutes (no more than about 15 minutes). You will be weighed, your various records and forms collected, and your questions answered. These meetings are very important. If you cannot make it at the above times please call us for another appointment (Joe Rallo: 237-2815 weekdays/ 489-3943 evenings and weekends).

You should bring the following materials to each of your appointments:

- 1) your manual;
- 2) used FOOD RECORDS;
- 3) used ACTIVITY RECORDS;
- 4) used BEHAVIOUR RATINGS;
- 5) completed "Post-treatment Questionnaires" (for 10 week appointment only).

Meetings will be held at:

MANITOBA OBESITY CONTROL CENTRE,
Room P-502,
Fifth floor,
Duff Roblin Building,
University of Manitoba

This is the same place where you came for your first meeting where you were weighed and given your manual.

WEIGHT REDUCTION MANUAL

Prepared by

Joseph S. Rallo

ACKNOWLEDGMENTS

This manual is an adaptation of the following weight reduction manual:

Pezzot-Pearce, T. D. Weight Reduction Manuals. Unpublished Doctoral Dissertation, University of Manitoba, 1980.

portions of which were collected from the following sources:

1. Richard L. Hagen, Janet P. Wollersheim, and Gordon Paul, Weight Reduction Manual. In R. L. Hagen, Group Therapy versus Bibliotherapy in Weight Reduction, Ph.D. Dissertation, University of Illinois at Urbana-Champaign, 1970, Published by University Microfilms International, Ann Arbor, Michigan.
2. Pearce, J. W. Therapist Manuals. Unpublished Doctoral Dissertation, University of Manitoba, 1980.
3. Janet P. Wollersheim. Behavioural Treatment Manuals, in Catalog of Selected Documents in Psychology, 1975.

If you have any questions during the course of your program, please contact me at:

Joe Rallo,

Phone 237-2815 (9:00 a.m. - 5:00 p.m. weekdays)
489-3943 (after 5:00 p.m. and on weekends)

***Note: This manual is for the exclusive use of individuals participating in our weight control program. Reproduction of this manual, or any part of it, by any means, is not permitted without the written permission of the authors.

September, 1984

INTRODUCTION

This manual is designed to teach you to lose weight and to keep it off. It is based on behavioural principles that have been shown to be effective in initiating weight loss. The treatment is a self-control treatment and as such, will teach you principles and methods which you can apply in your own environment in order to alter your eating and exercise habits. It will be solely up to you to learn and more importantly, apply and try the various techniques suggested in the manual.

This weight reduction manual is divided into 10 weekly lessons. One advantage of this program is that it can be used by you on your own at home. You are required only to meet periodically with us so that we can monitor your progress. This is discussed below. The results will depend on you and your involvement and adherence to the program. It is important that you complete one lesson per week in order to obtain the maximum benefit from this program.

You will need the following additional materials. If you do not already have them, purchase them now: 1) a good "calorie book" ("calorie counter") - choose from a variety of inexpensive ones in most bookstores; 2) an inexpensive kitchen scale for weighing food portions (should have a range of about 1 - 6 ounces); 3) a reliable bathroom scale for weighing yourself.

The basic aim of our program is behaviour change and not just weight change. By this, we mean that we want to see livable changes in your eating and activity habits -- changes that will remain once the program is complete. Anyone can lose weight but few can keep it off. For instance, you can lose weight by simply not eating. However, at some point you will start eating again and will likely regain the weight which you lost. However, if you should slowly change the way you eat and the way you expend energy so that the changes become part of your everyday life-style, then you will be more likely to keep the weight off once you have lost it. Because we are interested in helping you to make enduring changes in your life-style, we do not place great emphasis on large weekly weight losses. Rather we prefer to see smaller but steady and enduring weight loss. Such losses are typically in the range of one pound per week.

Over the next 10 weeks, you will be working through 10 lessons. Each lesson will discuss various principles and techniques to be used in losing weight. Each lesson will be different but will include the following parts: discussion of principles and techniques, your assignments for the week which will consist of SIMPLE STEP-BY-STEP INSTRUCTIONS OF WHAT YOU SHOULD DO EACH WEEK, review questions to be filled out after reading the discussion (you are free to refer back to the discussion when answering them), and various daily records which will be discussed later. This program also provides you with a weekly meal plan which, if followed closely should help you to reduce your calories safely and effectively.

As you may have already guessed, the following program will involve some work on your part. We can tell you what to do and to try, but it will be up to you to try everything we suggest and to discover which of these things work best for you and then to follow through and do them for several months or longer. We cannot do the program for you.

As mentioned above, although this program is designed to be used by you at home, it is still important that we meet with you periodically to evaluate your progress. During the program, you will weigh yourself weekly in order to see how you are doing weight-wise. We will meet with you briefly about halfway through the program, and at the end of the ten week period when we will be weighing you, collecting some of your forms, and answering any questions you may have.

It is expected that once you complete the 10 weekly lessons you will have learned about a variety of techniques aimed not only at helping you with weight control, but also at helping you to continue to lose weight in the future if necessary. Just as important, we will be discussing the problem of maintaining weight losses that you achieve. Keeping weight off is as difficult, if not more difficult than losing weight in the first place. This is why we have arranged three follow-up meetings with you to take place over the one year period following the program (at 3 months, 6 months, and 12 months). These check ups are very important for the reasons outlined above, and therefore have become an attendance requirement in order for your deposit to be returned to you. These meetings will take only a few minutes and will be scheduled at a mutually convenient time.

So, as you can see, this is a very comprehensive weight control program. We are interested in seeing each one of you obtain maximum benefit from this program, and that is why it is important that we meet with you from time to time to monitor your progress.

As you proceed through your lessons, you will notice that some are longer than others. Regardless of length, all require your close attention in order to lose weight and to change your eating and activity life-styles.

IMPORTANT: You should plan on reading through the first lesson before your next shopping trip. This will allow you time to plan what foods you must purchase in order to stick to the daily meal plans provided. We also recommend that you read through and complete the first lesson before Sunday so that you can begin carrying out your assignments first thing Sunday morning. You should also have purchased all the foods necessary for your diet by Sunday morning. This means a good day for sitting down and reading through your first lesson would be Friday, or Saturday at the latest. It's probably a good idea to get into a routine of doing your lessons on the same day each week, so that you always know that this time is reserved for you to complete your lessons each week.

You are now ready to begin. The first lesson is a little longer and will require a little more time than the others, but do not get discouraged. Once you get through the first week you will see that it is not too difficult. Good luck.

LESSON 1

As already mentioned, we will be concerned with slowly changing your eating and activity habits in this program. We will suggest behavioural principles to you which will be helpful in making these changes. A behavioural or otherwise called "learning" approach is necessary since your eating and activity habits which contribute to your weight problem have been learned through the years. They must be unlearned so that better habits may take their place and thus result in weight loss. Again, it will be up to you to work hard at making these changes. At first they will be difficult and will often feel artificial, but after a time they will become easier to do.

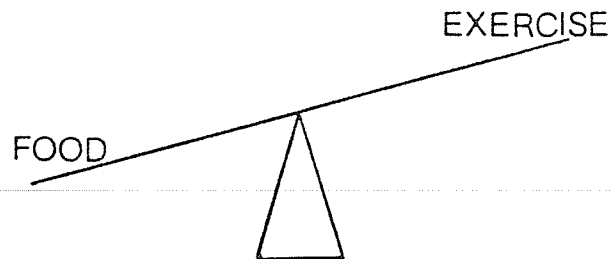
ENERGY BALANCE

Behaviour factors are not the only cause of obesity. In fact, obesity is a complex condition involving behavioural, physiological, glandular, metabolic, genetic, sociological, and economic factors. It is not exactly known how all of these factors operate and interrelate. Physical causes can seldom be found for obesity, and even when they can, they are often secondary. For most people, behavioural factors seem to be the primary causes. The real culprit in obesity is the energy balance in your body. This is the balance of the energy you take in by eating and the energy you expend in physical activity. Thus your behaviour at the table and your behaviour in physical endeavours has a direct bearing on how fat or slim you will be.

The energy in your body is measured in terms of calories. All foods contain certain numbers of calories depending upon their composition. When you take in more calories in your food than your body needs for activity, growth, cell metabolism, digestion, respiration, and so on, the body converts the unused portion to fat. Since this conversion takes place at the rate of about 3,500 calories per pound of fat, for every extra 3,500 calories you take in, you become one pound fatter. For instance, if you take in only 100 calories more than you need each day, at the end of one year you will have gained about 12 pounds. 100 calories is the equivalent of a piece of toast with a teaspoon of butter on it. Such a small difference can have a big effect over time. Energy balance is thus extremely important in both gaining and losing weight.

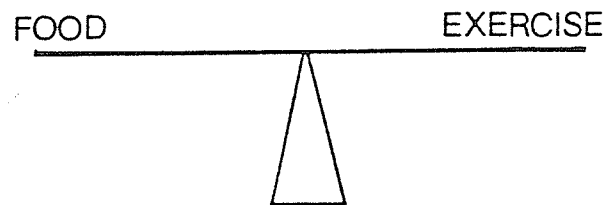
Basically three things can happen in your energy balance. First, as just described above, you can have a positive energy balance where you take in more calories than you expend or use up. This can come from either eating too much food or from reducing your usual activity. In either case the excess calories are being stored as fat and you will gain weight.

Weight Gain - Positive Energy Balance



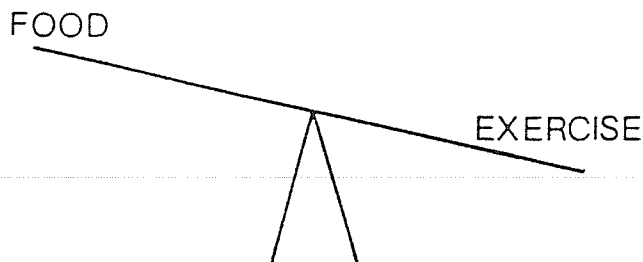
Second, you can have an energy balance where the calories you take in equal the calories you expend and where you in fact neither lose nor gain any weight. Those people who can maintain their weight at a constant level are doing nothing more than eating in such a manner that gives them enough energy for their activities yet not too much that they gain weight nor not enough so that they lose weight.

Weight Maintenance - Energy Balanced



Third, you can have a negative energy balance where you take in fewer calories than you use up through your activities. This can happen from eating less or exercising more than you usually do. In either case, over a period of time, your body will begin to use its fat stores for energy and you will lose weight and slim down.

Weight Loss - Negative Energy Balance



Right now, you are likely in a period of positive energy balance where you have been slowly gaining weight over the past years. If you have not been gaining weight but have not been losing it either, then you will be in a state of energy balance. What we want you to go into now is a state of negative energy balance where you are taking in fewer calories than you are using up. This is the aim of nearly any weight reduction scheme. In order to get you to reduce your negative energy balance state, we will be asking you to reduce your calorie intake (that is, the food you eat) and to increase your activity level. Since this is a lot to ask of you in the first week, we will begin by reducing your intake level this week and in a couple of weeks we will begin asking you to slowly increase your activity level.

On the basis of your current weight, a personal meal plan has been selected for you. This was done by calculating approximately how many calories an individual of your current weight should eat every day in order to lose 1 to 2 pounds per week. A meal plan best meeting this daily goal, and providing you with good nutrition, was then selected. This will be your own personal meal plan, based upon your weight, so that what you can eat has been determined by how much you weigh right now. The meal plan chosen for you has been provided in a separate package. This meal plan should be suitable for you for the full 10 weeks of the program, and should be followed closely. If you feel you are losing weight too quickly, or not quickly enough, let us know at the 5 week check-up.

Of course as you lose a significant amount of weight you will eventually find it necessary to reduce your calories further. Instructions for re-calculating your daily intake goal and adjusting your meal plan are provided in lesson 10. It will not be necessary for you to do this recalculation for the next 10 weeks. In fact it is very important that you stick to the same meal plan for at least 10 weeks, even if you are not losing weight as quickly as you would like to at times. We will make any necessary adjustments to your

meal plan at our check-up meetings with you. At the end of the program (10 weeks), if you have lost a significant amount of weight, you can adjust your plans accordingly. (IMPORTANT: We strongly recommend that, no matter what your weight, you never reduce your daily calorie intake below 1200 calories, as this might cause dizziness, fatigue, and other physical symptoms. If you find in the future that you are having trouble losing weight and you have already gone down to 1200 calories, then we suggest that you increase your energy expenditure by perhaps taking a walk during the day, or going bowling, swimming, or some other activity.)

By now you are probably thinking that you are going to have to do some calorie counting. This is not necessarily the case. Actually, the amount of calorie counting will be minimal in this program. The meal plans which have been provided for you already indicate the exact amounts you should eat of each food in order to meet your daily goals. As long as you follow the meal plans you should not have to do any calorie counting at all. You should, however, familiarize yourself with the calorie values of the foods you are eating. This is why they have been provided along with the meal plans, so that in future, you can choose your foods wisely.

There are, however, some instances where you will need to calculate calories. For example, if you go off of the meal plan and eat snacks, different foods, or different amounts not already on the plan, you will need to do some calculating. For this reason, you should buy yourself a good calorie book, if you do not already have one.

YOUR PERSONAL MEAL PLAN

During this program you will be guided in developing a sound, nutritional meal plan which should help you to lose weight gradually. Using the menu plans provided as a guide, you will be able to determine what you should be eating each day in order to lose weight safely. This will, of course, require some initial extra effort on your part, but if you apply that effort now, you will find that your meal planning becomes less of a chore as the weeks go by. What follows is a description of your personal meal plan.

A Balanced Diet - The Food Exchange System:

Your daily meal plan is based upon a Food Exchange System. What this means is that you will be following a low calorie diet which at the same time is nutritious and which ensures that you are receiving your daily required nutrients. For many people, this means they will be eating even better than before, even though they will be cutting down on the quantity of food they eat. Your meal plan is based upon recommendations found in Canada's Food Guide, and recommendations of the American Dietetic Association.

Most overweight people trying to lose weight (and many people who are not overweight) do not eat a balanced diet, and they are unaware of their poor eating patterns. The exchange system will provide you with a diet that is:

- 1) nutritionally sound,
- 2) flexible, thus allowing for individual preferences and customs,
- 3) easy to follow, and,
- 4) something you can live with the rest of your life.

Many reputable weight control programs already use some variation or another of an exchange system in order to ensure good nutrition, so the basic principle may be familiar to some of you. If you have already tried an exchange system and failed, do not be discouraged. The current system has been designed to make it easier to follow and to live with. Also, the meal plan is only one small part of this weight control program. This program is not just another diet, but a comprehensive package of weight control techniques, including a meal plan.

We will be providing you with more specific instructions on how to follow your meal plan later, but for now, this is how a Food Exchange System works. All foods are classified into seven FOOD GROUPS. These Groups are:

- 1) Vegetables
- 2) Fruits
- 3) Breads and Cereals
- 4) Protein (Meat and alternate sources of protein)
- 5) Dairy (Milk and Milk Products)
- 6) High Calorie (Beverages, Fats, and Sweets)
- 7) Unlimited Foods (little or no calories)

Lists of different foods within each Group, and the amount of that food which makes up one EXCHANGE or equivalent, have been provided for you in your meal plan package. All of the foods within a group, IN THE AMOUNT RECOMMENDED, are approximately EQUAL IN NUTRIENTS AND CALORIES.

Refer to your Food Group Lists now. If you look at List #3, BREADS AND CEREALS, you will see that both one slice of bread and 1/2 cup of cooked rice are on this list. Each of these supplies approximately 70 calories of food energy, and they both contain similar amounts of carbohydrates, proteins, vitamins, and minerals. Either one may be chosen for ONE BREAD EXCHANGE. In your meal plan, you will be allowed a selection of foods from each list, the type and number of exchanges from each list being in accordance with sound nutritional levels, and determined by the calorie limitations of your particular meal plan. Foods in a list are called EXCHANGES because they may be freely exchanged (in the specified amounts) for other foods on the list. Thus a person can interchange any foods within a

Food Group according to personal preference, also ensuring that person maximum flexibility and choice.

For example, assume a married couple are both on a food plan that allows, among other things, 4 bread exchanges a day. These two people can choose any food or combination of different foods from the bread exchange list as long as they don't total more than four bread exchanges. The wife might eat one slice of bread (one exchange), three quarters of a cup of unsweetened cereal (one exchange), two graham crackers (one exchange) and 1/2 cup of mashed potato (one exchange), while the husband might choose a completely different combination of foods from the list that meets his food preferences.

Quite simply, foods within the same list can be substituted for each other, but foods from different exchange groups, in general, should not be substituted. A person needs to eat foods from each of the exchange groups to insure a balanced diet.

It should be noted that the nutrient and calorie values of foods within the same list are not always identical; to a degree, exactness is sacrificed for simplicity and convenience. This does not, however, make the exchange system inferior in any way to other menu plans. The calorie values of different foods are always only approximations. Steaks of the same weight but from different animals will vary in their caloric content, as will grain grown in different climates or soils. Spaghetti prepared by different cooks will not have the same value. For absolutely accurate calculations laboratory analysis of everything you eat would be necessary. For practical purposes, however, the values provided by this exchange system are sufficiently accurate, and used by most professionals for approximating daily calorie intake.

Following your Meal Plan - The FOOD RECORDS

Following your meal plan has been simplified even further for you by use of the FOOD RECORDS. If you have not already located them (in your meal plan package), do so now. There are enough FOOD RECORDS to last you for the entire 10 weeks of the program, plus some extras for you to practice on. Take out a blank FOOD RECORD along with your FOOD GROUP LISTS. You will use one FOOD RECORD for every day you are on the program.

The first step in following the program is to plan in advance. This is important in order to be sure that when the time comes to eat them, you have the foods required by your meal plan in the house. Thus, you should always plan at least one day in advance, and preferably one week. Start by writing tomorrow's day and date in the spaces provided at the top of the FOOD RECORD.

Next, you will note that your FOOD RECORD specifies how many exchanges you should eat from each FOOD GROUP at each meal. You simply refer to the appropriate FOOD GROUP LIST and choose any food from that list that you would like to eat. In the blank space provided on your FOOD RECORD, write in the food that you choose plus the specified amount indicated on the list.

For example, under Breakfast, the first food is "FRUIT", and the specified number of exchanges is one. You refer to the FRUIT exchange list (list #2), and you decide to have Apple Juice - 1/3 cup. In the blank space beside FRUIT you write in "1/3 cup Apple Juice". Instead of apple juice you could have chosen 1/2 small banana, or 1/4 cantaloupe, or 1/2 small grapefruit, etc. All have the same number of calories and the same nutritional value. Next you need to choose one Bread/Cereal exchange. You could choose 1 slice of whole wheat bread, or 1/2 small bagel, or 1/2 cup bran flakes (and if you have milk with your cereal, don't forget to count one dairy exchange).

Continue on down the list until you have picked all of the foods on your FOOD RECORD. Note that where more than 1 exchange from the same food group is required at the same meal, you can choose different foods from that group, or several exchanges worth of the same food. For example, if your plan calls for 3 protein exchanges you could have 1 ounce each of three different meats, or more likely, you will have 3 ounces (3 exchanges) of the same meat.

Once you have filled out your food record completely, you have a complete menu plan consisting of foods you have chosen. You simply follow the plan, eating what is listed on the food record, and you should eventually lose weight. You should check off each food as you eat it in the appropriate boxes on the FOOD RECORD form. You do not need to count calories as long as you stick to your plan. The approximate calorie value of each food you eat is provided for your information.

If you should go off of your food plan one day and eat something extra, be sure to record it in the space provided. In this case you will have to calculate the calorie value of your extras, using a good calorie book. At the end of the day add up your total calories for the day and enter this at the bottom of the page. This total will always equal your planned total, provided you have stuck to the plan. Otherwise you will have to add in any extras you ate (or subtract anything you did not eat that was on your plan).

The Importance of Planning

While you must always plan your meals at least one day in advance, we strongly recommend that you plan what you are going to eat ONE WEEK IN ADVANCE. That means filling in the FOOD RECORDS for the next seven days in advance. There are two advantages to this. First, it helps you to plan your grocery shopping so you can be sure that you have everything that you need for the week. Second, if you set aside about 15 minutes at the same time each week, you can plan your whole week's meals in one sitting, and then not have to worry about it for the rest of the week. This also prevents you from forgetting to plan one day, or not having time another day because of something unexpected. Remember, if you want to enhance your chances of succeeding on this weight control program, you must follow your meal plan, and this means PLANNING IN ADVANCE.

One other note about planning. A big advantage of the exchange system is that it allows you to choose from a variety of foods with very few restrictions, except in quantity. This means that your family can usually continue to eat what they like, only in different quantities than you. When planning your week's meals you might want to involve your family in the planning. This will not only make the program run smoother all around, but can actually be a good family experience. Of course, this may not be relevant to everyone, and others may be in the habit of planning meals by themselves anyway. Whatever fits for you is fine. However, if you are not the one who usually plans (or prepares) the meals, then doing your meal planning in cooperation with whoever does do the planning is essential.

The Importance of Accuracy

Although the above system may sound time consuming, it really is not if you follow the step-by-step instructions above, (and summarized again later). It does require a little extra effort at the beginning until you get to know your foods (1 or 2 weeks). Unfortunately, one thing which often suffers as people try to save time is ACCURACY. Accuracy is essential, especially at the beginning if you are to get to know your foods. If you are accurate now, then very soon you will be able to estimate food portions without measuring when you are in a hurry (although you should always try to measure). Thus, until portions of food can be estimated accurately, it is essential to measure or weigh the food before eating. Most foods on the exchange lists can be measured with regular kitchen measuring spoons, measuring cups, or a ruler. Many meat (protein) exchanges, however, are listed by weight, and an inexpensive kitchen or postal scale is accurate and easy to use. If you do not have one already you will need to buy one. Most meat exchanges weigh 1 ounce; however, an average serving of meat for dinner weighs 3 or 4 ounces, thus equaling 3 or 4 meat exchanges. The weights of the exchanges are for cooked meat, with 4 ounces of raw meat weighing approximately 3 ounces when cooked.

Once you get to know your menu plan, and which foods come from which lists, you will be able to fill out your food records in minutes, and following the meal plan will be much easier. One of the nice things about this meal plan is that it allows you to eat anything, so long as you eat it in moderation.

As you spend time planning your meals and staying within your calorie limit, do not think of yourself as being on a "diet", a diet that you will go off of once the formal program ends! Rather make changes in the way you eat so that you can live with them for years. Thus do not say that you will never have ice cream again, but instead say that you will have ice cream only two times a week and then plan and allow for having a certain amount of ice cream on two days during your week. Planning and thinking in this way will make living much easier if you know that you can have your favorite foods but in small amounts and at fewer times.

A sample filled-in FOOD RECORD is found on the next page. A summary of the steps involved in the meal plan follows that.

FOOD RECORD
1200 cal. plan

Sunday
DAY

March 3
DATE

206

	Food Group	Amount	Food	Cals.	
<u>BREAKFAST</u>	1 FRUIT	: <u>1/3 cup</u>	<u>Apple Juice</u>	40	✓
	1 BREAD/CEREAL	: <u>1 slice</u>	<u>Whole Wheat Toast</u>	70	✓
	1 PROTEIN/MEAT	: <u>1</u>	<u>Poached Egg</u>	75	✓
	1 DAIRY	: <u>3/4 cup</u>	<u>2% Milk</u>	80	✓
	1 HIGH CALORIE	: <u>1 tsp.</u>	<u>Margarine (on toast)</u>	45	✓

<u>LUNCH</u>	1 VEGETABLE	: <u>1/2 cup</u>	<u>Tomato Juice</u>	25	✓
	1 FRUIT	: <u>1 small</u>	<u>Apple</u>	40	✓
	1 BREAD/CEREAL	: <u>1/2 small</u>	<u>Bagel</u>	70	✓
	1 PROTEIN/MEAT	: <u>1 ounce</u>	<u>Farmer's Cheese</u>	75	✓
	1 HIGH CALORIE	: <u>1 tsp.</u>	<u>Margarine</u>	45	✓

<u>DINNER</u>	2 VEGETABLE	: <u>1/2 cup Broccoli</u>	<u>1 cup total</u>	25	✓
		: <u>1/2 cup Broccoli</u>		25	✓
	1 FRUIT	: <u>3/4 cup</u>	<u>Strawberries</u>	40	✓
	2 BREAD/CEREAL	: <u>1/2 cup</u>	<u>mashed potato</u>	70	✓
		: <u>1 small</u>	<u>dinner roll</u>	70	✓
	3 PROTEIN/MEAT	: <u>3 ounces</u>	<u>lean Roast Beef</u>	75	✓
		: <u>(3 exchanges)</u>		75	✓
				75	✓
	1 DAIRY	: <u>3/4 cup</u>	<u>2% Yogurt (with strawberries)</u>	80	✓
	1 HIGH CALORIE	: <u>2 ounces</u>	<u>dry light Wine</u>	45	✓

<u>SNACKS</u>	1 HIGH CALORIE	: <u>20 whole</u>	<u>Spanish Peanuts</u>	45	✓
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<u>EXTRAS</u>	Amount	Food	Cals.
	<u>3/4 cup</u>	<u>milk (oops!)</u>	<u>80</u>

Total of Extras: _____

CALORIES FOR THE DAY

TOTAL PLANNED: 1190

plus extras: 80

ACTUAL TOTAL: 1270

Your first assignment of this program is to follow the meal plan. This is summarized again for you below.

**ASSIGNMENT 1 - FOLLOW THE MEAL PLAN EVERY DAY

- Step 1. Plan meals one week in advance using FOOD RECORDS. Record the day and the date at the top of each FOOD RECORD, and use one FOOD RECORD for each day. Refer to FOOD GROUP LISTS in order to choose the food exchanges outlined on each food record. Fill in the foods you have chosen from the lists in the spaces provided along with the recommended amounts.
- Step 2. Eat precisely what is specified on your food record every day, ticking off each food as it is eaten.
- Step 3. If necessary, add extras not on the plan to the FOOD RECORD. Use a calorie book to calculate the calories in any extras you eat.
- Step 4. Total your calories for the day and record this value in the bottom right hand corner of your FOOD RECORD at the end of the day. If you have stuck exactly to your plan, then this value should equal your planned total.

NOTE: As part of our research program, we will be collecting your FOOD RECORDS from you at each of our meetings. Therefore, do not discard them when you are finished, but place them in the envelope or folder provided for materials which we will be asking you to return.

FOOD ENJOYMENT

While you certainly will be eating less while you are losing weight on our program, you should be enjoying the food you eat even more than you did before. It is not the purpose of the program to make eating an unenjoyable event. Rather, the aim of the program is to make eating an enjoyable event and to add to the pleasure you experience in eating by teaching you to eat on purpose like a gourmet who enjoys his or her food with all of his or her senses.

One who eats a lot and often indiscriminately, just stuffing food into one's mouth, often does not really appreciate the eating experience. By changing your eating habits you can "eat less but enjoy it more". You can learn to enjoy your food by looking at it, enjoying its color and its aroma. Most importantly, you can learn to eat slowly and enjoy each small mouthful, enjoying its texture and its taste. Get the most out of your food by chewing it thoroughly and tasting it with the left side of your tongue, then the right side, and then the back before you swallow. This brings us to your next assignment of the program, "Eating more slowly".

**ASSIGNMENT 2 - EATING MORE SLOWLY

Any food taken to the mouth should be taken on purpose and should be thought about and relished as it goes in. It helps to slow down. That is one of the secrets to full enjoyment of eating. You will find that the following procedures will help you to learn to eat more slowly:

- (1) TAKE SMALL MOUTHFULS
- (2) CHEW THOROUGHLY BEFORE SWALLOWING
- (3) LAY DOWN SILVERWARE AFTER EACH BITE AND ONLY
PICK IT UP AFTER CHEWING AND SWALLOWING.

Because it is so important that you follow our suggestions, each day you will rate how well you were able to do the behavioural recommendations for that week. Each week these recommendations will change. The Behaviour Rating Form, found at the end of this lesson, is fairly straightforward, and includes instructions on how to fill it out.

**ASSIGNMENT 3 - WEEKLY WEIGH-INS

One final thing which we would like you to start this week is a weekly weigh in and recording of your weight. In order to get accurate weights, it will be necessary for you to use a fairly reliable bathroom scale. Then, weigh yourself once a week (usually on the last day of the week for each of your ten weekly lessons) in the following way. Always weigh yourself at the same time of the day on the scale, which you will place on a level, non-carpeted floor. Always place the scale in exactly the same place (mark the floor with tape if necessary) and try to wear the same amount of clothes. When you obtain your weight, then enter it on the chart at the end of this lesson, along with the date, whether you gained or lost during the week, how much you gained or lost for the week, and your total change from the beginning of the program. It may be a good idea to take this sheet out of the manual and post it somewhere so that you may refer to it and not forget to weigh yourself once a week. Do not weigh yourself more than once a week as your weight will fluctuate on a day-to-day basis and you may become discouraged if you should go up a tiny bit on a day or two during the week.

Also, weight loss usually does not proceed evenly, and some weeks may show more loss than others even though you have followed the program just as well on each of the weeks. Do not become alarmed. If you follow the program closely and stick to your calorie limit, you should lose weight at a fairly even average pace.

Because this was the first lesson there were a lot of new things to discuss and explain. Therefore, this lesson is much longer than the rest, so don't be discouraged if you feel a little overwhelmed at this point. Now, turn to the next page for a step-by-step summary of this week's lesson.

SUMMARY - WEEK 1

You have now read the first lesson and it is now up to you to go from here. Following is a summary of the steps you should be taking this week as outlined in this lesson:

- 1) Answer the review questions (immediately following this lesson) to see what you got out of the preceding discussions. The questions are by no means comprehensive but do hit on some of the main points in the lesson.
- 2) Complete BEHAVIOUR RATINGS daily (also found at the end of this lesson).

In addition to the above steps, which you will do every week, each lesson will consist of new ASSIGNMENTS for the week. Once introduced, assignments should be followed every week for the remainder of the program, in addition to new assignments introduced each week. This week's assignments are:

ASSIGNMENT 1: FOLLOWING THE MEAL PLAN EVERY DAY - Follow the meal plan every day for the next week, and for each week hereafter. Be sure to follow the four steps outlined in this lesson (review assignment 1), being sure to plan in advance, so you can shop for what you need. Also, remember to save your used FOOD RECORDS for the remainder of this program to be returned to us at your check-ups.

ASSIGNMENT 2: EATING MORE SLOWLY - Use the three procedures described in this lesson for slowing down and enjoying your food more every day.

ASSIGNMENT 3: WEEKLY WEIGH-INS - Weigh yourself today, record it on your progress record, and then once a week, and only once a week (on the last day of each weekly lesson).

NOTE: You will notice that one of your FOOD GROUP lists is labelled, "UNLIMITED FOODS". These are foods that contain no calories, or so few calories that they need not be counted. Many of them are also good for you, and make excellent snacks (for example, raw vegetables). You are encouraged to eat as much as you want from this list, every day, and to always have some "Unlimited" foods available for when you feel like snacking. Foods from this list can be eaten in ANY AMOUNT and do not need to be recorded on your food records.

PROGRESS RECORD

Name _____ Starting Weight _____ lbs.

[illegible]

REVIEW QUESTIONS - LESSON 1

You are to answer the questions below as clearly as you can in the space provided. Feel free to go back to the material in the lesson if you do not remember an answer.

1. What is the real culprit in obesity and how can it be changed so that people begin to lose weight? _____

2. About how many calories more do you have to burn up than take in in order to lose one pound of fat? _____

3. Why must you keep good records of your calorie intake? _____

4. Why should you not think of yourself as being on a diet?

5. What should be the place of "eating pleasure" in the life of a person involved in this weight reduction program? _____

6. List four habits that you can establish which will help you to enjoy your food more: _____

BEHAVIOUR RATINGS - LESSON 1

For each of your behaviours which you are to rate this week, there are seven boxes, one for each day of the week. They are labelled with the first letter of the day's name. Each day award yourself a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you were able to do that behaviour during the day. At the end of the week, add up how many total points you earned for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. I took small mouthfuls.	—	—	—	—	—	—	—
2. I chewed my food thoroughly before swallowing.	—	—	—	—	—	—	—
3. I laid my silverware down after each bite and only picked it up after chewing and swallowing.	—	—	—	—	—	—	—

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

LESSON 2

You have now followed the menu plan and kept food records for a week. Were you amazed at how fast those calories add up? Now you know where those pounds have been coming from! As you continue to keep track of your food intake, you will become aware of when and how much you eat so that you will be able to know when to stop. Without knowing when or how much you eat, you would not be able to exert control over your eating behaviour.

SHAPING OF BEHAVIOUR

After a week of trying to stay below a calorie limit, you may at times be thinking "Oh, what's the use? I can't just change everything at once". Do not become alarmed - we do not want to see you change everything at once. If you try to change everything at once, you will likely fail. Instead we are going to teach you about shaping or making small livable changes in your behaviours. Shaping is a word which has particular relevance for this program. It refers to small yet realistic changes in behaviour. Shaping is a process of gradual change, with each change more closely approximating or becoming like the desired end behaviour.

Your task is to establish patterns of eating and activity which will lower your weight and then later maintain your weight at a desirable level. If you attempt to change these patterns overnight, the chances of failure are greater than they would be if you make these changes in small but realistic steps. Sure, it would be nice to lose five pounds in one week. To do this, you might have to live on 200 calories a day. But living on 200 calories is nearly impossible and you would soon get so discouraged with such a diet that you would give it up and gain back all the weight the next week - the end result would be nothing accomplished.

So begin by setting realistic goals for yourself. Decide that you will meet these goals. After having success on these goals, then go on to goals which require more self-control. Here are some concrete ways to get started using shaping to help you lose weight:

1. Set goals only for each day and each moment. That is, set short-term goals something like this - I won't have any snacks this morning, or, I will not eat chips when I am watching television tonight. Setting these kinds of goals will make you more likely to succeed rather than if you say that you will not have any snacks all week.
2. List situations in which you eat most often and cut out eating in some of these situations, first concentrating on situations in which it will be easiest not to eat. The food records you keep will provide a great deal of assistance in this procedure.
3. Before attending social events, determine beforehand just how much you will eat (for example, only 12 peanuts and 1 coke, only 2 glasses of wine).

4. List the situations in which you eat less and further decrease and finally eliminate eating in these situations altogether (for example, no refreshments at movies or ball games).
5. Limit between meal eating to certain specific foods. For example, afternoon coffee snacks can be limited to diet cola or coffee with an artificial sweetener. When you go out with others to have a snack, you can order a salad or a dish of fruit. If a place does not have diet pop, order and drink only half of it. Waste the 25 cents - it is better to do that than be fat. Also before you go, think about how many calories you can take in without going over your calorie limit and plan for the day.
6. List the activities and situations in which you do not eat and then do these activities more often (for example, if you tend not to eat when you are bicycle riding, then bicycle ride more often).
7. Control between meal snacking by gradually lengthening periods of abstention, working first with the periods of the day that cause the least difficulty in temptation to overeat. When you have succeeded in abstaining for a specific length of time, allow yourself some kind of reward. If the reward is food, the kind and amount would be decided ahead of time.

If you should have a bad meal or a bad day where you just cannot stay within your calorie limit, do not let that blow the whole program. Such things do happen once in a while. Whatever you do, do not let that make you give up. If you do overeat at a particular time, return to working with the techniques as soon as possible. Usually one indiscretion will not destroy your weight control program. Failure occurs when you let one indiscretion lead to another indiscretion and another and another. Setting small goals will help prevent this cycle by making it easier for you to be successful at each step.

CONTROLLING STATE OF DEPRIVATION

As you move along in the program and become more aware of the times and situations in which you eat, you may notice that there are times when you feel more hungry and times when you feel less hungry. You can use these fluctuations in your feelings of hunger to your advantage. For instance, you can arrange to have highly desirable foods available only when hunger is low. For example, eat desserts only at the end of a meal when you are full. Conversely, allow yourself only less desirable foods when hunger is high as in having Rye-Krisp only for between meal snacks. Also you can anticipate situations in which you will be highly tempted to overeat. Before you go into the situations, you can reduce your hunger just enough to get you through them successfully. For instance, if you know that you are going to a party, then you may have 6 ounces of juice or milk so that you will not be as hungry when you get there and, therefore, will not overeat. Also, if you find yourself eating a lot when you are cooking a meal, then have a light snack before you start cooking and you will taste less.

It is important too, to not limit your calorie intake too much (and not below 1000 calories). If you do, you will lose weight too fast and produce a level of deprivation which will then make you want to eat even more. If your self-control is still not well developed, you will start to eat more and defeat the whole purpose of your calorie restriction. Also, do not limit your diet to one specific food such as protein because this will make your craving for other foods higher. A well-balanced diet is best since it will satisfy your hunger the most. That is why we have provided you with an Exchange system diet. In all then, control your hunger and let it work for you. Do not let yourself get excessively hungry since this will make it very difficult for you to control your eating when you do get into a tempting situation.

YOUR ASSIGNMENTS FOR THIS WEEK:

**ASSIGNMENT 4 - EAT YOUR MEALS ON A REGULAR BASIS

One way to help control hunger is quite simple - have your meals on a regular basis. In fact, this is one of the behaviours which we would like you to try this week. Try to have your three meals at approximately the same time each day. Although this may not always be possible, the main point is that you try to build some regularity into your eating habits. So, for example, if there is one night when you or one of your family arrive home later than usual every week, it is OK to have your dinner at a later time that day every week. Try to avoid unpredictable and sporadic eating patterns.

**ASSIGNMENT 5 - SET ONE SHORT-TERM GOAL EVERY DAY

We would also like you to try setting at least one short-term goal concerning your eating each day. Review the section at the beginning of this lesson for some help. Remember, by short-term we mean things like, "I will not have a snack with my coffee this morning", or, "I will not eat potato chips while watching television tonight". You probably have a pretty good idea of some eating problems which you would like to try to change in this way. You should probably set your goal when you first get going in the morning, or before you retire the previous night. The goal should be small, fairly easy to achieve, and short-term (one day).

**ASSIGNMENT 6 - USE SHAPING TO CHANGE ONE PROBLEM SITUATION

This week you are to pick out one situation in which you seem to have a lot of problems with eating and try to change it gradually over the week using shaping. One situation might be eating while watching television. Others might be eating at parties, or mid-afternoon coffee breaks. Looking over your food records for the week might help you find a problem situation if you cannot think of one offhand (look for situations in which you have eaten extras not on your plan). Review the previous section on shaping to help you with this assignment.

We will want you to do one other thing this week and that is to have someone else in your household become a little bit involved in your program. They are not to do the program with nor criticize the way that you are doing in the program. Rather they are to help with the behaviour ratings. We want you to ask someone in your house to rate how frequently they think that you are able to do the behaviours we ask of you each day. Their form is exactly the same as yours. When both of you are filling in your ratings, do not do it together. Rather you fill in yours and they fill in theirs. This is a little check for our purposes so that we may have some idea as to how other people see you as trying the different things that we suggest. It is not intended to show that you are being good or bad because it is entirely up to you as to how closely you will follow our recommendations. The more you want to lose weight, the more closely you will follow our recommendations.

SUMMARY - WEEK 2

- 1) Answer review questions.
- 2) Prepare your MENU PLAN using the four steps outlined in Lesson One. Be sure to fill in the FOOD RECORDS in advance so that you can plan your grocery shopping. Note that many people find it easier to plan their week's meals (that is, fill in the food records) on a different day from when they sit down to complete their lesson. This is because they may shop in the middle of the week. For example, some people fill in their FOOD RECORDS for the following week (Sunday to Saturday) on the preceding Thursday, because that is when they do their grocery shopping, but they wait until Saturday afternoon or Sunday morning to read through their lesson. Whatever works best for you is fine.
- 3) Complete FOOD RECORDS daily. Check off what you eat after each meal, and total your calories for the day on the Food Records. Remember to keep saving your used FOOD RECORDS.
- 4) Complete behaviour ratings daily, both you and your helper.
- 5) Weekly weigh-in.

**** NEW ASSIGNMENTS THIS WEEK -**

ASSIGNMENT 4 - Eat meals on a regular basis.

ASSIGNMENT 5 - Set one short-term goal a day.

ASSIGNMENT 6 - Use shaping on a problem situation.

This week you will also start keeping a graph of your weight. Your graph is started for you on the next page, and shows your first interview weight and your weight just before you started the program. Each week draw a dot for your weight at the right place and join the dots week by week to see how you are doing weight wise. It might be good if you posted your chart somewhere where you can see it every day.

REVIEW QUESTIONS -- LESSON 2

You are to answer the questions below as clearly and as briefly as you can in the space provided. Feel free to go back to the material in the lesson if you do not remember an answer.

1. Why will "shaping be an important concept for you to use in this weight reduction program? _____

2. List three concrete ways in which you can use shaping which you think may be particularly helpful in your own situation. (Then try to use them during the coming week) _____

3. What are two ways in which you can let your hunger work for you? _____

4. Before going into a situation where I know that I will be highly tempted to overeat, what should I do? _____

BEHAVIOUR RATINGS - LESSON 2

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I rate myself:

Each day award yourself a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you were able to do that behaviour during the day. At the end of the week, add up how many total points you earned for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. I ate each meal on a regular basis.	___	___	___	___	___	___	___
2. I was able to set at least one short-term goal today.	___	___	___	___	___	___	___
3. I was able to use shaping today on my problem situation which is _____	___	___	___	___	___	___	___

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 2 (HELPER)

Each day award your friend a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you think your friend was able to do that behaviour during the day. For each of your friend's behaviours which you rate this week, there are seven boxes, one for each day of the week. They are labelled with the first letter of the day's name. Award the points at the end of each day and do not wait until the end of the week to write them down. Please do it daily. It only takes a minute. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend ate each meal on a regular basis.	_____	_____	_____	_____	_____	_____	_____
2. My friend was able to set at least one short-term goal today.	_____	_____	_____	_____	_____	_____	_____
3. My friend was able to use shaping on his or her problem situation.	_____	_____	_____	_____	_____	_____	_____

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

Note: You will be asked to rate different behaviours for nearly all of the remaining lessons. We appreciate your help. Also, when you make your ratings, do not do them in collaboration with your friend in the program although you may inquire at the beginning of the week as to what the problem situation is that your friend is working on. Do not criticize how your friend is following the program or nag him or her either, as this may harm his or her weight reduction attempts. Thank you again for your help.

You are now two weeks into our program. How are you doing? Is it getting easier to think out your day and plan ahead of time for each day so that you can better deal with situations in which you are likely to be very tempted to overeat? Are you able to make at least one short-term goal each day (sometimes even more than one) and to use shaping in problem situations? Can you use fluctuations in your hunger to your advantage and are you slowing down and enjoying food more? By no means do we expect you to be a master at doing all of these things yet. However, we do expect you to be thinking about them, reviewing them, and trying them often so that they will become natural behaviours for you to do. It is a lot of work but it pays off.

STIMULUS CONTROL OF BEHAVIOUR

By now you may have been noticing specific patterns in your eating patterns because you have been carefully watching everything you eat and recording it down. Perhaps you may have noticed that you only eat when you are in the kitchen. More likely, however, it is probably the case that you have noticed that you eat in many different places and at different times. In fact, you may have noticed that you are irresistibly drawn into overeating when you are in such places as a pizza place, a shopping mall and are walking near the hot dog stand, or are outside your house and the Dickie-Dee ice cream boy comes around. The control that such situations have over your hunger (either real or imagined) is almost amazing and indeed psychologists have a name for it which is stimulus control. This simply means that whenever you are in the presence of a certain stimulus (it can be a situation, a person, or a certain time of the day), a certain behaviour is more likely to take place than if you were in a different situation. The stimulus seems to control the behaviour which in your case is eating. You must note, however, that the control is never totally complete and that by exerting your own willpower, and by using the techniques outlined in this program, you can lessen the control of the stimulus.

The important thing about stimulus control is that you can turn it around and use it in several ways so that instead of making you eat, it can help you stop or not even start eating in certain situations. One way you can use stimulus control is to narrow the range of the stimuli in your environment which have been associated in the past with eating. As these stimuli become less frequent in your life, you will find yourself eating less. Let us outline some examples which will give you ideas on how to narrow the range of eating stimuli in the environment. If you find that you cannot pass up the ice cream stand on the way home from shopping, then take a different route home so that you will not see it. Money is often an important stimulus for buying food. Therefore, do not carry money with you unless you are specifically planning to make a purchase. No money, no unplanned-for food. Also, the presence of food is often a strong stimulus for eating. Consequently, do not keep tempting, fattening foods around such as desserts, candy, chips, or pop.

To many people, eating has become strongly associated with such stimuli as watching television, reading, watching a movie, etc. You can eliminate the control that these situations exert over your eating by making eating a distinctive process - a "pure activity". When you eat, you should do that and nothing else. Remember what was pointed out to you in Lesson 1 about eating like a gourmet. You should fully enjoy the sight, smell, texture, and taste of your food. You can do this properly only if you separate eating from all other activities. For example, you can specify that you will never eat unless you are sitting at a table. Or, you may want to specify that eating can occur only in certain places, for example, in the dining room or kitchen but not in the living room. By specifying the stimuli under which you will allow yourself to eat, you will find that you are less tempted to eat under other circumstances. Limiting eating to only certain situations as just described is a second way of having stimulus control work for you. You may also do some things such as limiting snacks to very specific foods such as apples, vanilla wafers, celery sticks or carrot sticks. If you plan that you can only have certain things then it will be easier to refuse the temptation to have other things.

Generally, if a situation is a particular problem, just avoiding it is a very effective method of stimulus control. However, there are some situations which you just cannot avoid. To handle these you can use stimulus control in a third way. Here you must systematically change your normal behaviour in the situation, eating, to another behaviour. For instance, if you always eat when you go to a friend's house for coffee, then take along some knitting so that your hands are busy and you are less likely to eat. Or, if coffee break at work presents a problem, do not go for coffee but take a 10 minute walk instead.

The above are just some examples of how stimulus control can help you cut down on what you eat. There are many others, depending on the person. Some of the above may apply to you, and others may not. For now, just keep these in mind. This week you will be asked to try only one stimulus control strategy. Remember the principle of shaping introduced in the last lesson. We do not want you to try to change everything at once. The excess stimuli which have become associated with eating in your life do not have to be cut out all at once.

****ASSIGNMENT 7 - MAKE EATING A "PURE ACTIVITY"**

We would like you to start by making eating a "pure activity" as discussed in the previous section. During the next week, you are to eat only in a very specific spot without engaging in other activities such as watching television, reading, or the like. You are to eat, and that is all you are to do. You may, however, talk as much as you like to others who are eating with you at the table and are to enjoy your food as much as possible. You will be recording the frequency with which you are able to do this on your behaviour rating scale.

FOOD BUYING STRATEGIES

Since many problems with overeating stem from availability and handling of food in a home, we will deal over the next few lessons with concrete ways in which you may change your habits about buying, storing, preparing, eating, and cleaning up after meals in your home. We will begin with the buying of food this week. Since just having certain foods in your home can be a powerful stimulus for eating (just talked about under stimulus control section), then the buying of food becomes an important step where you can start controlling the stimuli for eating. If you do not buy certain foods, you will not eat them. Buying food is the first step in the whole process of eating and your buying habits will greatly affect your eating habits. Following are six steps towards helping to limit the amount of food that you buy. Together, they make up your eighth assignment of this program, and hence you are to begin to follow each of the following six steps this week:

**ASSIGNMENT 8 - LIMITING THE FOOD YOU BUY

- STEP 1. Buy groceries from a shopping list. You will be less likely to buy things that you did not plan for.
- STEP 2. Prepare your weekly shopping list after a meal. Your hunger will not have as great an influence on what you think you need to eat.
- STEP 3. Do grocery shopping after a meal. Your lessened hunger will make you less likely to buy food which is not on your list.
- STEP 4. Buy groceries once a week or at least on a regular basis. You will be less likely to buy things when you are hungry and if you do not shop as often you will not see the foods which you might be tempted to buy as much.
- STEP 5. Buy food for specific meals and try to buy just enough so that leftovers are minimized. If you do not have leftovers, you will not be tempted to eat them. Your planning skills are very important here.
- STEP 6. Buy food that requires at least some preparation. You will be less likely to be tempted to snack on it.

The above are some helpful ways of limiting the amount of food you buy. Even though you may already be doing some of these things already, you are to practice all six of the above suggestions this week. You will be rating how often you were able to do these behaviours each day this week. Your helper will also have to rate how frequently he or she thinks you were able to do these behaviours and how frequently you were able to make eating a pure activity each day for the following week.

SUMMARY - WEEK 3

- 1) Answer review questions.
- 2) Meal planning and shopping based on this week's menu plan, using the four steps in Lesson 1.
- 3) Complete food records by the end of each day.
- 4) Complete behaviour ratings daily, both you and your helper.
- 5) Weekly weigh-in, and graphing of weight.

****NEW ASSIGNMENTS THIS WEEK -**

ASSIGNMENT 7 - Make eating a "PURE ACTIVITY".

ASSIGNMENT 8 - Limit your food buying taking the following steps:

- Step 1: Buy groceries from a list.
- Step 2: Prepare shopping list after a meal.
- Step 3: Shop after a meal.
- Step 4: Buy groceries once a week, or at least on a regular basis.
- Step 5: Buy food for specific meals to minimize leftovers.
- Step 6: Buy food requiring some preparation.

REVIEW QUESTIONS - LESSON 3

You are to answer the questions below as clearly and as briefly as you can in the space provided or on the back side of the page if you need it. Feel free to go back to the material in the lesson if you do not remember an answer.

1. What is meant by "stimulus control of eating behaviour? _____

2. What are three ways in which you can use stimulus control to your advantage so that instead of making you eat, it can help you to not eat? _____

3. Buying food is the first step in the process of eating. Briefly list ways in which you can change your food buying habits so that you do not buy food that you do not need. _____

BEHAVIOUR RATINGS - LESSON 3

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I made eating a "pure activity".	_____	_____	_____	_____	_____	_____	_____
2. When I bought food, I bought groceries from a shopping list.	_____	_____	_____	_____	_____	_____	_____
3. I prepared the weekly shopping list after a meal.	_____	_____	_____	_____	_____	_____	_____
4. I did grocery shopping after a meal.	_____	_____	_____	_____	_____	_____	_____
5. I bought groceries according to a schedule.	_____	_____	_____	_____	_____	_____	_____
6. I bought food for specific meals and bought just enough to minimize leftovers.	_____	_____	_____	_____	_____	_____	_____
7. I bought food that requires at least some preparation.	_____	_____	_____	_____	_____	_____	_____

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 3 (HELPER)

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My helper rates me:

Each day award your friend a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend made eating a "pure activity".	___	___	___	___	___	___	___
2. When my friend bought food, he/she bought groceries from a shopping list.	___	___	___	___	___	___	___
3. My friend prepared the weekly shopping list after a meal.	___	___	___	___	___	___	___
4. My friend did the grocery shopping after a meal.	___	___	___	___	___	___	___
5. My friend bought groceries according to a definite time schedule.	___	___	___	___	___	___	___
6. My friend bought food for specific meals and just enough to minimize leftovers.	___	___	___	___	___	___	___
7. My friend bought food that requires at least some preparation.	___	___	___	___	___	___	___

Total points for the week ___

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

LESSON 4

PLANNING PROBLEMS

By now you must be getting pretty used to planning or at least trying to plan your food intake and manage situations which have been problems in the past or situations that come up unexpectedly. How do you think you are doing? Do not be alarmed if your days still do not work out as perfectly as you plan them. It usually takes a while before you can handle every situation that comes up. Right now it is especially important to look at the cases in which your plans do not seem to work. Keep an eye out for situations in which you just cannot seem to follow your plan and try to see what is happening.

For instance, are there situations that come up unexpectedly for which you just have no more calories available for the day? You might handle this by setting up a "slush fund". What we mean by this is to allow for those unexpected foods in your meal plan which you may be tempted by in such situations as maybe an unexpected visit from a friend, or a drink out with your friends - anything which you cannot anticipate beforehand. You could use your snack category on your meal plan for this purpose, if you have one. If your plan does not have a snack category, you could use one of your HI CALORIE exchanges as a "slush fund". What you then do is put a mark beside your snack or one of your high calorie exchanges to designate it as your "slush fund" (mark it with a star, or with an "s"). You still choose your specific food and fill in your food records as always, but in this case you save your slush fund exchange until late in the day, and you use the calories in it should something unexpected come up. In other words, you substitute the unexpected food for your slush fund. If you have set up a slush fund in advance, then you will always have at least some calories available in case something unexpected comes up. It is important, however, that if nothing unexpected comes up, you should eat the food originally planned for.

For example, let's say your snack on a particular day calls for one High Calorie exchange (45 calories), and you have planned in advance to have peanuts (Spanish, 20 whole). You have also marked this as your "slush fund" in case something unexpected happens. Sure enough, a friend drops over unexpectedly on Friday evening and brings along a small bottle of dry white wine. You decide to use your slush fund, and instead of having the peanuts you planned for, you have a 2 ounce glass of wine (also 45 calories). You manage to still stay within your calorie limit for the day (provided of course you don't then have the peanuts later that evening).

While we would like you to stay within the plan as much as possible, if you find that you are having difficulties such as the one above, it might help to set up a slush fund such as above. You should only take calories from the snack categories, or from a dessert, or fruit or whatever, provided you don't decide to use the same Food Group for your slush fund every day. This will require getting to know the calorie equivalents of your foods, and the use of your calorie counter. Also, if you do set up a slush fund, and those unexpected situations don't come up on a particular day, make sure that you do eat those calories either by having the original food

planned, or by having something else of the same calorie value. Remember, we do not want you to limit your daily intake below what we have provided. Finally, if you begin to substitute foods as above, remember to record this on your food records.

Another situation that sometimes poses problems in your plans is an invitation to a wedding or a wine, cheese, and lots of other goodies party. You might get around this by purposely planning to have 100 or 200 calories (no more) than your limit on that day and then reduce your intake by 100 the day before and 100 the day after to make up for it. You could do this by eliminating some things from your meal plan each of those days (again, being sure to note this on your food records). This should not, however, become a habit, and is a strategy you should use only for special occasions.

Certain friends may also make your plans very hard to follow by always insisting that you eat and then making you feel guilty if you refuse. You might help this situation by simply but forcefully stating that you are watching your calories and just cannot have the food. Tell them that they are free to eat but that you would much appreciate it if they would not try to get you to eat too. Plans may also be too hard to follow if you are taking too big of steps in your shaping process. Are you setting goals that are just impossible for you to meet, at least at your present stage? Maybe you should set your goals a little lower and try to take smaller steps. Just remember, when your plans just do not seem to work, stop and analyze the situation so that you can see what is going wrong and how you can change it so that things go right.

REWARDING YOURSELF

The reason that many weight control programs fail appears to be largely because the rewards of weight reduction come very slowly while food is immediately rewarding because of the taste and other things. As long as the reward value of the food overpowers the rewards that come so slowly with weight reduction, then it is likely that food will win out and you will overeat. It is, therefore, necessary that you find rewards that you can give to yourself when you do behaviours that lead to weight loss.

**ASSIGNMENT 9: REWARD YOURSELF FOR BEHAVIOURS LEADING TO WEIGHT LOSS

Beginning this week, every day you are to reward yourself in some way for doing a behaviour that leads to weight loss. The way you are to do this is by setting up short-term contracts with yourself. The contract should go something like this:

"If I do the following behaviour leading to weight loss today, _____, then I will reward myself by _____."

Or, more simply:

"If I do this, then I will reward myself with that."

Here are some examples:

- 1) If you have a salad for lunch, then let yourself read a good book for an hour in the afternoon.
- 2) If you eliminate all unscheduled evening snacking this week, then you will allow yourself a piece of pizza at the party on Saturday night.
- 3) If you manage to stick faithfully to your meal plan for a whole week, then you will go shopping at your favorite store on Thursday morning.

You may also set up longer-term contracts that will sometimes involve another member of your family, or a friend. For example, you may get your husband or wife to take you to a movie minus the children after you have lost 5 pounds, or you might treat yourself to dinner out after every 10 pound weight loss. You must be very careful in rewarding yourself with food treats. If these treats are not carefully planned for in your calorie limit for each day (by substituting different foods on certain days, for example), your food rewards will work against your program. In general, however, if you are careful in planning your intake you should be able to plan these rewards right into your program.

Another way in which you can use self-rewards which helps greatly in your weight loss attempts is to develop reinforcements which remove you from situations in which you are tempted to eat. It is good to substitute non-eating behaviours into situations where you normally would eat, but it is even better to substitute non-eating behaviours that you really like to do. If you tend to watch television and eat on Friday nights, you can arrange to go to a movie or a hockey game or something that you really enjoy (You decide that you will not eat while you are there of course).

Starting this week, then, you are to reward yourself each day for a behaviour leading to weight loss by making contracts with yourself as above.

ACTIVITY INCREASE

By now you must be wondering whatever happened to the activity part of our program. Well, it is finally here and if you are like most people who are trying to lose weight, you probably let out a big groan and said "Oh no!". Do not worry. We are not going to have you out jogging daily or whatever other horrible things you can dream up. Instead, you are going to use shaping to slowly increase your activity level. We will be providing you with an activity schedule later in this lesson. We will be telling you exactly what you need to do each week to meet the minimum activity requirements of this program. As you will see later in this lesson, the activity assignments are easy to follow, and can be done by everyone without any special equipment, and without any drastic changes to lifestyle. Your weekly activity assignments will be an essential requirement in order for you to lose weight and keep it off. Not only that, but you will probably also begin to feel better and healthier. First, however, let us look at some false beliefs that many people have about physical activity.

Many people think that they should not exercise because: 1) they think that physical activity has little effect on energy output; 2) and that whatever effect it does have on increasing output, is outweighed by the increased food intake that accompanies increased activity. Both of these beliefs are false. Physical activity does indeed have an effect on energy output. This has been measured both directly and indirectly and can be translated into how much of an activity is needed to burn a pound of fat. For example, moderate walking for 36 hours will burn one pound of fat. This might seem hopeless but remember that the 36 hours does not all have to be at one time. Walking one hour per day will give you 30 to 31 hours a month which will be almost one pound burned. Over one year this will add up to almost 10 pounds. Another example is swimming. One hour of swimming is approximately 670 calories in energy expenditure. This means that 5 hours of swimming will add up to one pound. On a regular basis this can contribute significantly to energy output and weight loss.

Because these seemingly small amounts of exercise do add up, rather small changes in our daily habits can have a great effect on weight control. Remember that brisk walking one hour daily will take off approximately 10 pounds in one year and that the converse holds true too - if you usually walked one hour daily and then quit, you could gain 10 pounds in one year just from that small change. By adding or subtracting one hour of brisk walking daily, you really do not alter your appetite enough that it would affect how much you ate. You probably would continue to eat the same amount as before.

The second false belief that most people have is that physical activity increases food intake. There is a small amount of intake increase with activity but only to certain points. Above the normal range of activity, exhaustion occurs and both appetite and food intake go down. This is not a stable state and cannot be endured for too long. Below the normal range is the sedentary range. Here even though activity is decreasing, food intake stays the same and may possibly even increase. The best way then to use activity in weight loss, is to increase your activity slowly in little progressive steps. Do an amount that makes you work a bit but not so much that you get really played out. Start activities that you will enjoy and can do regularly. Calisthenics usually is not much fun and only lasts for a few days. Walking, swimming, cycling, cross-country skiing, are much more enjoyable and are especially good if you can get others to do them with you. They can become social events and thus will be more likely to remain in your lifestyle.

In addition to following the activity schedule that we will be providing for you, what we would like you to start thinking about this week is what kinds of extra activities you might like to start to do in future weeks. Try to think of activities that you like or that you think you might like. If you learn to do enjoyable activities, they will become part of your life. If you pick activities that you do not like, then you most surely will quit them as soon as the program is over. Just as in planning changes in your eating behaviour, you must plan for changes in your activity habits that you can live with for the rest of your life. So be careful and

begin to think about changes that are liveable and even enjoyable. Maybe you would like to start swimming once or twice a week, or bowling, playing squash, badminton or racquetball once in a while. Think about joining a local community or recreation club where you can participate in a variety of activities. For others, aerobic dance classes might be considered, or just going ice-skating with the family or friends on a regular basis. As mentioned earlier, we will be helping you by gradually and specifically increasing your activity level over the next few weeks, and you could complete all of the activity requirements of this program without taking up any of the above activities. For some people, that will be just fine. Everyone, however, does not like to do the same things and sooner or later you may want to try some new things you think you might like. In addition, as we slowly increase your activity levels you may find that you are getting bored with doing the same things, only longer. So start thinking about it now.

ACTIVITY SCHEDULE - AN OVERVIEW

The activity assignments of this program have been designed to be acceptable to just about everyone without requiring any special equipment, without requiring that you join a health spa, and without requiring that you be an athlete. You should, however, have already checked with your doctor whether it is safe for you to begin to increase your activity level.

Each week you will be asked to increase the calories you expend through activity by a minimum amount. This will be your minimum Daily Activity Goal. This increase in caloric expenditure will be translated into the number of minutes of light, moderate, or heavy exercise you should do every day in order to achieve your daily goal. Special Activity Records simplify this process for you.

Below is your first Activity Assignment as it will appear in every lesson for the remainder of the program. Following that, we have provided a detailed explanation of the activity assignment.

**ASSIGNMENT 10 - ACTIVITY ASSIGNMENT

Minimum DAILY ACTIVITY GOAL - 50 calories per day

Extra Activity Required -

Light - 15 minutes per day (3 boxes)
or Moderate - 10 minutes per day (2 boxes)
or Heavy - 5 minutes per day (1 box)

Minimum Weekly Activity Goal - 350 calories per week

Maximum Daily Activity Goal - 150 calories per day

Let us look at each of the above items in your assignment.

- 1) Minimum Daily Activity Goal - This is the minimum number of calories you should be trying to burn off every day through physical activity. This extra activity should be over and above what you already normally do! Thus, if you already normally walk

10 minutes to a bus stop every day, then you must not count that as your extra activity, but should choose something that you do not already do. You could choose another activity altogether, or, you could walk an extra 10 minutes every day (for a total of 20 minutes) by walking to a bus stop that is farther away.

- 2) Extra Activity Required - This information is quite useful, and is provided in order to make it easier for you to meet the activity requirements of the program. Quite simply, it tells you how many minutes of light, moderate, or heavy activity you would have to do in order to burn off approximately 50 calories, this week's Daily Activity Goal. For your information, we have divided various activities into three categories, Light, Moderate, and Heavy. You will find this list in your ACTIVITY package. All activities in the light category burn off approximately 4 calories per minute, moderate activities burn off 7 calories per minute, and heavy activities burn off 10 calories per minute. The minutes of extra activity required to meet your goal have been rounded to the nearest 5, in order to make record keeping easier. So if you did 15 minutes of light activity, you would burn off approximately 60 calories (4×15), thus meeting your daily goal plus some. So each week, all you have to do is choose activities from your lists in order to achieve your daily goals. This has been simplified even further for you by use of the Activity Records which we will discuss in the next section. Note that you would be required to do 15 minutes of light activity OR 10 minutes of moderate activity OR 5 minutes of heavy activity, but not all three. (Beside the minutes for each type of activity you will see "5 boxes" etc. This will be explained later).
- 3) Minimum Weekly Goal - This simply equals the minimum daily goal times 7 ($50 \times 7 = 350$). This is useful in case you can't meet your daily goal every day, but still want to try to make your weekly goal. On some days you may do more activity than your minimum, and you can apply this extra activity to days when you are unable to meet your daily minimum goal. The main thing is that you try to burn off a minimum of 350 calories by the end of this week. It is BEST to try to spread this over as many days as possible, which is why we recommend shooting for a daily goal.
- 4) Maximum Daily Goal - Your minimum daily goal provided for you with each week's activity assignment is just that - a MINIMUM. You are encouraged to do more than the minimum every day, the more the better, up to a point. It is necessary to set an upper limit on the amount of extra activity you do each day so that you do not overextend yourself. That is the purpose of the Maximum daily goal. It also prevents you from waiting until the weekend to try to do all your activity on one or two days ("Weekend Warrior"). Also, remember the principle of shaping. We want you to gradually change your lifestyle. Drastic changes are unlikely to be followed in the long run.

ACTIVITY RECORDS

The activity records are easy to fill out. They are designed to help you follow your activity schedule, and to help you keep track of how many calories you have been burning off each day. You will find your activity records in your ACTIVITY package. Take the activity record for this week (WEEK 4) out now and look at it.

At the top of the page is a partial summary of your activity assignment for the week. On the rest of the page you will see that there are seven sets of boxes, one for each day of the week (labeled down the left side of the page). For each day of the week there are three rows of boxes, each labelled either "L" (Light), "M" (Moderate), or "H" (Heavy). These correspond to the three types of activities described in the previous section.

Each box represents 5 minutes of activity. So each time you complete 5 minutes of light activity on Sunday, for example, you would put a check mark in the row of boxes marked "L" for "Light" (top row). Similarly, for each 5 minute block of moderate activity you complete, check off an "M" box (middle row), and for 5 minutes of Heavy activity, check off a box in the "H" row for Sunday (bottom row).

For example, let's say that on Sunday you walked, at a leisurely pace, for 15 minutes. You would check three boxes in the "L" (light) row for Sunday ($3 \times 5 \text{ minutes} = 15 \text{ minutes}$). If you played tennis for 30 minutes (a moderate activity), you would check 6 boxes in the "M" row ($6 \times 5 \text{ minutes} = 30 \text{ minutes}$).

For the first week, your minimum daily goal is 50 calories, which requires 15 minutes of light activity. So, once you have checked off 3 boxes in the Light category on a given day, you have met your minimum daily goal ($3 \text{ boxes} \times 5 \text{ minutes per box} = 15 \text{ minutes}$). Similarly, you could have also achieved your goal by checking only 2 boxes (10 minutes) of moderate activity, or 1 box (5 minutes) of heavy activity (you can, of course do more, up to your maximum daily goal). Each week, the number of boxes which will meet your daily goal in each type of activity will be provided in brackets beside the "Minutes Required" in your activity assignment.

To calculate your actual daily caloric expenditure, count the number of boxes checked off in each row, and put these totals in the spaces provided to the right of the page, under the column headed "# of boxes". Multiply the number of boxes by the number provided on your Activity Record (20, 35, or 50) to get the total number of calories burned off in each type of activity (this is because one minute of light activity burns off 4 calories, and each box is 5 minutes, so each box means $5 \times 4 = 20$ calories burned off. The same holds for moderate activities: $7 \text{ cal. per minute} \times 5 = 35$, and heavy: $10 \times 5 = 50$). Enter these values in the spaces marked A, B, and C. The total of $A + B + C = \text{Total calories burned off for the day}$. The total of all seven days (weekly total) should be entered at the bottom of the page at the end of the week.

Now, let us look at the sample Activity Record on the next page.

"SAMPLE"

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ACTIVITY RECORD - WEEK 4

for Sam.

DAILY ACTIVITY GOAL

50 CALORIES (minimum)
150 CALORIES (maximum)
350 CALORIES PER WEEK

MINIMUM EXTRA ACTIVITY REQUIRED

15 minutes Light (3 boxes)
OR, 10 minutes Medium (2 boxes)
OR, 5 minutes Heavy (1 box)

Each box checked (✓) equals 5 minutes of activity completed

		15 min.	30 min.	45 min.	1 hour	1 hr. 15"	1 hr. 45"	# BOXES CHECKED			DAILY TOTAL (A+B+C)
s	L	✓	✓	✓				3	X 20 =	60 (A)	60
u	M								X 35 =	(B)	
n.	H								X 50 =	(C)	
m	L	✓	✓					2	X 20 =	40 (A)	75
o	M	✓						1	X 35 =	35 (B)	
n.	H								X 50 =	(C)	
t	L	✓	✓	✓				3	X 20 =	60 (A)	60
u	M								X 35 =	(B)	
e.	H								X 50 =	(C)	
w	L	✓	✓	✓				3	X 20 =	60 (A)	60
e	M								X 35 =	(B)	
d.	H								X 50 =	(C)	
t	L	✓	✓	✓	✓	✓	✓	12	X 20 =	240 (A)	450
h	M	✓	✓	✓	✓	✓	✓	6	X 35 =	210 (B)	
u.	H								X 50 =	(C)	
f	L	✓	✓	✓	✓			4	X 20 =	80 (A)	250
r	M	✓	✓					2	X 35 =	70 (B)	
i.	H	✓	✓					2	X 50 =	100 (C)	
s	L	✓						1	X 20 =	20 (A)	20
a	M								X 35 =	(B)	
t.	H								X 50 =	(C)	

SUM OF ALL DAILY TOTALS =

TOTAL CALORIES EXPENDED THIS WEEK THROUGH ACTIVITY

975

On Sunday, Sam walked for 15 minutes at a leisurely pace, and that is all he did on Sunday. Therefore, he checks off 3 boxes on Sunday beside "L" for light activity ($3 \times 5 = 15$ minutes). The total number of "L" boxes for Sunday (3) is entered to the right of the row at the end of the day. This is multiplied by 20, to arrive at 60 calories burned off in light activities for the day (entered in the space marked "A"). The total of all Sam's activities for Sunday is $A+B+C = 60 + 0 + 0 = 60$. So 60 is entered to the far right under "Daily Total".

On Monday, Sam walks for 10 minutes at a leisurely pace (2 boxes of light activity), and 5 minutes at a brisk pace (1 box of moderate activity). This works out to 40 calories of light activity (2 boxes $\times$ 20) and 35 calories of moderate activity (1 $\times$ 35). The total for the day is $A+B+C = 40 + 35 + 0 = 75$ calories.

On Tuesday and Wednesday, Sam walks for 15 minutes (slow walk), just as he did on Sunday. Total for the day: 60 calories.

On Thursday, Sam has a rather busy day. First he goes bowling for 1 hour (light activity), then when he gets home he does some heavy gardening for 30 minutes (moderate activity). One hour of bowling (60 minutes) means 12 boxes ($12 \times 5 = 60$) of light activity. Thirty minutes of gardening is 6 boxes ($6 \times 5 = 30$) of moderate activity. Now you check the totals for Thursday to make sure you understand how they were determined.

Sam continues to keep track of his activities for the remainder of the week in the same way. On the last day of the week, he totals up all of the daily totals to arrive at his total calories burned off for the week. This is entered at the bottom of the page.

You can see from the above example that it is not necessary to do only one type of activity each day. You can mix up light, moderate, and heavy activities any way you like to achieve your minimum daily goal. The minutes of different types of activities required which we provide you with each week are only guidelines meant for people who only want to stick to one type of activity on a given day.

Since many of you will just be starting to get used to doing extra activity, we recommend that you stick to light activities for one or two weeks. In fact, we suggest that everyone meet their minimum activity requirement this week by taking a 15 minute walk each day (minimum). Walking is an excellent way to get started on an activity program, and 15 minutes should not be too difficult for anyone.

There are enough activity records to last you for the rest of the program. As with the FOOD RECORDS, you will be asked to save all of your activity records to give back to us at each of your check-ups. Thank you.

Now that you are all set to increase your activity level in addition to cutting down your calorie intake, one final point must be mentioned as to why you should do this. When people diet only, they

lose more muscle or lean tissue and less fat tissue. When people exercise in addition to watching their diets, they lose more fat and less lean tissue. Since we want you to lose fat and not lean tissue, it is important that you incorporate activity in your program - activity that you will keep doing once the program is over.

FOOD STORAGE

Although this lesson is already long, we are going to add one more step in our concrete discussions of ways to handle food in your home so that you will be less likely to eat when you are not supposed to. Already you should be making some changes in the way you buy food as discussed last week. Now even when you get your planned-for food home, you may have problems trying to keep yourself from eating it. One thing which helps is to keep tempting foods out of sight. If you cannot see the food you may be less tempted to nibble at it. It is a simple case of stimulus control again. The sight of food is often a stimulus for eating it. Thus if you cannot see it you are less likely to eat it. Your third new assignment this week consists of three steps all aimed at keeping tempting food out of sight (and out of mind).

**ASSIGNMENT 11 - KEEP FOOD OUT OF SIGHT

Step 1: Put all foods away from clear sight.

Step 2: Store problem foods (if you must have them in the house) in inaccessible as well as out-of-sight places such as the back of the bottom cupboard, the top shelf where you need a chair to get it, or even in the basement.

Step 3: Store all refrigerator food in non-see-through containers to take them out of your sight.

SUMMARY - WEEK 4

- 1) Answer review questions.
- 2) Review meal plan, and complete grocery shopping to meet plan.
- 3) Complete food records.
- 4) Complete behaviour ratings, both you and your helper.
- 5) Weekly weigh-in, and graphing of weight.

**NEW ASSIGNMENTS THIS WEEK -

ASSIGNMENT 9 - Reward yourself each day for behaviours leading to weight loss by making contracts with yourself.

*** continued next page...

ASSIGNMENT 10 - ACTIVITY ASSIGNMENT/ACTIVITY RECORDS

Increase activity by a minimum of 50 calories per day.

Minimum Daily Goal - 50 calories

Minutes Activity: Light - 15 minutes (3 boxes)

Mod. - 10 minutes (2 boxes)

Heavy - 5 minutes (1 box)

Minimum Weekly Goal - 350 calories

Maximum Daily Goal - 150 calories

For this week stick to light activities such as 15 minutes (or more) of walking.

ASSIGNMENT 11 - Keep food out of sight by following the three steps outlined in this lesson.

REVIEW QUESTIONS - LESSON 4

You are to answer the questions below as clearly and as briefly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. Why should you reward yourself for doing behaviours that lead to weight loss? _____

2. What are three ways in which you can reward yourself for weight loss behaviours? _____

3. Why is it necessary to increase activity as well as reduce calorie intake when trying to lose weight? _____

4. When you increase your activity level, what are some points that you should take into account when planning this increase? _____

5. When you are cutting down on the amount of food you eat, the way you store food in your home is important because _____

BEHAVIOUR RATINGS - LESSON 4

I rate myself:

Each day reward yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I rewarded myself today for doing behaviours that will lead to weight loss.	___	___	___	___	___	___	___
2. I did more activity than I usually do.	___	___	___	___	___	___	___
3. I put all foods away from clear sight.	___	___	___	___	___	___	___
4. I stored problem foods in inaccessible as well as out-of-sight places.	___	___	___	___	___	___	___
5. I stored all foods in the refrigerator in non-see-through containers.	___	___	___	___	___	___	___

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 4 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend rewarded him/herself for doing behaviours that will lead to weight loss.	___	___	___	___	___	___	___
2. My friend did more activity than he/she usually does.	___	___	___	___	___	___	___
3. My friend put all foods away from clear sight.	___	___	___	___	___	___	___
4. My friend stored problem foods in inaccessible as well as out-of-sight places.	___	___	___	___	___	___	___
5. My friend stored all foods in the refrigerator in non-see-through containers.	___	___	___	___	___	___	___

Total points for the week ____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

NOTE: Remember that when you are doing your ratings, that you are not to nag or criticize your friend as this may make it harder for him or her to lose weight.

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LESSON 5

MOTIVATION

During the past 4 weeks you should have been losing weight if you have been following the program. You probably noticed a fairly large loss in the first few weeks. Now you may have slowed down a bit in your rate of loss. This is to be expected in almost any program and in fact you may sometimes find that you do not lose any weight for a few weeks. This is called a plateau and as long as you are not gaining, just keep on following the program and you will start dropping soon. If you start to gain, then carefully examine what you are doing. Are you following the program closely or have you stopped doing some of the behaviours? Remember that each new assignment introduced each week should continue to be followed each week thereafter. Are you eating differently and exercising differently? What has changed? Has your motivation to lose weight gone down? All of these things may happen to you at some point in the program and will make it difficult to lose weight. Watch for them and handle them as they come up.

Although you may not be having problems with motivation yet, you likely will at some time during your weight loss program. It may not be in these first 10 weeks but as you continue doing the program after so that you will get down to your goal weight, you will likely experience some problems with motivation - especially as you near your goal weight. This happens because the weight that you have already lost has made you look almost as good as you want to look. The social distress that you were feeling at your heavy weight may be almost gone and consequently you may not be as highly motivated to turn down that doughnut with coffee or to leave the dinner table when you are full. You must, however, keep doing these things. If you do not, you will regain that lost weight.

There are, of course, behaviours that you can do which will help keep up your motivation to do these behaviours which are necessary for you to first lose weight, and second to keep it off. One way to keep yourself doing these behaviours is to make them part of your life as we have stressed repeatedly already. Establish long-lasting patterns of eating which will become habitual. It is hard to practice some of these behaviours but it is easiest to do them at the beginning of a program. So, practice them a lot now. You will soon find out which ones you can live with. Once you practice these behaviours such as planning, enjoying your food, weighing yourself weekly, shaping your behaviour by setting little reachable goals, using your hunger to your advantage, using stimulus control to your advantage, handling your food in your home in such a way that it presents the least temptation possible, and rewarding yourself for doing these behaviours, you will find that they will become habitual and natural feeling. A second way to help you keep up your motivation is to set up long-term contracts with yourself or others.

This was discussed in the last lesson where we suggested that your husband or wife maybe take you to a movie after a loss of 5 or 10 pounds. Be sure to specify what you must do to get the reward and what the reward will be. If you set up the long-term contract when you are highly motivated, it will carry you through when your motivation goes down.

***ASSIGNMENT 12 - ACTIVITY ASSIGNMENT

Last week you were told to start increasing your activity in little steps. As well, you were asked to do a minimum extra daily expenditure of 50 calories, which is a total of 350 calories for the week. This was the equivalent of about a 15 minute leisurely walk for most people (or a 10 minute brisk walk). How was it? Did you manage OK? This week you are to try to do a bit more. Try to do a minimum of 100 extra calories worth of exercise each day (but no more than 250 per day). This means a minimum expenditure of 700 extra calories for the week (100 x 7). It should not be hard. Remember to split it up onto different days and it will not seem half as bad. Keep records of these extra activities again. Your activity assignment is summarized at the end of this lesson.

In addition to these more major planned activities, you can also add to your energy output in many little ways - ways that you do not even need to record and which, when added together, can account for a considerable amount of energy expenditure even though each of them individually do not account for much. You can add on energy output in many ways because our way of life is basically a lazy one. Our modern world spends billions of dollars each year just so people can avoid activity. We try to save exercise in the ways that we move from place to place: the long walk gave way to the bicycle, the bus, and now the car; and the trek from a parking place to a store has given way to parking-lot-at-the-door shopping centers. And once we arrive where we are going, stairs have been replaced by escalators and elevators to make certain that we use as little energy as possible. In industry, machines are doing most of the hard work which is good in several ways but bad in others because jobs require less effort and thus fewer calories and are less interesting. And exercise is decreasing at home as well. Many machines help with housework - the electric vacuum cleaner, dishwasher, clothes washer and dryer, and mixer. Even ice cream freezers are electric as are ice crushers and can openers. All work against men and women who are trying to watch their weight. And downstairs or out in the garden, we are no better off. We use electric drills and saws instead of a brace and bit and handsaw, and gasoline or electric lawn mowers and hedge cutters instead of human powered tools.

All of these gadgets take away chances for useful exercise, and people actually feel left out if they do not think that they own enough machines of this sort. While this may be good for industry, it is surely a problem for the individual. Now you must start thinking about spending your own energy instead of saving it as all of our modern conveniences want you to. You could begin by throwing out all of your electric appliances and your car but this would be rather silly. You can, however, change the ways you use them. That is the topic of your new assignment for this week (see next page).

ASSIGNMENT 13 - USING UP ENERGY IN LITTLE WAYS

The following are some examples of using up energy in little ways. Each one may seem small, but taken together and over a period of time they will burn off calories that would normally be stored as fat.

- 1) Walk or bicycle to a nearby store, the post office, etc., instead of driving your car. It is probably almost as fast.
- 2) Instead of fighting for a parking spot outside the door of your grocery store or mall, park at the far end of the lot and walk the few extra steps.
- 3) Walk to the next bus stop when waiting for a bus.
- 4) Do not try to save extra steps around the house - use them.
- 5) In stores, offices, etc., use the stairs instead of the escalator or elevator, or, if it is too many floors, take the elevator or escalator only part of the way and walk the rest.
- 6) When your electrical appliances wear out, get a good quality manual one where you will use a bit of exercise, or even have both now and give preference to the manual one.

For the coming week, you are to try to use up energy in these little ways and in any other little way you can think of. Your new assignment this week is to do at least one of the above (or perhaps others you can think of) every day. This will be the only new behaviour you have to work on and to rate how often you can do it this week, so you can really concentrate on it. It will be hard to do as you are so used to trying to save steps. Keep the above list handy and refer to it every day to remind yourself. Wherever you can use up energy, it means less fat for you to carry around. Work hard and it will become easier. Those little increases here and there will add up quite dramatically.

NUTRITION

Instead of giving you any more new behavioural things to do this week, the remainder of this lesson will be devoted to a discussion of nutrition and its importance in weight reduction. Just continue trying all of the things that you were introduced to in the past four lessons so that they will become natural and part of your life.

Nutrition is important to everyone and should be watched carefully when you are trying to lose weight. Your body will suffer if you are not taking in the proper nutrients, especially on a limited calorie intake. In order for you to stay healthy, your body needs carbohydrates, protein, fat, vitamins, minerals, and water. These all work in combination with each other so it is important to include all of these in your diet.

Carbohydrates are our main source of quick energy. All plants contain carbohydrates which we refer to as sugars and starches. Although carbohydrates do have some other functions, their main function is to provide energy. The caloric or energy value of plants depends on the fiber and water content of the plants. Plants with a low fiber or water content are higher in calories than those with a high fiber or water content. Recently, refined carbohydrates or sugars have been implicated as a factor in heart disease. Although high levels of refined sugars may not be desirable, it is important to have some carbohydrate in the diet, including weight reduction diets.

Protein furnishes calories and can be used for energy or for building and repairing body tissue. It cannot be used for both purposes at the same time, however, so we need calories from other sources to meet the energy needs of the body. Our most important sources of protein are animal products such as meat, fish, poultry, eggs, milk, and cheese. Dried peas and beans and peanut butter are also good protein sources.

Fat is our most concentrated source of calories. A given amount of fat supplies over twice the calories that the same amount of carbohydrate or protein would. This is why we have to watch the amount of fat we eat when cutting down on calories. This does not mean, however, that all fat must be cut out of the diet. Since all animal products contain fat, we would have to greatly limit our protein in order to eliminate fat from the diet. Also fat is important because it has a high filling value, it increases the palatability of foods, and it is a carrier of the fat-soluble vitamins.

Vitamins and minerals do not furnish calories to the diet but are important in regulating and controlling many body processes. They are found in many different foods. Water is also a very important nutrient. It makes up a large percentage of our body, carries nutrients to body cells, and carries waste away from the cells.

Nearly all nutrients except vitamins, minerals, and water contain calories. It is impossible to talk about weight control without discussing calories since proper weight maintenance is dependent upon a balance between energy output (activity) and energy intake (calories). We are concerned with two primary aspects of calories in our program - the caloric value of foods and the caloric needs of the body. The caloric values of foods have been determined in the laboratory and indicate the amount of energy in the foods. One gram of pure carbohydrate yields 4 calories, one gram of fat yields 9 calories, and one gram of protein yields 4 calories. Using these basic figures we can easily determine the caloric value of any food by looking at its composition and then using these figures. The caloric needs of the body depend on several factors and can be classified into two main areas which are the basal metabolic rate (BMR) and the muscular work, activity, and movement of the body. The BMR is the number of calories needed by the body for maintenance of its basic functions. The BMR is affected by several factors which

are growth (increases BMR), sex (men have a higher BMR than women due to body composition), pregnancy (increase), and age (decreases with age). The BMR stays fairly constant per person, however, and the muscular work and activity is what causes variations in a person's daily caloric needs.

When you want to lose weight, you must create a negative energy balance in your body by taking in fewer calories in your food than you need for your daily activity (BMR plus other muscle work). Even though you reduce the amount of food that you take in when you are losing weight, you must be very careful to maintain a balanced diet by including carbohydrates, protein, fat, vitamins, minerals, and water in your food intakes each day. To maintain the best balanced diet your diet should be high in protein and low in carbohydrates and fat but by all means do not cut out all carbohydrates and fat from your diet. The meal plan provided by this program meets these requirements.

Following are seven handy questions which you should ask yourself about your diet should you ever go off this plan:

1. Are you eating too much food? (your food record sheets should tell you this).
2. Are you eating too much fat? (it has the most calories per gram).
3. Are you eating too much sugar? (only gives you calories but no nutrients).
4. Are you eating too many empty calorie foods? (like sugar, these only give you calories, but no nutrients).
5. Are you eating too many highly processed foods? (these often have sugar added and also lose nutrients the more they are processed).
6. Are you eating too few fruits and vegetables? (if so, then you are missing many valuable nutrients).
7. Are you eating enough different foods? (you may miss out on many important nutrients if you are not, and you may also end up eating more because you are only eating what you like).

Before summarizing this week's lesson there is one other thing we would like to mention. Sometimes when you are trying to lose weight, others in your home may be making it harder for you to lose weight by their comments to you and by their own eating behaviours. If this is happening, ask these people to not interfere with your program. It is important that others are not making it more difficult for you to lose weight. If they are not helping you, it is important that they are not hindering you either. Therefore, please tell them that we are asking them to not interfere with your program either by their behaviour or by their comments.

SUMMARY - WEEK 5

- 1) Answer review questions.
- 2) Review meal plan in advance and buy groceries.
- 3) Complete food records.
- 4) Complete behaviour ratings, both you and your helper.
- 5) Weekly weigh-in, and graphing of weight.

***NEW ASSIGNMENTS THIS WEEK -

ASSIGNMENT 12 - ACTIVITY ASSIGNMENT

Minimum DAILY ACTIVITY GOAL - 100 calories

Extra Activity Required -

- Light Activity - 25 minutes (5 boxes) per day
- or Moderate Activity - 15 minutes (3 boxes) per day
- or Heavy Activity - 10 minutes (2 boxes) per day

Minimum WEEKLY Activity Goal - 700 calories

Maximum Daily Activity Goal - 250 calories

(Be sure to use Activity Record marked "Week 5")

ASSIGNMENT 13 - USING ENERGY IN LITTLE WAYS: Use up extra energy in some small way every day, referring to our suggestions, or think of some of your own.

REVIEW QUESTIONS - LESSON 5

You are to answer the questions below as clearly as you can.
Feel free to go back to the material in the lesson if you do not
remember an answer.

1. What are two things that you can do so that you can carry through
with your program if your motivation drops down? _____

2. Why does modern living make it hard for people to lose weight and
how can you get around this problem? _____

3. Which contains more calories - a gram of carbohydrate or a gram
of protein? _____

4. Sugar, either pure or in processed and junk foods, should not be
overeaten because _____

BEHAVIOUR RATINGS - LESSON 5

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points you earned during the week.

S M T W T F S

1. I was able to add in little extra activities during the day.

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

Did I find this hard to do, and why? _____

BEHAVIOUR RATINGS - LESSON 5 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend.

S M T W T F S

1. My friend was able to add in
little extra activities
during the day.

Total points for the week _____

All of the time = 5 points
Most of the time = 3 points
Some of the time = 1 point
None of the time = 0 points

LESSON 6

ULTIMATE AVERSIVE CONSEQUENCES

In Lesson 4 we told you that many weight control programs fail because the rewards for losing weight come very slowly while food is immediately rewarding. People, therefore have problems resisting food. We consequently had you begin to reward yourself for doing behaviours which would lead to weight loss so that you would do them despite the rewarding value of food. Another problem that people have in resisting food is that the undesirable consequences of overeating are often far removed from the actual act of overeating. Thus not only is food immediately reinforcing, but the harmful consequences of overeating are a long way down the road and the good effects and rewards for losing weight are often a ways down the road as well. When you are overeating, you are seldom thinking about the harmful consequences that may befall you later. We want you to change this by thinking about some of the things that may happen to you because of your overeating when you are actually in the process of overeating. We want you to think about these ultimate aversive consequences (UAC's) at the time that a stimulus to eat inappropriately presents itself. Thinking about the UAC will serve to punish thoughts about overeating and will make you less likely to overeat.

The use of UAC's is really another form of stimulus control. Before when we discussed stimulus control, we said that you might control a situation by not making snacks available or by avoiding situations in which you are likely to overeat. However, sometimes you cannot totally avoid a situation or a problem food. By using UACs, you can alter the situation enough that you will be less likely to eat. Just the thought of the long-term consequences of overeating can so change your feelings about eating the food in question, that it may no longer seem attractive to you.

The UACs or ultimate aversive consequences of overeating are many. On a general level, obesity is related to a number of undesirable physical, psychological, and social consequences. Physical problems which are often noted in the obese include respiratory difficulties, cardiovascular dysfunctions, diabetes, kidney disease, toxemia, menstrual abnormalities, and arthritis of the spine and lower extremities. Psychological problems which sometimes seem to come with obesity include feelings of inferiority, inadequacy, and shame. Socially it has been said that obesity often throws a dark shadow over a person's relationships with others because many view the fat person in our culture as being sloppy, irresponsible, and ungainly. Unfortunately, the fat person may often agree himself or herself with such evaluations. Although such problems do not occur in every obese person, they do occur often enough to cause many obese people problems and feelings of inadequacy.

****ASSIGNMENT 14 - MAKE UP A LIST OF 10 PERSONAL UACs**

This week we would like you to make up a list of 10 UACs which are particularly applicable to you. Although the above statements are potent, they are too generalized and abstract to be of use to you when you use them to stop you from overeating when you are tempted to do so. You are not to write such generalized statements as "Overweight women die younger". Instead, make up a list of personal UACs, ones which are specific to your situation and mean the most to you. The examples below show you how specific your statements must be to be of the most help to you:

"When I wear shorts, my legs look like hams."

"My husband is embarrassed to be with me because I am fat."

"Some people don't seem to want to be my friends."

"People gawk when I go to the pool in my bathing suit."

"My mother-in-law's subtle sarcasm came through with 'You sure do love to eat, don't you, Betty'."

"My wife must feel like she's going to bed with a walrus."

Statements of actual or imagined social rejection, sarcastic treatment, critical references to bodily contours or proportions, extreme personal sensitivity to over excess weight, demeaning inferences concerning professional incompetence or carelessness can all be effective. These statements about one's self are not easy to write. It will be a very humbling experience, but it is extremely important that your UACs hit you right between the eyes. Be honest. This list is just for you. No one else needs to see it so be as frank and honest as possible.

When you have written up your list of 10 UACs, carry it with you at all times. Read the list over at the first indication that you are tempted to eat inappropriately. Suppose you are downtown shopping and you walk by a snack bar which advertises strawberry pie with whipped cream. Let us say that you stand there for a few seconds trying to decide whether or not to indulge yourself. This is the time for you to pull out your list of UACs and read them over. Do not trust your memory. Carry the list with you at all times and use it whenever you are tempted to eat inappropriately. It might be useful when you are grocery shopping and are thinking about buying something that is not on your list. Be sure to use this list only when you are tempted to eat inappropriately. You are not to rehearse this list before appropriate or planned for eating.

****ASSIGNMENT 15 - BODY SELF-ASSESSMENT**

We would also like you to do another thing this week for each of the next seven days only. The request may seem a little silly but will make the ultimate aversive consequences of overeating hit home

to you. Often overweight people can wear clothes that make them look quite attractive because the rolls of fat are well hidden by carefully chosen clothes. At times, however, you must get into a bathing suit or a pair of shorts and it is then that you feel the aversive consequences of your weight. For each of the next seven days, you are to stand before a mirror nude or in your underclothes each night for several minutes. You are to look closely at your appearance, even if you find the experience aversive. Then, write down some negative response you had. These responses are to reflect your spontaneous reaction when you see yourself and are to be as emotionally charged as possible. Some examples are: "Good grief. Do I really look like that?", "I could stick an encyclopedia between the folds and never see it", "How can my partner want to crawl into bed with that?". Write your responses at the bottom of your UAC list so that when you are tempted to overeat, you will read the UACs and your responses to seeing yourself nude or nearly so. You will find as you read these, that you will be able to visualize yourself as you looked, and you will experience strong motivations to not eat even though you are very tempted.

FOOD PREPARATION

We have already dealt with concrete ways in which you can buy and store food so that you will be least tempted to overbuy and overeat. This week we will look at ways in which you can prepare food so that you will be least tempted to overeat.

**ASSIGNMENT 16 - PREPARE FOOD IN LESS TEMPTING WAYS

- Step 1. Prepare the exact amount of food that you need so that you can avoid leftovers (they will only tempt you to eat).
- Step 2. Prepare low calorie foods whenever possible (when you have a choice between foods, always try to pick the one with fewer calories).
- Step 3. Cook with lids whenever possible. You will not see the food and thus will be less likely to pick at it.
- Step 4. Sample cooking dishes only as you need to. Remember that anything extra must be counted on your meal record form.

Practice the above steps for the coming week.

**ASSIGNMENT 17 - ACTIVITY ASSIGNMENT

For your extra activities, keep the SAME GOALS that you had last week. These were to do between 100 - 250 extra calories worth of extra exercise each day. This means a minimum expenditure of 700 extra calories for the week (100 x 7). Also keep working in little extra activities into each day such as walking to post a letter, parking at the other end of the parking lot, standing instead of sitting when you are talking on the phone, and the like.

SUMMARY - WEEK 6

- 1) Answer review questions.
- 2) Look over meal plans, and shop for what you need.
- 3) Complete FOOD RECORDS daily.
- 4) Complete BEHAVIOUR RATINGS daily, both you and your helper.
- 5) Weekly weigh-in and graphing of weight.

** NEW ASSIGNMENTS THIS WEEK -

ASSIGNMENT 14 - Make up a list of 10 personal UACs. Carry it with you at all times, and read it at the first indication that you are tempted to eat inappropriately.

ASSIGNMENT 15 - Body self-assessment.

ASSIGNMENT 16 - Prepare food in less tempting ways by following the four steps outlined under "Food Preparation."

ASSIGNMENT 17 - ACTIVITY ASSIGNMENT - Use the same goals as last week (minimum Daily Activity Goal of 100 calories) Use Activity Record marked "Week 6".

Remember too, that the benefits which you will get out of this program will depend on the degree to which you actually follow it and participate in it.

REVIEW QUESTIONS - LESSON 6

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. Why are the aversive consequences of overeating often too weak to stop one from overeating? _____

2. How can a list of UACs help one exert control over the urge to eat?

3. Cooking with lids is an example of stimulus control. How does it help?

BEHAVIOUR RATINGS - LESSON 6

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I used my UAC list when I was tempted to eat inappropriately.	___	___	___	___	___	___	___
2. I prepared the exact amount of food that was needed for meals.	___	___	___	___	___	___	___
3. I prepared low calorie foods.	___	___	___	___	___	___	___
4. I cooked with lids.	___	___	___	___	___	___	___
5. I sampled cooking dishes only as I needed to.	___	___	___	___	___	___	___

Total points for the week ___

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

Rate the following behaviour as well, but do not add it into your total points for the week:

6. I observed myself in the mirror either nude or nearly nude for several minutes. ___

I had the most problem with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 6 (HELPER)

58

257

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend used his/her UAC list when he/she was tempted to eat inappropriately.	___	___	___	___	___	___	___
2. My friend prepared the exact amount of food that was needed for meals.	___	___	___	___	___	___	___
3. My friend prepared low calorie foods.	___	___	___	___	___	___	___
4. My friend cooked with lids.	___	___	___	___	___	___	___
5. My friend sampled cooking only as he/she needed to.	___	___	___	___	___	___	___

Total points for the week ____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

LESSON 7

By now many of the behaviours which we have been asking you to do should be becoming much easier for you to do. You should be making livable changes in your eating and activity habits. These changes should be part of your new life-style and should be resulting in a slow but sure weight loss. You should now be aware of which situations make it more likely that you will eat and should be able to change or avoid these situations so that you will not eat what you have not planned for. Planning for eating and activity should also be easier at this point even though it still will involve work and steady dedication to the program.

DEVELOPMENT OF INCOMPATIBLE BEHAVIOURS

As just mentioned, you should now be aware of which situations present particular problems when it comes to overeating for you. We have already said that you could avoid these situations or if that is not possible you could change the situation perhaps by making food less visible or in other ways already discussed in the past six lessons. Another way in which you can lessen your urge to overeat in various situations is by taking part in activities that are incompatible with eating. By incompatible activities we mean activities which are hard to do when you are eating. Thus, when you do the activity, you will be less likely to eat.

You often may face situations which you know are just terribly tempting in regards to eating but which you simply cannot avoid due to business, social, or other assorted reasons. When you must face these situations, you can now substitute another behaviour instead of eating. To have the greatest effect in stopping you from eating, these new behaviours which you do should be behaviours which you really enjoy doing. If you substitute behaviours which you do not like to do, you will be unlikely to do them consistently and instead will eat, which you do enjoy very much.

**ASSIGNMENT 18 - SUBSTITUTE ACTIVITIES INCOMPATIBLE WITH EATING

Each day, we would like you to substitute a behaviour or activity which is incompatible with eating for a situation in which you would normally eat inappropriately, or be very tempted to eat inappropriately. The following are some examples as to how you may substitute activities into your day which are incompatible with eating:

- 1) If you generally go out to dinner on Friday evenings, you could substitute going to a movie instead. There you will be less likely to eat than if you went to a restaurant. You could also substitute a sports activity like swimming or ping pong or anything else you enjoy.
- 2) In place of coffee and a sweet roll, sandwich, or cake in the afternoon, you might substitute sitting down with a good book for half an hour, or doing the laundry, the ironing, some yard work, or other chores.

- 3) If you have a job, you might go for a 10 minute walk instead of going for coffee.
- 4) Even when you are in a situation where everyone else is eating you can substitute incompatible activities. You can talk, or suck on a low calorie candy or life-saver.

In all of the above cases, if you are engaging in the above substitute activities, you will be less likely to stuff high calorie foods into your mouth. Always try to tailor the behaviours you select to do in place of eating to your own specific life-style. The above are just examples. Try to choose behaviours which you know you will like. It may take some thinking. Each day try to choose one from our examples above, or the list below, and substitute it for inappropriate eating, or tempting situations. If none of our examples suit you, then think of some yourself. In any case, your assignment is to engage in one substitute activity every day. Below are some further suggestions for eating-incompatible activities:

- Gardening,
- Telephoning a friend,
- Walking,
- Relaxing in a hot bath,
- Starting a new book,
- Writing a letter,
- Keeping up a diary,
- Engaging in a favorite hobby.

As mentioned above, when choosing behaviours to substitute in place of eating, choose ones which you know you will like. The practice of substituting behaviours incompatible with eating is most effective if you select activities that you enjoy. You may even want to save highly rewarding and enjoyable activities to be done when there is an especially strong tendency to overeat. The main thing is to do something that blocks eating. Choose a highly desirable incompatible behaviour so that you will not mind doing it - you will find that you will not miss eating much at all.

**ASSIGNMENT 19 - TELL YOUR FRIENDS ABOUT YOUR WEIGHT PROGRAM

This is another type of activity which you can do which is incompatible with eating although the "incompatibility" does not immediately meet the eye. In this activity you tell your friends that you are on a weight program and that you are off desserts or whatever for a week. Then, if you do eat in the presence of these friends, you may lose a bit of face. By telling your friends of your goal, you have altered the situation in which you normally would eat

so that you will be less likely to eat when you are in their presence. Actually, this procedure is very much like the ultimate aversive consequences procedure which you practised last week. You can use this same procedure in many spontaneous situations. You will be less likely to eat dessert if you announce to your table companions that you have given up desserts for a week. Your friends will help matters by not offering desserts once they know that you are not eating them. Similarly, when offered a snack at a party, you can respond, "No thank you. I have given up all in-between-meal snacks this week". Such statements will establish rules in the situation which will help you overcome the temptation to overeat.

There is yet another incompatible behaviour which you can do to block eating and which is especially helpful when you are away from home. If you have trouble buying and eating "goodies" when you are shopping or are downtown, you can avoid this by not taking money, especially small change along. Without money to buy tempting food during excursions, your outside eating will be reduced. This principle can also apply to all restaurant and cafeteria eating. If you plan to eat out and you want to control how much you eat before facing the inviting menu or buffet line, take only enough money to allow minimal food buying. You do not eat what you cannot buy. If the above situations are particularly troublesome for you, then think about trying this strategy.

FOOD SERVICE

Last week we dealt with ways in which you could prepare food so that you would be least likely to overeat. This week we shall have you practice ways which will help you to keep from overeating by altering the way you serve food at the table even before you begin to eat it.

**ASSIGNMENT 20 - SERVE FOOD IN LESS TEMPTING WAYS

This assignment consists of 5 steps or behaviours which you are to practice for the coming week. All are designed to alter the way your food is served (either by you or by another member of your family) so that you will be less tempted to overeat.

- Step 1) Serve food in covered, non-see-through serving dishes so that you will be less likely to be tempted to eat more than you have planned for.
- Step 2) Put on the table only what is needed for that meal. If you limit what you put on, you will be less likely to overeat.
- Step 3) Serve yourself last so that you will not take a big share.
- Step 4) Keep food away from you at the table. If it is not close, you will not see it as much and will be less likely to reach for it.

Step 5) Serve yourself completely once: no seconds. If you do not allow yourself seconds, then you will be able to limit your calorie intake.

The above steps are all designed to make it less tempting for you to take more food than you need at a meal. Practice them for the coming week.

**ASSIGNMENT 21 - ACTIVITY ASSIGNMENT

For your extra activities this week, your goals will be increased somewhat from last week's goals. This week do between 150 - 350 extra calories worth of activities a day. This means a minimum Daily Activity Goal of 150 calories, and a minimum Weekly goal of 1050 calories (150 x 7). Keep working on the little extra activities which you can do during the day as well, such as carrying in the groceries one bag at a time, standing instead of sitting while doing the ironing, parking at the other end of the parking lot, shovelling the snow yourself, and the like. Your activity assignment for this week is summarized, as always, at the end of this lesson.

You might also want to begin to think about other activities you can get involved in on a regular basis, such as swimming, racquet-ball, joining the Y, aerobics classes, etc. Some of you might want to begin to substitute your walks (etc.) with these activities on some nights, since your minimum goal now requires at least 40 minutes of light activity a day (or 20 moderate, or 15 heavy). Many of you, however, will be quite satisfied to continue doing what you are doing, only for longer periods of time. Many people find walking, for example, to be quite enjoyable, and look forward to their walk every day.

Turn to the next page for a summary of this week's lesson.

SUMMARY - WEEK 7

- 1) Answer review questions.
- 2) Plan and shop for meals according to this weeks meal plan.
- 3) Complete FOOD RECORDS daily.
- 4) Complete BEHAVIOUR RATINGS daily, both you and your helper.
- 5) Weekly weigh-in and graphing of weight.

**** NEW ASSIGNMENTS THIS WEEK -**

ASSIGNMENT 18 - Substitute activities incompatible with eating into your day at least once a day every day.

ASSIGNMENT 19 - Tell your friends you are on a weight control program.

ASSIGNMENT 20 - Serve food in ways less likely to tempt you to overeat. Follow the five steps outlined in this lesson daily.

ASSIGNMENT 21 - ACTIVITY ASSIGNMENT

Minimum DAILY ACTIVITY GOAL - 150 calories

Extra Activity Required -

Light Activity - 40 minutes (8 boxes) per day
or Moderate Activity - 20 minutes (4 boxes) per day
or Heavy Activity - 15 minutes (3 boxes) per day

Minimum WEEKLY Activity Goal - 1050 calories

Maximum Daily Activity Goal - 350 calories

REVIEW QUESTIONS - LESSON 7

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. When you are substituting an incompatible behaviour in place of eating, what kind of behaviour should you choose and why?

2. Give three examples of how you might substitute behaviours that are incompatible with eating into your everyday life.

3. List three behaviours which you can do when serving food which you think will help you the most in keeping from overeating.

BEHAVIOUR RATINGS - LESSON 7

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I was able to substitute a behaviour that was incompatible with eating today.	—	—	—	—	—	—	—
2. I served food in covered, non-see-through containers.	—	—	—	—	—	—	—
3. I put on the table <u>only</u> what was needed for that meal.	—	—	—	—	—	—	—
4. I served myself last.	—	—	—	—	—	—	—
5. I kept food away from me at the table.	—	—	—	—	—	—	—
6. I served myself completely only <u>once</u> : no second helpings.	—	—	—	—	—	—	—

Total points for the week _____

All of the time = 5 points
Most of the time = 3 points
Some of the time = 1 point
None of the time = 0 points

I had the most problem with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 7 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend was able to substitute a behaviour that was incompatible with eating today.	___	___	___	___	___	___	___
2. My friend served food in covered, non-see-through containers.	___	___	___	___	___	___	___
3. My friend put on the table <u>only</u> what was needed for that meal.	___	___	___	___	___	___	___
4. My friend served him/herself last.	___	___	___	___	___	___	___
5. My friend kept food away from him/herself at the table.	___	___	___	___	___	___	___
6. My friend served him/herself completely only <u>once</u> : no second helpings.	___	___	___	___	___	___	___

Total points for the week ___

- All of the time = 5 points
- Most of the time = 3 points
- Some of the time = 1 point
- None of the time = 0 points

LESSON 8

CHAINING

In this lesson we do not intend to introduce a number of new techniques and approaches. You are to continue practising all of the techniques which we have already introduced. However, we do think that the following discussion of chaining may be very useful to yourself in helping you gain a better understanding of the purpose behind many of the things that you are doing.

All of us have problems writing the correct year during the month of January, and we often type "ting" instead of "tin" because we are so used to performing the sequence of behaviours which lead to typing "ing". These common mistakes illustrate the power of chaining. Each behaviour is a stimulus as well as a behaviour and the stimulus value of the behaviour exerts stimulus control over other behaviours which follow. Thus the process of writing "198" becomes the stimulus for writing a "4" (for 1984) instead of a "5" (for 1985). Thus chaining may be defined as a series of responses in which one response produces the stimuli for the next response.

The concept, of course, relates to chains of behaviour which terminate in eating, and the principles involved in building and breaking chains of behaviour. Chaining can also be used to increase activity.

Lengthening the chain. In Lesson 1, we discussed taking small bites, laying down your fork between bites and not putting more food on the fork until the food in your mouth has been chewed slowly and swallowed. While doing this, of course, you should completely relish and enjoy your food. All of these actions involve lengthening the chain of behaviours which will terminate in food consumption. The longer the chain, of course, the less food you will eat. You can further slow down your rate of eating (and thus decrease the amount you eat) by interrupting your eating with periods of conversation or by holding the food on the fork for increasingly longer periods before placing it in your mouth. Remember that in order for you to successfully establish a long-lasting habit, you should use the principle of shaping. If you do not regularly talk much while you eat, a few breaks for conversation while eating may be introduced at first, and then these can be increased in frequency. Similarly, you can practice holding food on your fork for longer and longer periods of time. You will recall the principle outlined in Lesson 2 regarding using periods of hunger to your advantage. With this in mind, you might practice interruption procedures at first near the end of the meal when you are not as hungry. Then, gradually move these interruption procedures toward the front of the meal (shaping).

The main application in "lengthening the chain" involves having many steps in the sequence of actions which have to occur between the desire to eat and the actual eating. Thus, if you decide that you will do all of your snacking only at a certain fountain or ice cream

stand which is some distance from where you live, you will be less likely to snack. Another idea is to allow yourself only 25 cents a day for snacks, thus forcing yourself to save 3 days for an ice cream cone or 5 to 7 days for a hamburger.

You can also use the technique of lengthening the chain to help yourself to do more activity. If you find that despite all your good intentions, you just cannot seem to do the activities you plan for, then you can lengthen the chain involved in going for a walk for instance. Perhaps you get a block up the street and turn around and come back. You can lengthen this chain by setting up your walk around little errands you must do where doing one will lead to the next. You may walk to post a letter and then go and drop some clothes off at the cleaners. On the way home you may stop for a newspaper and check in to see how a friend is doing with his gardening. Your walk will be more pleasant and seem more useful to you.

Chaining and activity. One other thing about chaining as it relates to activity. People sometimes have rather elaborate steps which they must go through before they are ready to actually do an activity. The end result is that they usually never get around to doing the activity. In order to insure that the activity does get done, it may be necessary for these people to shorten the chain leading to activity. In other words, they may have to cut out some of the steps leading up to activity so that they will be more likely to do the activity. Perhaps you may have this kind of problem. Whenever you plan to go for a walk, you say that you will not go until you do the dishes, make the beds, have supper ready to be prepared, and sweep the floor. Once you start doing these things you decide as well to do a load of laundry and dust the living room. By the end of all this, you do not have any time left for a walk (the family will be home in 5 minutes) and you are tired. Result - you do not get to do your needed and planned-for walk. To make sure you get your walk in, cut out some of the steps which you must do before you allow yourself to go for a walk. Maybe decide to do the dishes and make the beds. Leave the rest for when you get back from your walk.

Eliminating parts of a chain. You will recall that we have already suggested that you not have snacking food around and that you not carry money with you unless you have in mind making particular purchases. Also, by walking a route such that you cannot stop for food or by going to a movie instead of to a restaurant you can reduce the probability of eating. All of these suggestions involve both "stimulus control" (Lesson 3) and "eliminating parts of a chain". This logically follows since the various parts of the chain are stimuli which exert control over behaviours which follow.

At times, however, you will find that you have been lax in establishing stimulus control and you will realize that you are very near the end point in a chain of behaviours which will terminate in overeating. Is it possible to break the chain at this point? It certainly is! Let us suppose that Saturday night is a problem if you do not have a planned activity. According to an earlier lesson, the

best way to deal with this is to make sure you have an activity planned. Suppose, however, that your plans do not work out and you end up staying home. Soon you are out to the refrigerator during a television commercial. You open the door of the fridge, look to see what is in there, take out some ham, put it on the cupboard, get out the other ingredients and proceed to make a sandwich. Now even though the end of the chain leading to eating is near, any of these behaviours could have been interrupted so that eating would not occur. You could have refused to open the refrigerator door. You could have refused to take anything out. You could have put all the food away again before making the sandwich. If you have not interrupted up to this point you still can even when you are lifting it up to take a bite. Simply put it in a bag and give it to someone else saying that you are trying to lose weight. Even if you take one bite, you can still break the chain. Refuse to take another bite and give or throw the sandwich away. You see it is possible at any and all points in an eating chain to eliminate some part of the chain by performing some alternative behaviour (putting food back, throwing it away, etc.). It is never too late until the food is swallowed. You will find many situations in which it will be handy to keep this in mind. If you find yourself with a handful of popcorn, throw it in the wastebasket and leave the room. If you have taken a second helping even after you have eaten enough, refuse to pick up the fork.

**ASSIGNMENT 22 - INTERRUPT A CHAIN OF BEHAVIOURS LEADING TO EATING

For this week, we would like you to each day try to interrupt a chain of behaviours which typically leads to eating. Review our examples above until you clearly understand what we mean by interrupting the chain. You can interrupt the chain early, or late, but the earlier the better. Always remember that you are in command and that you can stop the eating process at any point.

EATING BEHAVIOUR

Last week we made suggestions as to how you might serve food at the table so that you would be least tempted to eat. This week we shall deal with a few suggestions as to how you actually should eat at the table. Many suggestions could be made in this area and fortunately you should already be practising a number of them. These were the suggestions made for increasing your enjoyment of food in Lesson 1. These included taking small mouthfuls, chewing the food thoroughly before swallowing, and laying down your silverware after each bite and only picking it up after chewing and swallowing. This week we want you to add two more behaviours to these:

**ASSIGNMENT 23 - LEAVE THE TABLE AS SOON AS YOU ARE FINISHED EATING

Leave the table as soon as you are finished or remove your plate and utensils from where you are sitting so that you will not be tempted to eat more.

****ASSIGNMENT 24 - LEAVE A SMALL AMOUNT OF FOOD ON YOUR PLATE**

Get into the habit of leaving a small amount of food on your plate. It shows you that you are making progress since you no longer feel compelled to eat everything you see.

Practice these behaviours every day for the coming week.

****ASSIGNMENT 25 - ACTIVITY ASSIGNMENT**

Your goals for extra activities this week are the SAME AS THOSE FOR LAST WEEK. This week do between 150 - 350 extra calories worth of activities a day. This means a minimum expenditure of 1050 (150 x 7) calories for the week. You could accomplish this by taking a 20 minute brisk walk every day. Keep working on the little extra activities which you can work into your day as well such as taking the stairs instead of the elevator, walking to post a letter, going to the basement to get something instead of sending your son or daughter, and purposely parking a block away from the store even though you could park right outside the door.

SUMMARY - WEEK 8

- 1) Answer review questions.
- 2) Plan and shop for meals according to this week's meal plan.
- 3) Complete FOOD RECORDS daily.
- 4) Complete BEHAVIOUR RATINGS daily, both you and your helper.
- 5) Weekly weigh-in and graphing of weight.

**** NEW ASSIGNMENTS THIS WEEK -**

ASSIGNMENT 22 - Interrupt a chain leading to eating.

ASSIGNMENT 23 - Leave the table as soon as you are finished eating, or remove your plate and utensils from where you are sitting.

ASSIGNMENT 24 - Leave a small amount of food on your plate.

ASSIGNMENT 25 - ACTIVITY ASSIGNMENT
SAME GOALS AS LAST WEEK.

REVIEW QUESTIONS - LESSON 8

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. Chaining may be defined as a series of responses in which one response produces stimuli which exert control over the next response. Give an example from your own experience of a series of behaviours which terminates in eating which illustrates chaining.

2. Describe a way in which you can lengthen an eating chain.

3. If you eliminate parts of an eating chain, you will be less likely to eat in the end. Why?

4. Why is it a good idea to leave the table as soon as you are finished?

BEHAVIOUR RATINGS - LESSON 8

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I was able to interrupt a chain of behaviours leading to eating.	—	—	—	—	—	—	—
2. I left the table as soon as I was finished.	—	—	—	—	—	—	—
3. I left a small amount of food on my plate.	—	—	—	—	—	—	—

Total points for the week _____

All of the time = 5 points

Most of the time = 3 points

Some of the time = 1 point

None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 8 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for the week.

	S	M	T	W	T	F	S
1. My friend was able to interrupt a chain of behaviours leading to eating.	___	___	___	___	___	___	___
2. My friend left the table as soon as he/she was finished.	___	___	___	___	___	___	___
3. My friend left a small amount of food on his/her plate.	___	___	___	___	___	___	___

Total points for the week ____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

LESSON 9

MAKING HUNGER A STIMULUS FOR SATISFACTION

By this point in your program you should periodically be feeling hungry even if you never before felt this way. In Lesson 2 we told you how to use feelings of hunger and of being full to your advantage so that you could control how much you ate. Now we are going to talk about feelings of hunger and of how slight feelings of being hungry are good since they can indicate to you that you are losing weight.

When you feel hungry you generally interrupt these sensations as signals for eating. At times, of course, food is not available. At other times food may be available but you refuse to eat because you want to lose weight. Either way if you cannot eat you probably feel deprived and unhappy. For most of us, these are the only two reactions we have ever experienced to feeling hungry: 1) "it's time to eat ... good!" or 2) "how terrible it is that I cannot eat now."

It is possible, however, to experience a third reaction to feelings of hunger - the happiness and satisfaction of knowing that you are losing weight when you feel a bit hungry. We can think of hunger as being produced in part by a negative energy balance in the body although it may also be caused by certain stimuli which in the past were related to eating (for example, being at your grandmother's). Whenever you are hungry generally at least some degree of negative energy balance is present. Thus whenever you feel hungry, you are losing weight. Realizing this can bring you a lot of satisfaction. You may find this hard to believe, but hunger can actually become a pleasurable experience, while a full feeling can be unpleasant if it signals overeating and certain knowledge that you are storing fat instead of losing fat. You should learn to associate the feeling of hunger with pride for self-control and the satisfaction of making progress in weight reduction. Thus last week's suggestion that you leave a bit of food on your plate is good. It should indicate that you are not totally full. It is a good idea, in fact, to get up from the table when you are a tiny bit hungry. If you get up full or very full, then you are likely to have overeaten. Of course, you should not get up when you are noticeably hungry because then you will have a hard time resisting food which you come across later in the day.

PLANNING

By now you should have realized that planning is an important part of losing weight. Without some idea of how you are going to regulate calorie intake and expenditure, you will have a harder time sticking to a program. Your plans do not have to be written down but you do have to have them. You must know or have some idea of how you will handle an unexpected eating situation, and you must have a plan of action when you are going to a banquet or a party. It will be good for you to read the small section on planning in Lesson 4 to reacquaint yourself with some problems that happen in planning and how you might deal with them. Even though you may never be able to plan every calorie in food and activity for a day, it is important to

have plans and try to stick to them. If you plan too much for yourself, take smaller steps so that you can reach your planned goals (shaping). Be careful too, to watch for times when your plans just do not seem to work. See how you can change the situation so you can meet your plans. Find out what is going wrong and try to change it so that things go right.

All of this talk applies not only to planning what you eat but also must include planning what kind of activity you will do. In fact, many people so dislike activity that it may be more important for them to stress activity planning than eating planning, although they must do both. Since many people do not like activity, they must plan for and make time for it. Otherwise it is almost guaranteed that time will run out in their day and none will be left for activity. Again as with eating, you do not have to write your plan down. You do, however, have to decide at the beginning of the day just what activity you will do for the day and then you must plan your day around it. With activity it is also a good idea to have some general idea as to what activities you will do throughout the week. If you plan ahead of time, you will not be left on the last day of the week with all of your extra activity calories left to expend. If you leave everything to the last day, you will be unlikely to do all of it or if you do it you will not enjoy it because you will be doing so much and may get played out. As with eating planning, you must also investigate what is happening if your plans do not seem to be working out and you cannot follow them. Perhaps you leave your activity until late in the evening and then find you are too tired to do it. You must then find some time earlier in the day to do it. Maybe before supper or maybe at work during your noon break. Perhaps you just get bored - then find someone else to do the activity with you. Whatever the problem, analyze it, think of a way to change, and try it so that you can follow your plans.

FOOD CLEAN-UP

This is our last week on suggestions in our series on how you may reduce eating by changing the ways in which you buy food, store food in your home, prepare food, serve food, and eat food. The final step is food clean-up. Food clean-up can also affect eating just as the five ways of handling food already discussed can. Basically, if the food is left around and not immediately put away, then it will present a temptation for you and make you more likely to eat.

**ASSIGNMENT 26 - HAVE SOMEONE ELSE CLEAR FOOD

Have someone else scrape the dishes and store the leftovers (in non-see-through containers of course).

**ASSIGNMENT 27 - SCRAPE PLATES DIRECTLY INTO GARBAGE

Scrape plates and serving dishes directly into the garbage can as soon as possible and in one rapid process. Once the leftovers are all mixed up in the garbage can, they will certainly be less tempting to eat.

**ASSIGNMENT 28 - ACTIVITY ASSIGNMENT

Your goal for extra activity is increased by a small amount again this week. For this week, your Minimum Daily Activity Goal is set at 200 calories per day (maximum, 500 calories per day). This means a minimum extra expenditure of 1400 calories for the week (200 x 7). Do not be alarmed with this increase. It will be the last one which we give you and is a goal which you should aim for over the next several months. If you would like to, you can set your goals higher over the next several months. Do not, however, go below the Minimum Goal which we have given you today. You could accomplish this goal by a 50 minute leisurely walk every day, or a 30 minute brisk walk every day. Twenty minutes a day of Heavy Activity will also do it. Remember, regular exercise is important if you are to maintain your weight losses now, and in the future.

SUMMARY - WEEK 9

- 1) Answer review questions.
- 2) Plan and shop for meals according to this week's meal plan.
- 3) Complete FOOD RECORDS daily.
- 4) Complete BEHAVIOUR RATINGS daily, both you and your helper.
- 5) Weekly weigh-in and graphing of weight.

** NEW ASSIGNMENTS THIS WEEK -

ASSIGNMENT 26 - Have someone else clear food from table.

ASSIGNMENT 27 - Scrape plates directly into garbage.

ASSIGNMENT 28 - ACTIVITY ASSIGNMENT

Minimum DAILY ACTIVITY GOAL - 200 calories

Extra Activity Required -

Light Activity	-	50 minutes (10 boxes) per day
or Moderate Activity	-	30 minutes (6 boxes) per day
or Heavy Activity	-	20 minutes (4 boxes) per day

Minimum WEEKLY Activity Goal - 1400 calories

Maximum Daily Activity Goal - 500 calories

REVIEW QUESTIONS - LESSON 9

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember the answer.

1. Why can feeling a bit hungry become a pleasant experience?

2. Why should you be careful to not get up from the table when you are feeling quite hungry even though a bit of hunger is fine and even recommended?

3. Why is planning an important part of a weight reduction program?

4. Why is food clean-up an important part of your meal when you are trying not to overeat?

BEHAVIOUR RATINGS - LESSON 9

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total points that you earned during the week.

	S	M	T	W	T	F	S
1. I got up from the table a bit hungry.	—	—	—	—	—	—	—
2. I had someone else store the leftovers from the meal.	—	—	—	—	—	—	—
3. I scraped the plates and leftovers that were being thrown away directly into the garbage immediately after the meal.	—	—	—	—	—	—	—

Total points for the week _____

All of the time = 5 points
Most of the time = 3 points
Some of the time = 1 point
None of the time = 0 points

I had the most problem with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 9 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many points you awarded your friend for the week.

	S	M	T	W	T	F	S
1. My friend got up from the table a bit hungry.	_____	_____	_____	_____	_____	_____	_____
2. My friend had someone else store the leftovers from the meal.	_____	_____	_____	_____	_____	_____	_____
3. My friend scraped the plates and leftovers that were being thrown away directly into the garbage immediately after the meal.	_____	_____	_____	_____	_____	_____	_____

Total points for the week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

This is the last week that you will be rating behaviours for your friend. Thank you very much for all your help.

LESSON 10

In this lesson you will not be asked to do anything new nor will you have to do behaviour ratings. Instead, we will discuss how you can keep losing weight until you reach your goal weight and then how you can stay at that weight once you have reached it.

After nine weeks in this program, you may now be at your goal weight. However, if you had 20 or more pounds to lose, which is probably the case, then you must continue to follow the program until you reach the weight you want to be. As mentioned throughout your lessons, losing weight is not an easy business and it is very easy to slip back into your old eating and activity patterns. Thus, it is very important that you continue practising what you have learned in this program. Do not forget about it once the program is over or you most surely will gain back the weight which you lost. Keep working at all of the behaviours which we have taught you, especially the ones that have worked well at keeping you from overeating and under-exercising. Make the behaviour changes a part of your everyday living so that you will do them naturally.

One certain way for you to keep losing is to continue to set calorie limits for intake and expenditure. Then stick to them. Make plans as to how you will structure your day so that you can stay within your limits. Make plans as to how you will handle problem situations that come up. If you have problems remembering everything that you learned over the past nine weeks, go back to your lessons and look them up. An index of topics covered in each lesson is on the last page of this lesson and will help you look things up. Immediately following that is a list of all of the assignments of this program - you might want to review them from time to time to see where you might be slipping. If you are still having problems remembering things, it might pay to work through the lessons again. Just start at the beginning and work right through them. Do the parts of them that you found helpful but do keep track of your calorie intake and extra activity expenditure. We will not be giving you more sheets to keep these records on. Instead, get yourself a scribbler and keep track in it something like we did on the food record forms, or if you still find our activity and food records helpful, make some copies of the ones you have left, and always keep a blank one in case you want more copies (if you do not have any spare forms now, or in the future, feel free to contact us and we will provide some for you). Keep track of your calories expended in activity as well. Your records do not have to be as elaborate as those we have been keeping over the past nine weeks. They must, however, show you your calorie intake and expenditure so that you can regulate your weight loss. From now until you have reached your goal weight, you should be losing at the rate of around one pound per week. If you still have another 50 to 100 pounds to lose, it still means a long time on the program. Do not get discouraged. It took a long time to put all of that weight on and it is healthiest to take it off slowly. Always be making changes in your daily eating and activity habits that you can live with. Only by doing so will you lose weight. If the changes you make are too big or too hard to follow, you will soon drop them and go back to your old habits and gain weight.

ADJUSTING YOUR MEAL PLAN

As mentioned in the first lesson of this program, the menu plan that you have been following for the past ten weeks was chosen on the basis of your weight at the beginning of this program. You have probably lost some weight now, and your meal plan may need to be adjusted. This is not, however, always the case. If you fall under any of the following categories, you should not adjust your meal plan:

- 1) If you are still losing weight at the rate of 1 pound a week or more, and you have not yet reached your goal weight, then it is not necessary to adjust your meal plan.
- 2) If you are presently on a 1200 calorie per day program. In this case you cannot safely reduce your daily calorie intake any further, even if you are not losing weight. In any case, if you are overweight and you are on a 1200 calorie per day program plus exercise you should be losing weight. Double check your food intake. Are you underestimating how much you are eating, measuring food inaccurately, or forgetting about unplanned snacks? Are you sticking to a regular program of exercise of at least 1400 calories per week? If neither of these is the problem, then you will have to increase your activity to get weight loss rolling again. Try adding one scheduled activity a week such as bowling, swimming, fitness classes, etc. Also, you may just be stuck at a plateau. Give it a few weeks and the weight will probably start to come off again if you are sticking to the program.

If you are not in any of the above categories, and you still have weight to lose, and your weight loss has slowed down to less than 1 pound per week, then you may have to adjust your meal plan. Remember, though, that weight loss does not always proceed in a nice, orderly fashion. Some weeks you may lose 3 or 4 pounds, some weeks 1 pound, some weeks you will not lose anything, and some weeks you may even gain weight. The main thing is that over the long run you are losing at a rate of about 1 to 2 pounds a week. Always allow three weeks of no weight loss, or weight gain, before making any adjustments. So if you don't lose weight one week, that is OK. If you still don't lose the next week, or perhaps you gain a pound or two, that's OK too (of course you should always be checking to make sure you are following the program correctly). If there is still no weight loss on the third week, and you have been sticking to the program, then you should adjust your meal plan downwards (but not below 1200 calories a day, as noted above).

At the end of this lesson, you will find a variety of different menu plans ranging from 1200 calories per day and upwards. They are based on the Food Exchange System, just like the plan you have been on for the past 10 weeks, and you follow each of the plans in exactly the same way, using the same food lists. If you have determined that your meal plan should be adjusted downwards, then choose then NEXT MENU PLAN UNDER YOURS IN CALORIES. In other words, if you are on the 1500 calorie per day plan now, then your next plan should be the 1350 calorie plan, not the 1200 plan. You should move downwards only one step at a time.

LOSING TOO QUICKLY? REACHED YOUR GOAL WEIGHT?

Some of you may have reached your goal weight and are still losing weight. Others of you may be losing weight too quickly (more than two pounds a week for several weeks in a row). In either case, you will want to ADD some calories to your meal plan. Do this the same way, but choosing the next menu plan UP. So, for example, you will move up from 1200 calories to 1350 calories. You may not believe this now, but sooner or later if you reach your goal weight on this program then you may have to start eating more to stop you from losing. The safest way to do this is to gradually increase your food intake, using the meal plans provided. Using the meal plans to achieve your MAINTENANCE plan will also insure good nutrition and a balanced diet. If you are still losing weight and you are on the plan with the highest calories, then simply add food exchanges of your choice, one at a time, to your daily meals until you achieve an ENERGY BALANCE (no weight gain, no weight loss). For your information, the following minimum selections are considered essential every day in order to achieve a balanced diet:

- 6 protein (meat) exchanges
- 3 cereal exchanges
- 2 dairy exchanges
- 2 vegetable exchanges
- 2 fruit exchanges

Once you have reached your goal weight, do not give up the rest of the program either. Keep those changes that you have made in your eating and activity habits. That has been the goal of this program. If you do not make permanent changes, you will begin gaining when you go back to your old habits. If you find yourself gaining, go back and be careful to follow the program. Keeping weight off is hard work (maybe more than taking it off) and requires careful attention. That is why permanent changes that you automatically come to do are so important in making a program able to be followed for extended periods of time. If a program is not livable, then it will not be followed over a long period of time. It is, therefore, up to you to make the program as livable as you can.

Following are some specific things which you can do to help you to continue losing and then to keep it off:

1. Decide what weight you would like to be and then keep working until you reach that weight. How fast you do it is not important.
2. Weigh yourself weekly probably for the rest of your life. You will then know how you are progressing. If you are gaining, then it means that you must be more careful in following the program. Are you taking in too many calories each day or are you not spending enough calories in activity or is it a combination of both? Take stock and do something about it now before it gets away on you and you end up giving up.

3. Keep on with your extra added activities. As mentioned in Lesson 9, aim for a minimum of 200 extra calories worth of activity a day. This means a minimum goal of 1400 calories worth of expenditure a week (200 x 7). If you keep at this level, it will become easier and easier to do. If you drop and then try to go up again, you will find the activity harder to do. Activity is very important to keep up because of the critical role it plays in fat loss.
4. Keep up with working small changes into your daily activity patterns. Stand whenever you can instead of sitting, walk instead of standing, go a bit further than you normally would, and the like. These little increases will add up if you do them day after day for a long time.
5. Continue to use the techniques that have helped while you were in the program. Remember our focus on establishing new eating and activity patterns. The techniques and procedures you learned here should become permanent patterns in your life. We want you to continue losing weight, and most importantly, to keep it off for good. This means that you continue with these new behaviours. If you have problems remembering some of the things to do, feel free to go back to the lessons. Work through them again and again until they become part of your life-style.

The formal part of this program is now finished. Hopefully, you have learned how to control your weight effectively, and you will be able to continue to apply what you have learned in the months to come. In order for us to be able to evaluate how well this program has worked for you, and whether it will continue to be useful for you in the future, we will be meeting with you periodically in the months to come. Our first meeting should be coming up shortly, and should have already been arranged. Please refer to the "Client Summary" Page at the very beginning of this manual. Your next appointment is your "10 Week Appointment" where you will be weighed and various other measures taken. This meeting should take no more than about 15 minutes. You should have completed all of the "Post-Treatment Questionnaires" handed out at our last meeting (if you do not have these please call us immediately).

You should bring the following materials to our next appointment:

- 1) This manual (it is yours to keep, but we would like you to bring it to this next meeting,
- 2) Used FOOD RECORDS,
- 3) Used ACTIVITY RECORDS
- 4) Used Behaviour Ratings
- 5) Completed "Post Treatment Questionnaires".

If for some reason you do not have your first appointment, or you cannot make it at that time, be sure to call me immediately. My phone number is at the beginning of this manual. Remember, these meetings are very important not only for us to evaluate this program, but also for you if you want to try to continue losing weight, or keeping it off. That is why your attendance at these meetings is necessary for your deposit to be returned to you. We look forward to seeing you again.

FOOD RECORD

1200 cal. plan

DAY _____

DATE _____

	Food Group	Amount	Food	Cals.
<u>BREAKFAST</u>	1 FRUIT	:	_____	40
	1 BREAD/CEREAL	:	_____	70
	1 PROTEIN/MEAT	:	_____	75
	1 DAIRY	:	_____	80
	1 HIGH CALORIE	:	_____	45

<u>LUNCH</u>	1 VEGETABLE	:	_____	25
	1 FRUIT	:	_____	40
	1 BREAD/CEREAL	:	_____	70
	1 PROTEIN/MEAT	:	_____	75
	1 HIGH CALORIE	:	_____	45

<u>DINNER</u>	2 VEGETABLE	:	_____	25
		:	_____	25
	1 FRUIT	:	_____	40
	2 BREAD/CEREAL	:	_____	70
		:	_____	70
	3 PROTEIN/MEAT	:	_____	75
		:	_____	75
		:	_____	75
	1 DAIRY	:	_____	80
	1 HIGH CALORIE	:	_____	45

<u>SNACKS</u>	1 HIGH CALORIE	:	_____	45
---------------	----------------	---	-------	----

<u>EXTRAS</u>	Amount	Food	Cals.
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Total of Extras: _____

CALORIES FOR THE DAY

TOTAL PLANNED: 1190

plus extras: _____

ACTUAL TOTAL: _____

FOOD RECORD

1350 cal. plan

DAY _____

DATE _____

	Food Group	Amount	Food	Cals.
<u>BREAKFAST</u>	1 FRUIT	:	_____	40
	1 BREAD/CEREAL	:	_____	70
	1 PROTEIN/MEAT	:	_____	75
	1 DAIRY	:	_____	80
	1 HIGH CALORIE	:	_____	45

<u>LUNCH</u>	1 VEGETABLE	:	_____	25
	1 FRUIT	:	_____	40
	1 BREAD/CEREAL	:	_____	70
	2 PROTEIN/MEAT	:	_____	75
		:	_____	75
	1 HIGH CALORIE	:	_____	45

<u>DINNER</u>	2 VEGETABLE	:	_____	25
		:	_____	25
	1 FRUIT	:	_____	40
	2 BREAD/CEREAL	:	_____	70
		:	_____	70
	3 PROTEIN/MEAT	:	_____	75
		:	_____	75
		:	_____	75
1 DAIRY	:	_____	80	
1 HIGH CALORIE	:	_____	45	

<u>SNACKS</u>	1 HIGH CALORIE	:	_____	45
	1 BREAD/CEREAL	:	_____	70

<u>EXTRAS</u>	Amount	Food	Cals.
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Total of Extras: _____

CALORIES FOR THE DAY

TOTAL PLANNED: 1335

plus extras: _____

ACTUAL TOTAL: _____

FOOD RECORD

1500 cal. plan

DAY _____

DATE _____

	Food Group	Amount	Food	Cals.
<u>BREAKFAST</u>	1 FRUIT	:	_____	40
	1 BREAD/CEREAL	:	_____	70
	1 PROTEIN/MEAT	:	_____	75
	1 DAIRY	:	_____	80
	1 HIGH CALORIE	:	_____	45

<u>LUNCH</u>	1 VEGETABLE	:	_____	25
	2 FRUIT	:	_____	40
		:	_____	40
	1 BREAD/CEREAL	:	_____	70
	3 PROTEIN/MEAT	:	_____	75
		:	_____	75
		:	_____	75
	1 HIGH CALORIE	:	_____	45

<u>DINNER</u>	2 VEGETABLE	:	_____	25
		:	_____	25
	1 FRUIT	:	_____	40
	2 BREAD/CEREAL	:	_____	70
		:	_____	70
	3 PROTEIN/MEAT	:	_____	75
		:	_____	75
		:	_____	75
		2 HIGH CALORIE	:	_____
		:	_____	45

<u>SNACKS</u>	1 HIGH CALORIE	:	_____	45
	1 BREAD/CEREAL	:	_____	70
	1 DAIRY	:	_____	80

<u>EXTRAS</u>	Amount	Food	Cals.
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Total of Extras: _____

CALORIES FOR THE DAY

TOTAL PLANNED: 1495

plus extras: _____

ACTUAL TOTAL: _____

FOOD RECORD

1700 cal. plan

DAY _____

DATE _____

	Food Group	Amount	Food	Cals.
<u>BREAKFAST</u>	1 FRUIT	:	_____	40
	1 BREAD/CEREAL	:	_____	70
	1 PROTEIN/MEAT	:	_____	75
	1 DAIRY	:	_____	80
	1 HIGH CALORIE	:	_____	45
<u>LUNCH</u>	1 VEGETABLE	:	_____	25
	2 FRUIT	:	_____	40
		:	_____	40
	2 BREAD/CEREAL	:	_____	70
		:	_____	70
	3 PROTEIN/MEAT	:	_____	75
		:	_____	75
		:	_____	75
	2 HIGH CALORIE	:	_____	45
		:	_____	45
<u>DINNER</u>	2 VEGETABLE	:	_____	25
		:	_____	25
	2 FRUIT	:	_____	40
		:	_____	40
	2 BREAD/CEREAL	:	_____	70
		:	_____	70
	3 PROTEIN/MEAT	:	_____	75
		:	_____	75
		:	_____	75
	2 HIGH CALORIE	:	_____	45
<u>SNACKS</u>	1 HIGH CALORIE	:	_____	45
	1 BREAD/CEREAL	:	_____	70
	1 DAIRY	:	_____	80

<u>EXTRAS</u>	Amount	Food	Cals.
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
			Total Extra Cals.

CALORIES FOR THE DAY

TOTAL PLANNED: 1650

plus total extra cals.: _____

ACTUAL TOTAL: _____

FOOD RECORD

1800 cal. plan

DAY _____

DATE _____

	Food Group	Amount	Food	Cals.
<u>BREAKFAST</u>	1 FRUIT	:	_____	40
	1 BREAD/CEREAL	:	_____	70
	1 PROTEIN/MEAT	:	_____	75
	1 DAIRY	:	_____	80
	2 HIGH CALORIE	:	_____	45
		:	_____	45

<u>LUNCH</u>	2 VEGETABLE	:	_____	25
		:	_____	25
	2 FRUIT	:	_____	40
		:	_____	40
	2 BREAD/CEREAL	:	_____	70
		:	_____	70
	3 PROTEIN/MEAT	:	_____	75
		:	_____	75
		:	_____	75
	2 HIGH CALORIE	:	_____	45
		:	_____	45

<u>DINNER</u>	3 VEGETABLE	:	_____	25
		:	_____	25
		:	_____	25
	2 FRUIT	:	_____	40
		:	_____	40
	2 BREAD/CEREAL	:	_____	70
		:	_____	70
	3 PROTEIN/MEAT	:	_____	75
		:	_____	75
	2 HIGH CALORIE	:	_____	45
		:	_____	45

<u>SNACKS</u>	1 HIGH CALORIE	:	_____	45
	2 BREAD/CEREAL	:	_____	70
		:	_____	70
	1 DAIRY	:	_____	80

	Amount	Food	Cals.	Total Extras
<u>EXTRAS:</u>	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

CALORIES FOR THE DAY: PLANNED + EXTRAS = ACTUAL TOTAL

1815 + _____ = _____

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Appendix K

Alternate Treatment Manual

CLIENT SUMMARY

NAME: _____ FILE # _____
first last #-m/sc-mp

FIRST INTERVIEW WEIGHT: _____ lbs./kg

STARTING WEIGHT: _____ lbs./kg

CHECK-UP APPOINTMENTS:

The following check-up appointments have been arranged for you in order for us to monitor your progress:

5 week appointment: _____

10 week appointment: _____

These meetings will take only a few minutes (no more than about 15 minutes). You will be weighed, your various records and forms collected, and your questions answered. These meetings are very important. If you cannot make it at the above times please call us for another appointment (Joe Rallo: 237-2815 weekdays/ 489-3943 evenings and weekends).

You should bring the following materials to each of your appointments:

- 1) your manual;
- 2) used ACTIVITY RECORDS;
- 3) used BEHAVIOUR RATINGS;
- 4) completed "Post-treatment Questionnaires" (for 10 week appointment only).

Meetings will be held at:

MANITOBA OBESITY CONTROL CENTRE,
Room P-502,
Fifth Floor,
Duff Roblin Building,
University of Manitoba

This is the same place where you came for our first meeting where you were weighed and given your manual.

WEIGHT REDUCTION MANUAL

Prepared by

Joseph S. Rallo

This manual is an adaptation of the following weight reduction manual:

Pezzot-Pearce, T. D. Weight Reduction Manuals. Unpublished Doctoral Dissertation, University of Manitoba, 1980.

portions of which were collected from the following sources:

1. Richard L. Hagen, Janet P. Wollersheim, and Gordon Paul, Weight Reduction Manual. In R. L. Hagen, Group Therapy versus Bibliotherapy in Weight Reduction, Ph.D. Dissertation, University of Illinois at Urbana-Champaign, 1970, Published by University Microfilms International, Ann Arbor, Michigan.
2. Pearce, J. W. Therapist Manuals. Unpublished Doctoral Dissertation, University of Manitoba, 1980.
3. Janet P. Wollersheim. Behavioural Treatment Manuals, in Catalog of Selected Documents in Psychology, 1975.

If you have any questions during the course of your program, please contact me at:

Joe Rallo,

Phone 237-2815 (9:00 a.m. - 5:00 p.m. weekdays)
489-3943 (after 5:00 p.m. and on weekends)

***Note: This manual is for the exclusive use of individuals participating in our weight control program. Reproduction of this manual, or any part of it, by any means, is not permitted without the written permission of the authors.

September, 1984

INTRODUCTION

This manual is designed to help you to lose weight and to keep it off. The treatment will teach you principles and methods which you can apply in your own environment in order to help yourself to lose weight. It will be solely up to you to learn and more importantly apply and try the various techniques suggested in the manual.

This weight reduction manual is divided into 10 weekly lessons and can be used by you on your own at home. The results will depend on you and your involvement and adherence to the program.

The basic aim of the program is to help you to understand the reasons for your being overweight. Once you come to understand these, losing weight should be easier and keeping weight off should also be easier. For instance, many people eat in response to anxiety arousing situations. If you can come to identify and control these situations, then you will be less likely to eat and can consequently lose weight and later keep it off. This understanding and these changes in how you handle your anxiety are not made quickly and will take work on your part. They also should last beyond the end of this particular program. Because we are interested in developing understanding in you and in making enduring changes in your lifestyle, we do not place great emphasis on large weekly weight losses. Rather we prefer to see smaller but steady and enduring weight loss. Such losses are typically in the range of one pound per week.

Over the next 10 weeks, you will be working through 10 lessons. Each lesson will discuss various principles and techniques to be used in helping you with weight control. This program does not provide you with a specific diet. Rather, we will focus on helping you to understand the reasons why you have been unable to be successful at previous weight control attempts, and on ways of helping you to deal with eating situations that are especially difficult for you. We will be providing you with nutritional information and with guidelines for developing and choosing your meals. Most of you will have tried many "diets" in the past. While most programs focusing exclusively on "diets" will result in weight loss if you stick to them, most people find it difficult to stay with them for a long period of time, and they usually eventually gain back any weight that they do manage to lose. That is why this program provides a different focus.

Each lesson will be different but will include the following parts: discussion of principles and techniques, review questions to be filled out after reading the discussion (you are free to refer back to the discussion when answering them), and various daily records which will be discussed later. You will also be asked to increase your activity level later in the program. Activity level has been found to be an effective and essential part of any weight reduction program. Increases in activity will be gradual, and activities chosen by you.

As you may have already guessed, the following program is not easy and will involve much work on your part. We can tell you what to do and to try, but it will be up to you to try everything we suggest and to discover which of these things work best for you and then to follow through and do them for several months or longer. We cannot do the program for you.

As mentioned above, although this program is designed to be used by you at home, it is still important that we meet with you periodically to evaluate your progress. Therefore, we will meet with you briefly about halfway through the program and at the end of the ten week period when we will be weighing you, collecting some of your forms, and answering any questions you may have.

Depending on how much weight you have to lose, some of you may not have reached your goal weight at the end of the 10 weeks of this program. Others may have reached their goal weight by then, and will be trying to make sure they do not gain back what they have worked so hard to lose. Continuing to lose weight over a long period of time, and keeping weight off are as difficult, if not more difficult than losing weight in the first place. This is why we have arranged 3 follow-up meetings with you to take place over the next 12 month period (at 3 months, 6 months and 12 months). These meetings are very important for the reasons outlined above, and therefore have become an attendance requirement in order for your deposit to be returned to you. These meetings will take only a few minutes and will be scheduled at a mutually convenient time.

So, as you can see, this is a comprehensive weight control program. We are interested in seeing each one of you be successful, and that is why it is important that we meet with you from time to time to monitor your progress. As you proceed through your lessons, you will notice that some are longer than others. Regardless of length, all require your close attention.

LESSON 1

As already mentioned, we will be concerned in this program with helping you understand why you are overweight. Once you understand why you are overeating, then you will find it much easier to change your ways of eating. If you do not gain this understanding, then you may find it hard to change your eating ways. Consequently, this program is going to take you back to the beginning to discover why you overeat and thus become or stay overweight.

Over the next 10 weeks we will go over many reasons which have been found in the past to lead to overeating in overweight people. Not all of these reasons or factors will have played a part in your obesity as different reasons account for obesity in different people. It is important, however, for you to examine each thoroughly. In this way you will be able to discover which ones are important in your own particular situation and thus will be able to recognize them and find it easier to lose weight. The reasons for you being overweight which we will be discussing will be psychological in nature. Psychology plays a big part in obesity and because of this it is necessary for us to go back and try to discover some of the psychological reasons for you being overweight. A psychological basis for your obesity does not mean that you are crazy. It simply means that how you think about eating and how you interact with your surroundings and people in your surroundings has a big effect on your behaviour - in this case eating behaviour which leads to your being overweight.

ENERGY BALANCE

Before we start discussing the psychological causes for your obesity, we must say that psychological factors are not the only cause of obesity. In fact, obesity is a complex condition involving psychological, physiological, glandular, metabolic, genetic, sociological, and economic factors. It is not exactly known how all of these factors operate and interrelate. Physical causes can seldom be found for obesity, and even when they can, they are often secondary. For most people, psychological factors seem to be the primary causes. All of these factors affect the energy balance in your body which is the real culprit in obesity. This is the balance between the energy you take in by eating and the energy you expend in physical activity.

The energy in your body is measured in terms of calories. All foods contain certain numbers of calories depending upon their composition. When you take in more calories in your food than your body needs for activity, growth, cell metabolism, digestion, respiration, and so on, the body converts the unused portion to fat. Since this conversion takes place at the rate of about 3,500 calories per pound of fat, for every extra 3,500 calories you take in, you become one pound fatter. For instance, if you take in only 100 calories more than you need each day, at the end of the year you will have gained about 12 pounds.

Basically three things can happen in your energy balance. First, as just described above, you can have a positive energy balance where you take in more calories than you expend or use up. This can come from either eating too much food or from reducing your usual activity. In either case, the excess calories are being stored as fat and you will gain weight. Second, you can have an energy balance where the calories you take in equal the calories you expend and where you in fact neither lose nor gain weight. Those people who can maintain their weight at a constant level are doing nothing more than eating in such a manner that gives them enough energy for their activities yet not too much that they gain weight nor not too little that they lose weight. Third, you can have a negative energy balance where you take in fewer calories than you use up through your activities. This can happen from eating less or exercising more than you usually do. In either case over a period of time your body will begin to use its fat stores for energy and you will lose weight and slim down.

Right now, you are likely in a period of positive energy balance where you have been slowly gaining weight over the past years. If you have not been gaining weight but have not been losing either, then you will be in a state of energy balance. Of course, if you are overweight and want to lose weight, then the ideal state for you to be in is one of a negative energy balance.

PSYCHOLOGICAL CAUSES - GAMES

As mentioned above, it will be easiest for you to get into a state of negative energy balance where you will lose weight, if you can come to thoroughly understand the psychological causes for your obesity. A successful method for coming to understand why you are overeating is through analyzing your own interactions along the line suggested by Dr. Berne in his book called The Games People Play. This analysis is based on the principle that any social contact or interaction is preferred to no social contact because people need the stimulation and satisfaction that they obtain from other people. In other words, people need what Dr. Berne calls "stroking" from other people. Stroking can be physical in nature as when you stroke and cuddle a baby or it may be more symbolic in nature as in a conversation. In a conversation, stroking can be an act of recognition of another's presence or any kind of positive interaction with them. Our need for strokes or recognition of various types from other people is what we call stimulus-hunger.

From the viewpoint of game analysis, overeating is a way, even though not a very good one, of stroking yourself. Overeating is a way of handling your stimulus-hunger or your need for positive attention from others. For example, when you are bored or restless you may tend to eat because this is a time when you would like to be stroked.

Overeating, then, can be viewed as a way of stroking yourself. It is inadequate because as we all know there are many adverse social, psychological, and physical consequences that come from overeating which leads to the problem of being overweight. Yet many

people continue to overeat, being fully aware of all the aversive consequences that follow overeating. One of the reasons that they continue to eat is because overeating is a way of not only stroking themselves but is also a way of playing games with themselves and others. Through playing games they gain advantages and payoffs. The game is played because the person gets strokes and gains by playing it even though he or she may not be totally aware of these motives and reasons for playing. A person plays the game because he has not learned to satisfy his stimulus-hunger and to obtain strokes and interpersonal satisfactions in more effective, mature, and adult ways. By understanding the games you have played in the past and the games you play in various areas of your life including the area of eating, you can learn to better understand yourself and you will be better able to regulate various areas of life including the eating area.

In order to analyze the games you may have been playing by staying overweight, we must introduce to you the methods and terms by which games are studied. Each person can be viewed as having three major ego states, which we will call the Parent, the Adult, and the Child. Each is a system of feelings accompanied by a related set of behaviours. Throughout the day, all of us switch back and forth from one ego state to another in our feelings and our behaviours. When in the Parent state, we act as parents do in moralistic and evaluative ways. When in the Adult state, we act in mature and objective ways. When in the Child state, we act in more impulsive, immature, childish, creative and spontaneous ways. All three states are good and have survival value. It is only when they are out of balance or when one state takes over inappropriately that things must be reorganized.

In any game there is a stimulus from one person and a response from another. When we analyze the game, we try to determine which ego state presented the stimulus and which ego state responded.

Games are often ulterior transactions. This means that while a person may be saying or doing something on one level (for example, the social level), there may be a totally different meaning at another level (for example, the psychological level). For example, consider the following transaction in which a boy asks a girl to his apartment at a late hour after a date:

Boy: "How about coming to my apartment and seeing my paintings?"

Girl: "Oh, that'd be fun. I always enjoy seeing paintings."

At the social level, this is an Adult conversation about paintings. However, at the psychological level, it may well be the impulsive Child talking about an opportunity for a necking or love-making session. Games generally have a concealed motivation. They are not played openly and honestly. Every game is basically dishonest. It is a way of behaving in which you are being dishonest with yourself or with your acquaintances. Games have a payoff. By playing games a person strokes herself or himself, or gets others to stroke her or

him. The gain or stroke or payoff may consist of a relief from tension or it may be a way of avoiding an unpleasant situation or thinking about an unpleasant fact. Getting others to stroke us in certain ways may be the payoff for a game. Or we may find that by playing a game, we can rationalize playing a certain role or maintaining a certain attitude. But whatever the payoff may be for playing games, we must remember that playing games are a poor and inefficient way of getting our strokes.

Maladaptive behaviours such as continuing to consume large numbers of calories and thus remaining overweight can be viewed from a game analysis point of view. If you are overweight and if you fail to set up a negative energy balance so that you can lose weight, you can view your behaviour as maladaptive because of all of the problems that come with being overweight. You can view this behaviour as playing games with yourself and others. As you analyze your behaviour and the games you are playing, you will understand the real motives behind your eating and weight problem. As your self-understanding develops, you will recognize your real needs and will be able to consciously choose a course of appropriate action and not only will it be easier for you to lose weight, but you will be better prepared to solve other difficulties as well.

When we start analyzing games that overweight people play, we will discuss several aspects of the game. We will give it a name and then describe it on the observable social level and then on a psychological level where the concealed motives, conflicts, and needs are being expressed. We will look at the aim of the game, the roles played in the game, and the advantages gained in the game for the overweight person.

Over the next 10 weeks, we will be presenting different games to you. It will be up to you to see if you are playing these games now or if you have played them in the past. You must put forth a lot of effort to discover the real reasons for your behaviour. Here are some of the questions which you should be asking yourself over the next 10 weeks: What games were you playing when you first became overweight? When did you start playing this game? Are you still playing this game today? By overeating and by remaining overweight are you playing many games? In the course of your development what have been your favorite games? As you learn to understand yourself you will find that you will be able to direct the various aspects of your life in a much more satisfactory manner, you will have less need to play games, and it will become much easier for you to work out realistic, effective ways to get your weight down.

By now you may be very confused with all of this talk about games and psychological causes of obesity. It may take you a week or two to get used to this approach to treating obesity because of the different words we use. If you stick to it, however, it will payoff in the end.

GAME 1 - "WHY DON'T YOU - YES, BUT"

Perhaps the best way for you to see how games analysis works is to analyze one game this week. We will start with the game most commonly played by overweight people. It is called "Why Don't You - Yes, But". In this game we have two roles: the Helpless person (obese person) and the Advisors (others). As we describe the game, think back and see if you have ever played this game or if you play it now.

Thesis:

In this game the player or overweight person begins by either describing his weight problem or by saying that he should really lose weight. Others then make suggestions as to how the person may lose weight. To each suggestion the player says "Yes, but ..." and proceeds to find some reason why the program or suggestion will not work. On the surface, the conversation sounds like two adults talking. On the psychological level, the player may feel totally inadequate especially in regards to dieting, just like a child. Others then act like parents and try to make helpful suggestions but the child, because he is a child, often rejects them. He wants to stay passive and not become responsible for his weight problem. If he rejects the suggestions, the parent tries again and again but is never successful because the player does not want to accept any responsibility for his weight problem. He may simply be afraid of trying and failing.

Here is how the interchange may be going on two levels:

Social Level:

Other (adult): "Why don't you ... " or "Did you ever try ...?"

Player (adult): "Yes, but ..."

Psychological Level:

Other (parent): "I can help you grow up and be responsible."

Player (child): "Go ahead and try. I don't want to grow up and you can't make me."

Aim:

The whole aim of the game is to encourage others to make helpful suggestions and then to reject so that you do not have to do anything about them.

Advantage:

This game has advantages for the player. By rejecting all suggestions offered by others, the player shows himself that it is the others and not himself who is inadequate in dealing with his weight problem.

After reading about this game, you most surely recognize it as one that you have played and play now. This game makes it easy for you to sluff off the responsibility for weight loss on others. Weight loss is difficult and by passing the buck on to others you do not have to try to lose weight or feel guilty about not losing it. Now that you realize that you play this game, you can begin to change matters. Quit passing the buck on to others and become responsible for your own weight loss. No one else can take the weight off for you. It is up to you. As mentioned earlier, weight loss is not easy. You have a long hard road ahead of you. The path is one which an Adult must choose to follow. You cannot lose weight if you act like a Child because, as we have seen, a Child will not accept the responsibility for weight loss.

Over the next week, we would like you to quit playing the "Why don't you - Yes, but ..." game. Whenever you catch yourself playing it or going to play it, stop and take the responsibility for your weight loss on yourself. Because it is so important that you follow our recommendations each week, each day you will rate how well you were able to do them. This week you are to take responsibility for your weight loss. Next week the recommendation will change. The Behaviour Rating Form is self-explanatory.

You have now read the basic part of Lesson 1 and it is now up to you from here. First, answer the review questions. The questions are by no means comprehensive but do hit on some of the main points in the lesson. At the end of each day, rate how well you were able to follow the recommended behaviour for this week. Finally, we would like you to start a weekly weigh in and recording of your weight.

WEEKLY WEIGH INS

In order to get accurate weights, it will be necessary for you to use a fairly reliable bathroom scale. Then, weigh yourself once a week (usually on the last day of the week for each of your ten weekly lessons) in the following way. Always weigh yourself at the same time of the day on the scale, which you will place on a level, non-carpeted floor. Always place the scale in exactly the same place (mark floor with tape if necessary) and try to wear the same amount of clothes. When you obtain your weight, then enter it on the sheet which follows along with the date, whether you gained or lost during the week, how much you gained or lost for the week, and your total change in weight from the beginning of the program. It may be a good idea to take this sheet out of the manual and post it somewhere so that you may refer to it and not forget to weigh yourself once a week. Do not weigh yourself more than once a week as your weight will fluctuate on a day-to-day basis and you may become discouraged if you should go up a tiny bit on a day or two during the week.

Also, weight loss usually does not proceed evenly, and some weeks may show more loss than others even though you have followed the program just as well on each of the weeks. Do not become alarmed. If you follow the program closely you should lose weight at a fairly even average pace.

Finally, you will notice that in describing the games in this and in upcoming lessons that we usually refer to either a male or a female player. This is for convenience sake, and we will be alternating between male and female players in each of the games we discuss. Of course, all of the games are intended for both men and women.

PROGRESS RECORD

Name _____ Starting Weight _____ lbs.

[illegible]

REVIEW QUESTIONS - LESSON 1

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You are to answer the questions below as clearly as you can in the space provided. Feel free to go back to the material in the lesson if you do not remember an answer.

1. It will be easier for you to change your ways of eating if you

2. What kind of factors are the primary cause of overweight?

3. In order for you to lose weight, you must develop a certain kind of energy balance. What kind is it and what does it mean?

4. Why is overeating an inadequate way of stroking yourself?

5. Each person has three major ego states. What are they?

6. What does the overweight person get out of playing the "Why don't you - Yes but" game?

7. What can you do when you find yourself playing this game?

BEHAVIOUR RATINGS

For the behaviour which you are to rate this week, there are seven boxes, one for each day of the week. They are labelled with the first letter of the day's name. Each day award yourself a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you were able to do that behaviour during the day. At the end of the week, add up how many total points you earned for all days combined.

S M T W T F S

1. I accepted responsibility for my own weight loss today. _____

Total points for week _____

All of the time = 5 points
Most of the time = 3 points
Some of the time = 1 point
None of the time = 0 points

Did I find this hard to do and why? _____

You have now been on the program for a week. Are you beginning to get used to thinking about the games you play so that you can avoid losing weight. As we go along, you will be amazed at the kinds of games which you may be playing even though you had no idea that you were playing them before. As you discover these games you will find it easier to quit playing them and consequently will find it easier to concentrate on losing weight.

GAME 2 - "HARRIED"

This week we shall look at another game played by the obese person. This one is called "Harried". As the name implies, the player or obese person puts off doing something about his/her weight because he or she is just too busy with other things. This is a game that the player frequently plays with him or herself but may at times involve others in the game.

Thesis:

Here the player dwells upon all of the things that she has to do or all the pressures that are upon her or all of the difficulties she must cope with and reasons "How can I take upon myself the extra task of trying to lose weight at this time?" What happens is that this person just never does get around to losing weight or watching her calorie intake. Students frequently play this game: "I have exams coming up ... a paper to write. I miss home. I haven't been getting enough sleep. I'm having troubles with my boy friend. How can I possibly add the strain of trying to lose weight to all of this?" This game is really played from a depressive position. The player is really depressed and dissatisfied with many aspects of her life situation and tends to blame herself for her difficulties, making her feel guilty and anxious. Then she tends to alleviate her guilt by viewing herself as a person burdened by many stresses and strains. Hence she feels that she should not be blamed for not trying to cope with the difficulties and strains of trying to lose weight as she already has enough to cope with.

Here is how the interchange may be going on the two levels:

Social Level:

Player to Self (Adult): "I just have too many things to do right now to fully direct my attention to losing weight."

Psychological Level (Child):

"If I can't find time to try

losing weight, then I will
not have to try or feel
guilty about not trying."

Aim:

To alleviate my guilt which may result from a failure to try to lose weight or which may result from an attempt to lose weight which fails.

Advantages:

By playing this game, the player avoids frequent occurrences of the "blues" which would occur if she were to objectively view her difficulties and realize that many of them could be alleviated if she took more responsibility for them in a more adult way. By playing "Harried" the player wards off this depression by, in effect, saying to herself: "Anybody that has all these stresses and strains and tensions shouldn't take on the extra strain of calorie watching."

After reading this game, you are likely to have recognized it as one you play not only in regards to losing weight, but in regards to many other things that you must do. It is really a game of procrastination in which you find good reasons (in this case being just too busy) for putting things off. Stopping this game takes a lot of work and will-power because it is so easy to put off work but very hard to actually stick to a program. This week we want you to seriously work on losing weight each day. We do not want you to find reasons to put it off or to invest as little energy as possible in trying to lose weight. You will be rating how well you are able to do this each day.

ANXIETY AND EATING

In the introduction to this manual, it was mentioned that many people eat in response to anxiety. This simply means that when they are anxious or worried about something, they often eat to lower their anxiety level. If these people can learn to stop feeling anxious or to lower their anxiety, then they will be less likely to eat. Because anxiety does play a major part in many people's eating habits, we are going to teach you in this program how to relax and thus lower your anxiety level so that you will be less tempted to eat.

Most people have experienced anxiety at some point in their lives. They know that they were anxious because their muscles were tense, their breathing may have been fast and shallow, or they may have been trembling. Can you remember how anxious you felt before your first real date or how you felt just before you took that walk up the aisle? Very likely you were feeling anxious and you knew it. In a lot of cases, however, when a smaller amount of anxiety is present, a person may not even realize that he is quite tense. Usually a smaller amount of anxiety shows up as muscle tension where

one's muscles are a little more tight than usual. You may not even realize that you were tense until the next day when you wake up with a stiff neck or sore legs. Even when you do realize that you are feeling tense, you may not know how to relax so that the tension and anxiety will be reduced.

As a second part of our program, we are going to teach you how to recognize muscle tenseness which usually stems from anxiety and how to relax so that instead of eating as you normally would you will relax and feel less tense. This relaxation training takes a while to master so we will introduce you to it slowly. If you learn how to do it well, you will find it valuable in keeping you from eating.

RELAXATION INSTRUCTIONS

For the first week of relaxation training, we want you to practice the procedure we give you for 10 minutes each day. The procedure is not that difficult but does require your total attention in order to do it and learn it well. For practising this procedure for the next 9 weeks, it will be best if you can use a quiet room which is free from intruders and phone calls. If other people are in the room, make sure that they leave you alone so that you can concentrate fully on relaxing in the way we tell you. For these exercises, the ideal position is sitting in a reclining easy chair. Otherwise, sitting in an upright and comfortable easy chair is fine as is lying on a bed.

When you are ready to begin, sit down in your chair or lay down on your bed. Relax and slowly close your eyes. By closing your eyes you will be able to concentrate more fully on the feelings of tension and relaxation which you will be experiencing.

When you are relaxed and your eyes are closed, begin by tightening the muscles in your right arm. Clench your right fist and bend your arm a bit so that the muscles are tight. Hold this position for a slow count to 10. Then relax your whole arm, letting the tension just drain away. Feel the difference. Once you are relaxed again, tense your right arm in the same way again. Hold it for a slow count to 10 and think about how your arm feels when it is very tense. Relax and think about how this feels. Now repeat the same procedure with your left arm, tensing it as much as you can. Count slowly to 10 and then relax. Repeat this again. At all times keep your eyes shut and concentrate on your feelings of muscle tension and relaxation. Finally repeat the procedure using both arms. Tense both together and then relax. Tense both together and again relax. By now your arms should be feeling relaxed. Do not hurry your exercises. Take as much time as you need.

Once you have relaxed your arms, then begin with your feet. Curl your toes under so that you can feel tension in your right foot. Hold for a slow count to 10 and then release the tension and relax. Wait for a bit and then repeat the procedure with your right foot again. When this foot is again relaxed, tighten the toes on your left foot, hold for a slow count to 10, relax them, wait, and then repeat again with the left foot. When you are again relaxed, tighten

and curl the toes of both of your feet together, hold for a slow count to 10 and then relax them. Repeat once more. At all times during this exercise concentrate on the feelings of tension and relaxation. Keeping your eyes closed will help.

If these exercises do not take a full 10 minutes, then repeat some of them again until you have spent at least 10 minutes tensing and relaxing your muscles in your arms and toes each day for the next week. We will progress to other muscle groups in later weeks.

This week you have the following things to do: stop playing the "harried" game and work seriously on losing weight each day, spend 10 minutes at least each day in doing relaxation training, answer the review questions, fill in the behaviour ratings, and make a graph of your weight. Your graph is started for you on the next page and shows your first interview weight and your weight just before you began the program. Each week draw a dot for your weight at the right place and join the dots week by week to see how you are doing weight wise. It might be good if you posted your chart somewhere where you can see it every day.

WEIGHT CHART

FOR

Weight in Pounds

[illegible]

First Interview

Pre-Program

Date of Weigh In

REVIEW QUESTIONS

You are to answer the questions below as clearly and as briefly as you can in the space provided. Feel free to go back to the material in the lesson if you do not remember an answer.

1. Why is it so easy to put off going on a weight reduction program and instead play the game "harried"?

2. What is the main aim of the game "harried"?

3. Why is relaxation training so important in a weight reduction program?

4. Why is it good to close your eyes when you are doing the relaxation exercises?

BEHAVIOUR RATINGS

Each day award yourself a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you were able to do that behaviour during the day. At the end of the week, add up how many total points you earned for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. I worked seriously on losing weight today.	_____	_____	_____	_____	_____	_____	_____
2. I did my relaxation exercises for 10 minutes today.	_____	_____	_____	_____	_____	_____	_____
3. I was able to make my arms and toes feel very relaxed today.	_____	_____	_____	_____	_____	_____	_____

Total points for week _____

All of the time = 5 points

Most of the time = 3 points

Some of the time = 1 point

None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

LESSON 3

You are now two weeks into our program. How are you doing? Is it getting easier for you to accept responsibility for seriously trying to lose weight and have you been able to quit putting off weight loss attempts because you keep telling yourself that you are too busy? Were you able to practice the first week's directions in muscle relaxation? By no means do we expect you to be a master at doing all of these things yet. That will require becoming more aware of the reasons for your eating and more daily practice of the muscle relaxation exercises. We do expect you, however, to be earnestly trying to do the behaviours which we suggest so that they will become natural behaviours for you to do. It is a lot of work but it pays off.

GAME 3 - "LOOK HOW HARD I'VE TRIED"

When we discussed the "Why don't you ... Yes, but" game, we said that the obese person played it so that she did not have to accept responsibility for weight loss attempts. The game which we shall discuss now is very similar because by playing it, the obese person does not have to give any kind of diet a chance and thus does not have to accept responsibility for a failure. Generally this game has an obese player and a would-be-helper.

Thesis:

Here the player is exemplifying her basic passivity. She half-heartedly dabbles with a variety of weight reduction methods, knowing well that none will work. Unconsciously she really does not want to give any method a chance to work because if a weight reduction method is to work she would have to relinquish her passivity and take on a more active role in getting her weight down. Thus, by only half-heartedly participating in a program, the obese person does not have to really work at it and can essentially give up responsibility for losing weight since she can blame the program for failing instead of herself.

Here is how the interchange may be going on two levels:

Social Level:

Helper (Adult):	"Why don't you try the grapefruit diet?"
Player (Adult):	"All right, I'll try it."

Psychological Level:

Helper (Parent):	"Let me help you."
Player (Child):	"See, it doesn't work."

Aim:

People cannot tell the player what to do. The player wants to be whatever he/she wants. Right now the player does not want to assume responsibility in order to lose weight.

Advantages:

Avoids responsibility and yet can rationalize with "Look how hard I've tried." Can assume the blameless roles because of claims that he/she tried very hard. The player continues to avoid responsibility.

This game sounds familiar to you too, does it not? At the beginning of a diet, it is easy to stick to it for a day or two or sometimes even a week or more. However, continued following of a diet takes an awful lot of work. Often it is easy to give up after a short while and say that you have tried but it just is not working. The only person that you are harming when you do this is yourself. As we mentioned in the introduction to our manual, weight loss is not easy and if you do not give it a good try, you certainly will not be very likely to lose weight. Weight loss is work. Do not kid yourself. There is no magic pill or diet. If you are to lose weight on our program, you simply cannot be playing the "look how hard I've tried" game. Look seriously at how you are trying to lose weight now. If you are playing this game - STOP! Otherwise you will not lose weight.

RELAXATION INSTRUCTIONS

Last week you began practising muscle relaxation so that you may later use it to relax when you are tense or anxious and when you would normally eat as a response to this tenseness. We will progress a bit further in this training this week and want you to practice this training for 20 minutes each day of the coming week. You may practice for a whole 20 minutes at one time, or may practice two times each day for 10 minutes. Divide up your time depending upon which is more convenient for you. It is essential though that you practice a full 20 minutes so that you can learn how to relax and can begin to use this skill effectively in stopping you from overeating.

As you did before, find a quiet place and either lay down or sit down. When you are ready, relax and slowly close your eyes. Take a quick, deep breath and let it out slowly. Repeat this a few times until you are feeling relaxed. Then clench your right fist and tighten the muscles in your right arm. Hold for a slow count to 10 and then release. Repeat. Then do the same twice for your left arm, and then twice for both arms together. Follow this by curling your toes and tensing your right foot. Hold this for a slow count of 10. Concentrate on feeling the tenseness. Relax your foot and see how your feelings change. Repeat. Now do the same for your left foot twice, and then do this twice with both feet at the same time.

At this point, take in two deep breaths of air. Take them in quickly and let them out slowly making sure you expel all of the air in your lungs. As you do this imagine your body to be like a balloon. As the air goes out, let your body become very loose. Let all your muscles become relaxed and limp, very comfortable. Let the air out slowly and relax deeper and deeper. Take a few similar breaths of air and become more and more relaxed.

Now concentrate on your hip muscles. These are the big muscles of your buttocks or your seat. Let them become relaxed. Let your whole body sink into these large hip muscles. They become softer and more relaxed. Let your body sink down very warm and very comfortable. With each breath, let your relaxation become deeper and deeper. Let all tenseness melt away. Feel the deep relaxation flow into your muscles.

Now think about your abdominal or tummy muscles. Let those muscles relax. Let all tension melt away. Concentrate as much attention as you can on your stomach. Relax more with each breath. Let a deep feeling of warmth and comfort spread throughout your body. No tension. No strain. Just relaxation. Feel how good it feels.

Concentrate now on your chest muscles. Feel the muscles in your chest and let them relax. With each breath that you exhale let your shoulders relax a little more. Let a wave of muscle relaxation spread across your chest, across your shoulders and down to the small of your back. Let your body relax deeper and deeper. Feel warm, comfortable, and relaxed.

Go back again to your arms. Do not tense them this time. Just relax your upper arms even more. Remember how they felt when your arms were tense. Remember how it felt when you let them relax. Remember the warm and comfortable feeling. Feel this again. Make your arms relax even more. They should feel heavy. Let your elbows and forearms relax. Let them go completely limp. Let your wrists, hands and fingers relax. Let them feel warm and comfortable. Again let all the tenseness that is not absolutely necessary flow out the tips of your fingers. Let your arms relax deeper, deeper, and even deeper.

By now you should be feeling warm, sleepy and comfortable. It feels lovely. Close your eyes so that you can really feel how relaxed you are. Enjoy it. When you are ready, you may slowly get up. Once you are up, you should feel refreshed. Practice this exercise each day for the coming week for at least 20 minutes. It is essential that you practice and learn to relax more and more each week. Otherwise, it may be hard for you to be able to use this valuable tool in stopping you from eating. These first weeks are very important in effectively learning this useful technique.

This week you have the following things to do: give up playing the "Look how hard I've tried" game and put all you have into losing weight, spend at least 20 minutes each day in practising your relaxation training, answer the review questions, fill in the

behaviour ratings, have your weekly weigh in and record and graph your weight.

We will want you to do one other thing this week and that is to have someone else in your household become a little bit involved in your program. They are not to do the program with you nor criticize the way that you are doing the program. Rather, they are to help with the behaviour ratings. We want you to ask someone in your house to rate how frequently they think that you are able to do the behaviours that we ask of you each day. Their form is very similar to yours. When both of you are filling in your ratings, do not do this together. Rather, you fill in yours and they fill in theirs. This is a little check for our purposes so that we may have some idea as to how other people see you as trying to do the different things that we suggest. It is not intended to show that you are being good or bad because it is entirely up to you as to how closely you will follow our recommendations. If you want to lose weight, you will follow them closely. If you do not want to lose weight, you will not follow them as much.

Finally, since this manual is yours to keep, feel free to write notes in it or mark sections that you find are particularly useful to you in your weight loss attempts.

REVIEW QUESTIONS - LESSON 3

You are to answer the questions below as clearly and as briefly as you can in the space provided or on the back side of the page if you feel you need it. Feel free to go back to the material in the lesson if you do not remember an answer.

1. How is the "Look how hard I've tried" game similar or like the "Why don't you ... Yes, but" game which was discussed in the first lesson?

2. The "Look how hard I've tried" game lets the player (obese person) stay passive in regards to weight reduction. How does it do this?

3. If you are to lose weight on our program, can you play this game?

4. When you are feeling relaxed, do you feel cold and uncomfortable? What do you feel instead?

BEHAVIOUR RATINGS - LESSON 3

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I stuck to my weight loss attempts today and did not give up.	—	—	—	—	—	—	—
2. I practised muscle relaxation for a full 20 minutes today.	—	—	—	—	—	—	—

Total points for week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

Rate the following behaviour as well but do not add it into your total points for the week.

3. I was able to become very relaxed when practising muscle relaxation today. _____

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 3 (HELPER)

My helper rates me:

Each day award your friend a certain number of points (the numbers are indicated at the bottom of the page) depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend stuck to his/her weight loss attempts today and did not give up.	_____	_____	_____	_____	_____	_____	_____
2. My friend practised muscle relaxation for a full 20 minutes today.	_____	_____	_____	_____	_____	_____	_____

Total points for week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

Note: You will be asked to rate different behaviours for nearly all of the remaining lessons. We appreciate your help. Also, when you make your ratings, do not do them in collaboration with your friend in the program. Do not criticize how your friend is following the program or nag him/her either as this may harm his/her weight reduction attempts.

LESSON 4

Three weeks into the program. How have you been doing? Have you been able to create a negative energy balance in your body? Remember that you must do this in order to lose weight.

ACTIVITY

By now you must be wondering whatever happened to the activity part of our program. Well, it is finally here and if you are like most people who are trying to lose weight, you probably let out a big groan and said "Oh no!". Do not worry. We are not going to have you out jogging daily or whatever other horrible things you can dream up. Instead, you are going to slowly and gradually increase your activity level. Try to pick activities that you like or that you think you may like. If you learn to do enjoyable activities, they will become part of your life. If you pick activities that you do not like, then you most surely will quit them as soon as the program is over. It is important that you plan for changes in your activity habits that you can live with for the rest of your life. So be careful and plan for changes that are livable and even enjoyable.

When you go to create a negative energy balance, you may do this by dieting and by increasing your activity. Most people forget about the second way. It is very important. Many people think that they should not exercise because: 1) they think that physical activity has little effect on energy output; 2) and that whatever effect it does have on increasing output, is outweighed by the increased food intake that accompanies increased activity. Both of these beliefs are false. Physical activity does indeed have an effect on energy output. This has been measured both directly and indirectly and can be translated into how much of an activity is needed to burn a pound of fat. For example, moderate walking for 36 hours will burn one pound of fat. This might seem hopeless but remember that the 36 hours does not all have to be at one time. Walking one hour per day will give you 30 to 31 hours a month which will be almost one pound burned. Over one year this will add up to almost 10 pounds. Another example is swimming. One hour of swimming is approximately 670 calories in energy expenditure. This means that 5 hours of swimming will add up to one pound. On a regular basis this can contribute significantly to energy output and weight loss.

Because these seemingly small amounts of exercise do add up, rather small changes in our daily habits can have a great effect on weight control. Remember that brisk walking one hour daily will take off approximately 10 pounds in one year and that the converse holds true too - if you usually walked one hour daily and then quit, you could gain 10 pounds in one year just from that small change. By adding or subtracting one hour of brisk walking daily, you really do not alter your appetite enough that it would affect how much you ate. You probably would continue to eat the same amount as before.

The second false belief that most people have is that physical activity increases food intake. There is a small amount of intake increase with activity but only to certain points. Above the normal range of activity, exhaustion occurs and both appetite and food intake go down. This is not a stable state and cannot be endured for too long. Below the normal range is the sedentary range. Here even though activity is decreasing, food intake stays the same and may possibly even increase. The best way then to use activity in weight loss, is to increase your activity slowly in little progressive steps. Do an amount that makes you work a bit but not so much that you get really played out. Start activities that you will enjoy and can do regularly. Calisthenics usually is not much fun and only lasts for a few days. Walking, swimming, cycling, cross-country skiing, are much more enjoyable and are especially good if you can get others to do them with you. They can become social events and thus will be more likely to remain in your lifestyle.

Over the next week, we would like you to slowly begin increasing your activity. We would also like you to keep records of these extra activities on a daily basis. Remember that we would like you to keep track of the extra activity which you do which is over and above that which you normally do. A sample activity sheet is on the next page. The sheet is fairly easy to fill out. You are to enter the day and date in the left hand margin and then in the boxes indicate what activity you did on that day, how many minutes, and how many calories you expended. At the bottom, add up the total number of extra calories you burned up in these activities for the whole week. On the page following is a listing of common expenditures for various activities. Use these in computing how many calories you burn up. The figures in the table are for a 150 pound person. If you weigh more or less than this, you will have to make some small adjustments in the calories you compute. For each 15 pounds that you are over 150 pounds, add 10% to your calorie score. For each 15 pounds that you are under 150 pounds, subtract 10% from your calorie score. These adjustments are made simply because it takes more calories to move around more weight, and less calories to move around less weight.

For this week, we want you to use up 50 to 150 calories more than you usually do each day. This means a minimum of 350 calories to burn up each week (50×7). Try to do a bit each day. This will make it much easier than if you try to use up all of the extra calories on one day. Many people find that walking is an excellent way to get their exercise. It does not put stress on your system and if you do not like people to see you exercising, then they will never know that you are if you are simply out walking.

Now that you are all set to increase your activity level, in addition to other things you will be doing to control your weight, one final point must be mentioned as to why you should do this. When people diet only, they lose more muscle or lean tissue and less fat tissue. When people exercise in addition to watching their diets, they lose more fat and less lean tissue. Since we want you to lose fat and not lean tissue, it is important that you incorporate activity in your program - activity that you will keep doing once the program is over.

ACTIVITY RECORD

Day/Date	Activity	Minutes	Calories Used
Wed. Sept. 6	Walking (5 calories)	10 minutes	50
Thurs. Sept. 7	None		
Fri. Sept. 8	Dancing (4 calories) (out for three hours but maybe danced only 30mins.)	30 minutes	120
Sat. Sept. 9	Walk to store (3.5 calories) (there and back)	6 minutes	21
Sun. Sept. 10	Bicycling with husband (5 calories)	20 minutes	100
Mon. Sept. 11	None - tired		
Tues. Sept. 12	Walk (5 calories) (with sister who is on on diet too)	20 minutes	100

Total Calories Used for Week 391

Goal for Week - 350 calories

Remarks: Those walks paid off!

CALORIE EXPENDITURES FOR PROLONGED ACTIVITIES

Type of Activity	Approximate Calories Used Per Minute by a 150 lb. Person*
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Aerobics

Moderate pace	7
Fast pace	10

Badminton	6
-----------------	---

Baseball	5
----------------	---

Basketball

Moderate play	7
Fast play	9

Biking

Leisure (5 m.p.h.)	5
Fast (13 m.p.h.)	11

Bowling	4
---------------	---

Calisthenics

Moderate	7
Fast	10

Canoeing

Slow/leisurely (2.5 m.p.h.)	3
Faster (4 m.p.h.)	7

Dancing

Moderate	4
Moving Fast	6
Square	8

Football	9
----------------	---

Gardening

Light	4
Heavy	7

Golf

Foursome	4
Twosome	6

Ice Skating

Slow to medium pace	7
Fast pace	10 (plus

Jogging	(see Running)
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Lawn Mowing	4
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ACTIVITY LIST - CONTINUED

Ping-pong (table tennis)	4
Roller-skating	
Slow - moderate	7
Fast	10
Rowing a boat	10
Running	
Take your time jog (5 m.p.h.)	10
Faster pace (7.5 m.p.h.)	15
Really moving (10 m.p.h.)	20
Stationary Cycling	
Moderate speed	7
Fast speed	10
Skiing	
Cross Country	
Leisurely pace	10
Moderate pace (5 m.p.h.)	12
Fast pace (8 m.p.h.)	17
Down Hill	
Leisurely	4
Moderate to vigorous pace	8 - 12
Water-skiing	8
Skiping Rope	10
Snowshoeing	9
Soccer	9
Stair-climbing (up and down combined)	10
Squash/Racquetball/Handball	11
Swimming	
For fun	4
Moderate (30 yds. per minute)	7
Fast (40 yds. per minute)	10
Tennis	
Recreational	7
Fast	10
Volleyball	4
Walking	
Stroll (2 m.p.h.)	4
Brisk pace	7

****Note:** Calorie expenditures are for 150 lb. person. Add 10% for each 15 pounds that you are over 150 pounds, and subtract 10% for each 15 pounds that you are under 150 pounds.

GAME 4 - "FOOD ALCOHOLIC"

Now that you know the importance of activity, we shall proceed to a fourth game that many obese people play. This game which we will call "Food Alcoholic" has the player or fat person (food alcoholic) in it and other people who may fall into the general roles of Persecutor ("You're fat - why don't you lose weight"); Rescuer (perhaps a physician or friend who is interested in the player's weight problem); and a Patsy ("Oh - Go ahead and have a doughnut, you can't always be depriving yourself"). All of these people playing these roles not only make being fat hard, but make trying to stick to a program difficult as well.

Thesis:

"I can't help it - if food's around I eat. See how I am - see if you can stop me." Here the overweight player is having feelings of deprivation. He senses deficiencies in the "strokes" he should be getting from other sources (girlfriends, wife, attention from others, being able to wear smart clothes, etc.) and experiences this as a great need to eat. He knows that he should cut calories but feels simply driven to eat while unconsciously feeling a need for more satisfying interpersonal relationships.

Here is how the interchange may be going on two levels when the player is interacting with someone playing the persecutor role:

Social Level:

Player (Adult):	"I can't cut out food."
Persecutor (Adult):	"You really should you know - you can if you try."

Psychological Level:

Player (Child):	"See if you can stop me."
Persecutor (Parent):	"You've got to lose weight because ... "

Aim:

The player's purpose is to punish himself for not feeling adequate enough to stop eating and for not being able to effectively find outlets for his interpersonal needs.

Advantages:

The player gets sympathy from others or can play "martyr" with the Persecutor - "He (or she) just

doesn't understand." He then has an excuse for being good to himself and since he is so deprived, he might as well be good to himself - at least he can enjoy food. Hence, he goes on eating often in bigger quantities.

Essentially, what happens then is a vicious circle wherein the obese person can justify eating more and more. He laments about his weight and eating problem, others insist that he can lose weight and try to help, he gets angry about their intrusion or else gets depressed and ends up eating even more. Do you recognize this game at all? You probably do. It is a very destructive game and by all means should be stopped. You can do this by ignoring other people's comments about your weight problem and by steadily plodding along on your own with your weight loss program. Do not let others bother you because this will give you an excuse for eating more instead of less. Doing this may be hard because others comments have probably bothered you for years and it is hard to ignore them. However, you must ignore them and stick to your guns and work at losing weight. It is not easy but the effort is worth the end results.

RELAXATION INSTRUCTIONS

After two weeks of practising the relaxation training, you should be finding it easier to relax. We will progress a bit further in the training this week. For this week, practice 20 minutes at least each day. If you can, try to do the 20 minutes all at one time. If you are able to work this into your schedule, you will find that you are able to obtain a greater degree of relaxation.

When you are ready and are in your relaxation practice position, begin by taking two deep breaths. Inhale fast but exhale slowly. Next tighten all of the muscles in your right arm and hand. Hold for a slow count to 10. Release. Repeat once more with your right arm, followed by twice with your left arm, and twice with both arms together. Now move to your legs. Curl your toes and tense your whole right leg, not just your foot. Hold for a slow count to 10, release. Repeat. Then repeat with your left leg twice, and then both legs together twice.

Again take two deep breaths of air, inhaling fast, exhaling slowly, and expelling all of the air from your lungs. Imagine yourself to be a balloon as you do this. As the air goes out, let your body become very loose and relaxed. Let your muscles feel limp and comfortable. With each breath, let your relaxation become deeper and deeper.

Now concentrate on your hip muscles. Let them become relaxed. Let your whole body sink into these large muscles. They become softer and more relaxed. Let your body sink down very warm and comfortable. With each breath, let your relaxation become deeper and deeper and feel warmer and more comfortable.

Now think about your tummy muscles and let them become totally relaxed. Let your tummy feel like putty. Let all tension melt away. Relax more and more with each breath. Let a deep feeling of warmth and comfort spread throughout your body. No tension. No strain. Just relaxation. Feel as if you have no cares in the world.

Move now to your chest muscles. Feel these muscles and let them relax. With each breath that you exhale, let your shoulders relax a little more. Let a wave of muscle relaxation spread across your chest, across your shoulders and down to the small of your back. Let your body relax deeper and deeper. Feel warm, comfortable, and relaxed.

Go back to your arms and let them relax even more. Remember how they felt when you tensed them. Remember how they felt when you relaxed them. Let them get an even deeper feeling of warmth and relaxation. Let your wrists, hands and fingers relax. Your arms should feel heavy. Let all the tenseness that you do not need flow out of the tips of your fingers and relax deeper and deeper.

Now think about your neck. Let it become very relaxed. Just let the muscles in the back of your neck relax. let your neck become very relaxed, very loose, and very limp. If you are in a sitting position, it should not feel uncomfortable for your head to hang very limp and loose. Just reduce any uncomfortableness that you might feel, and let it fade away. With each breath that you let out, let your neck muscles become more relaxed and sink deeper and deeper into relaxation.

Now coming right across your scalp, let all of those muscles in your scalp relax. Those muscles around the top of your head and the muscles around your forehead and around your eyes go completely limp. Let the upper eyelids rest very heavily but very comfortably on the lower lids. Let the cheek muscles relax and those muscles around your mouth. Let your jaw muscles relax. Let complete relaxation flow into these muscles. Let your tongue go completely limp in your mouth and let this relaxation flow right down to your throat. With each breath, let these muscles become more and more relaxed. There is no necessity for you to talk or to have any feeling of necessity to speak or to respond. Just let your vocal chords relax. You can simply relax. Deeply relax. You can relax completely. Deeply. Deeper and deeper and even deeper. Relax as completely as you possibly can. You may feel a feeling of warmth and heaviness spreading throughout your body. This too is good. Let yourself sink deeper and deeper into this relaxation.

When you are ready to get up, do so. When you do, you should feel relaxed and refreshed with a calm sense of confidence that you can stop from eating and keep working at losing weight. Do not gain any tension that is not necessary to get you through the rest of the day.

Practice this relaxation procedure each day for at least 20 minutes so that you can relax easier and deeper each time you try. It is essential that you learn to relax deeply and well for it to be of use to you in losing weight and releasing tension.

This week you have the following things to do: quit playing the "Food Alcoholic" game (ignore others's comments and steadily work at losing weight), practice relaxation, answer the review questions, fill in the behaviour ratings, have your weekly weigh in and record and graph your weight. You will also begin your extra activity this week, and you should try to use up 50 to 150 calories more than you usually do each day. This means a minimum of 350 calories to burn up for the week (50 x 7). Activity records have been provided and should be completely every day. Also, please note that we will be collecting your used Activity Records at the end of the program as part of our research project. An empty envelope has been provided for you to save your used Activity Records in.

REVIEW QUESTIONS - LESSON 4

You are to answer the questions below as clearly and as briefly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. Why is activity so important? _____

2. Why is it important not to let the comments of others bother you in the "Food Alcoholic" game?

3. What kinds of strokes may a person be missing when they are playing the "Food Alcoholic" game? (Note: Think of specific things which are not necessarily listed in the lesson and which may be strokes that you are not getting.)

4. When you finish your relaxation training for the day, how should you feel?

BEHAVIOUR RATINGS - LESSON 4

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I ignored other people's snide remarks about my weight and weight loss attempts.	—	—	—	—	—	—	—
2. I kept up on my weight loss program.	—	—	—	—	—	—	—
3. I practised muscle relaxation for a full 20 minutes today.	—	—	—	—	—	—	—
4. I did more activity than I usually do.	—	—	—	—	—	—	—

Total points for week _____

All of the time = 5 points

Most of the time = 3 points

Some of the time = 1 point

None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 4 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend ignored other people's snide remarks about his/her weight and his/her weight loss attempts.	___	___	___	___	___	___	___
2. My friend kept up on his/her weight loss program.	___	___	___	___	___	___	___
3. My friend practised muscle relaxation for a full 20 minutes today.	___	___	___	___	___	___	___
4. My friend did more activity than he/she usually does.	___	___	___	___	___	___	___

Total points for week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

Note: Remember that when you are doing your ratings, that you are not to nag or criticize your friend as this may make it harder for him or her to lose weight.

LESSON 5

MOTIVATION

During the past 4 weeks you should have been losing weight if you have been following our program. You probably noticed a bigger loss in the first few weeks. Now you may have slowed down a bit in your rate of loss. This is to be expected in almost any program and in fact you may sometimes find that you do not lose any weight for a few weeks. This is called a plateau and as long as you are not gaining just keep on with the program and you should start dropping again. If you start to gain, then you are probably not following the program, so look at what you are doing and make sure that you are not playing games with others and with yourself in regards to weight reduction.

Although you may not be having problems with motivation yet, you likely will at some time during your weight loss program. It may not be in the first 10 weeks but as you continue doing the program after that so that you will get down to your goal weight, you will likely experience some problems with motivation - especially as you near your goal weight. This happens because the weight that you have already lost has made you look almost as good as you want to look. The social distress that you were feeling at your heavy weight may be almost gone and consequently you may not be as highly motivated to watch your eating and activity. You must, however, unless you want to regain the weight which you lost.

GAME 5 - "GOOD-NATURED ME"

Have you ever tried to kid yourself that you really like being overweight and at the same time ignore all of the bad effects, physical and otherwise, of being overweight? If you are like most overweight people, you have. The game you are playing when you do this is called "Good-natured me" and is one way of masking feelings of inferiority at being unable to lose weight. The participants in this game are the overweight player who we will call Fat and Jolly, and various other agreeing friends.

Thesis:

Here the player, Fat and Jolly, plays hard at the game to fool herself and others. In effect, she is trying to convince herself and others that if she is good natured about being fat neither she nor anyone else will really notice. "As long as I admit I have a weight problem, everyone will be satisfied with me including myself and I won't have to bother to slim down."

Here is how the interchange may be going on two levels:

Social Level:

Fat and Jolly (Adult): "I've learned to live with my weight problem - it doesn't bother me anymore."

Agreeing Friend (Adult): "Nobody's perfect - we all have to learn to accept something."

Psychological Level:

Fat and Jolly (Child): "I feel so helpless in trying to do anything about my weight."

Agreeing Friend (Parent):
"You poor thing - you really do have a problem, don't you."

Aim:

Avoidance of responsibility because of fear of failure in trying to lose weight.

Advantages:

By playing this game, Fat and Jolly can be satisfied with making few, if any, demands upon herself. She also tells others not to expect anything from her - if she is happy being fat, no one will expect her to do anything about her weight. In effect, she plays the ostrich, hiding her head in the sand and asks others to do likewise when it comes to her weight.

Unfortunately, even though the obese person is saying that she is content with her weight, inside she really is not and in fact may be rather upset and depressed about it. Often this just leads to more eating and makes matters even worse. It is difficult to break out of this circle but with perseverance it can certainly be done. Quit trying to kid yourself. Acknowledge that you are unhappy with your weight and begin to do something about it. The fact that you are involved in our program and are trying to do something about your weight is a very good sign. It is easy, however, to slip back into kidding yourself that you do not have to lose weight. Carefully watch whether you are beginning to play this game again. If you catch yourself beginning to, then stop right there and recommit yourself to your weight loss program.

ACTIVITY:

Last week you were told to start increasing your activity in little steps. As well, you were asked to do a minimum extra daily

expenditure of 50 calories, which is a total of 350 calories for the week. This was the equivalent of about an hour's brisk walk for most people. How was it? Did you manage OK? This week you are to do a bit more. Try to do 100 - 250 extra calories worth of exercise each day. This means a minimum expenditure of 700 extra calories for the week (100 x 7). It should not be hard. Remember to split it up onto different days and it will not seem half as bad. Keep records of these extra activities again.

In addition to these major planned activities, you can also add to your energy output in many little ways - ways that you do not even need to record and which, when added together, can account for a considerable amount of energy expenditure even though each of them individually do not account for much. You can add on energy output in many ways because our way of life is basically a very lazy one. Our modern world spends billions of dollars each year just so people can avoid activity. We try to save exercise in the ways that we move from place to place: the long walk gave way to the bicycle, the bus, and now the car; and the trek from a parking place to a store has given way to parking-lot-at-the-door shopping centers. And once we arrive where we are going, stairs have been replaced by escalators and elevators to make certain that we use as little energy as possible. In industry, machines are doing most of the hard work which is good in several ways but bad in others because jobs require less effort and thus fewer calories and are less interesting. And exercise is decreasing at home as well. Many machines help with housework - the electric vacuum cleaner, dishwasher, clothes washer and dryer, and mixer. Even ice cream freezers are electric as are ice crushers and can openers. All work against men and women who are trying to watch their weight. And downstairs or out in the garden, we are no better off. We use electric drills and saws instead of a brace and bit and handsaw, and gasoline or electric lawn mowers and hedge cutters instead of human-powered tools.

All of these gadgets take away chances for useful exercise, and people actually feel left out if they do not think that they own enough machines of this sort. While this may be good for industry, it is surely a problem for the individual. Now you must start thinking about spending your own energy instead of saving it as all of our modern conveniences want you to. You could begin by throwing out all of your electric appliances and your car but this would be rather silly. You can, however, change the ways you use them. Take your car - do you have to drive it two blocks to post a letter? Walk instead, it is probably almost as fast. Do not fight for a parking spot outside the door of your grocery store. Park at the end of the lot and walk the few extra steps. Walk to the next bus stop when waiting for the bus. When your electric appliances wear out, get a good quality manual one where you will use a bit of exercise or even have both now and give preference to using the manual one. Do not try to save steps around the house - use them instead. In stores, walk up the stairs instead of the escalator ride, or if it is several floors, take the elevator only part of the way and walk the last couple of floors.

For the coming week, try to use up energy in these little ways and in any other little way that you can think of. It will be hard to do as you are so used to trying to save steps. Work hard and it will become much easier. Those little increases here and there will add up quite dramatically.

NUTRITION:

Before going on to your relaxation instructions for this week, a discussion of nutrition must be undertaken as this is important to everyone and should be watched carefully if you are trying to lose weight. Your body will suffer if you are not taking in the proper nutrients. In order for you to stay healthy, your body needs carbohydrates, protein, fat, vitamins, minerals and water. These all work in combination with each other so it is important to include all of these in your diet.

Carbohydrates are our main source of quick energy. All plants contain carbohydrates which we refer to as sugars and starches. Although carbohydrates do have some other functions, their main function is to provide energy. The caloric energy value of plants depends on the fiber and water content of the plants. Plants with a low fiber or water content are higher in calories than those with a high fiber or water content. Recently, refined carbohydrates or sugars have been implicated as a factor in heart disease. Although high levels of the refined sugars may not be desirable, it is important to have some carbohydrates in the diet, including weight reduction diets.

Protein furnishes calories and can be used for energy or for building and repairing body tissue. It cannot be used for both purposes at the same time, however, so we need calories from other sources to meet the energy needs of the body. Our most important sources of protein are animal products such as meat, fish, eggs, milk and cheese. Dried peas and beans and peanut butter are also good protein sources.

Fat is our most concentrated source of calories. A given amount of fat supplies over twice the calories as the same amount of carbohydrates or protein would. This is why we have to watch the amount of fat we eat when trying to lose weight. This does not mean, however, that all fat must be cut out of the diet. Since all animal products contain fat, we would have to greatly limit our protein to eliminate fat from the diet. Also, fat is important because it has a high filling value, it increases the palatability of foods, and it is a carrier of the fat-soluble vitamins.

Vitamins and minerals do not furnish calories to the diet, but are important in regulating and controlling many body processes. They are found in many different foods. Water is also a very important nutrient. It makes up a large percentage of our body, carries nutrients to body cells, and carries waste away from the cells.

Nearly all nutrients except vitamins, minerals, and water contain

calories. The caloric values of foods have been determined in the laboratory and indicate the amount of energy in the foods. One gram of pure carbohydrates yields 4 calories, one gram of fat yields 9 calories, and one gram of protein yields 4 calories. The caloric needs of the body depend on several factors and can be classified into two main areas which are the Basal Metabolic Rate (BMR), and the muscular work, activity, and movement of the body. The BMR is the number of calories needed by the body for maintenance of its basic functions. The BMR is affected by several factors which are growth (increase), sex (men higher than women due to body composition), pregnancy (increase), and age (decrease with age). The BMR stays fairly constant per person, however, and the muscular work and activity is what causes variations in a person's daily caloric needs.

You must be careful to maintain a balanced diet by including carbohydrates, protein, fat, vitamins, minerals and water in your food intakes each day. To maintain the best balanced diet, your diet should be high in protein and low in carbohydrates and fat but by all means do not cut out all carbohydrates and fat from your diet. We have included a summary of "Canada's Food Guide" at the end of this lesson for your information. Following these guidelines when choosing and developing any diet will ensure that you are eating a balanced and nutritious diet. Also useful are the following seven handy questions which you can ask yourself about your diet:

1. Are you eating too much food?
2. Are you eating too much fat?
3. Are you eating too much sugar? (contains only calories, no nutrients).
4. Are you eating too many empty calorie foods? (give you only calories but no nutrients).
5. Are you eating too many highly processed foods? (often sugar added and also lose nutrients the more they have been processed)
6. Are you eating too few fruits and vegetables? (if so, then you are missing many valuable nutrients)
7. Are you eating enough different foods? (if not, then you may miss out on many important nutrients, and you are probably eating more because you are only eating what you like)

RELAXATION INSTRUCTIONS

As mentioned earlier, relaxation takes practice before you can do it easily and quickly. This week you are to go back to the relaxation instructions in Lesson 4 and practice these for at least 20 minutes each day just as you did last week. This is necessary for you to become good at it. This week, however, try to do your 20 minutes of daily practice during the part of the day in which you have the most problems with eating. Relaxing during this time will make you feel less like eating and will give you confidence in your weight loss attempts.

During the next week, you have the following to do: acknowledge that you are not satisfied with your weight and want to lose, follow your program closely, fill out your activity record, practice relaxation during the hardest part of the day, answer the review questions, fill in the behaviour ratings, have your weekly weigh in and record and graph your weight.

Eat a variety of foods from each group every day

Energy needs vary with age, sex and activity. Foods selected according to the guide can supply 1000-1400 calories. For additional energy, increase the number and size of servings from the various food groups or add other foods.

bread and cereals **3-5 servings**

whole grain or enriched. Whole grain products are recommended.

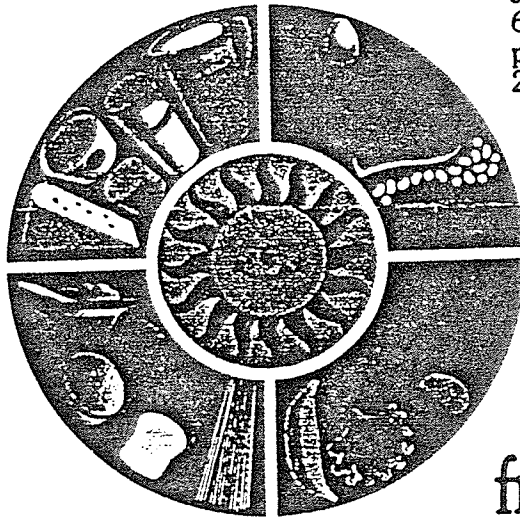
Examples of one serving

1 slice bread
125 to 250 mL ($\frac{1}{2}$ -1 cup) cooked
or ready-to-eat cereal
1 roll or muffin
125 to 200 mL ($\frac{1}{2}$ - $\frac{3}{4}$ cup)
cooked rice, macaroni,
spaghetti

meat and alternates **2 servings**

Examples of one serving

60 to 90 g (2-3 ounces) cooked lean
meat, poultry, liver or fish
60 mL (4 tablespoons) peanut butter
250 mL (1 cup) cooked dried peas,
beans or lentils
80 to 250 mL ($\frac{1}{3}$ -1 cup) nuts or
seeds
60 g (2 ounces) cheddar,
process or cottage cheese
2 eggs



milk and milk products

Children up to 11 years	2-3 servings
Adolescents	3-4 servings
Pregnant and nursing women	3-4 servings
Adults	2 servings

Skim, 2%, whole, buttermilk, reconstituted dry or evaporated milk may be used as a beverage or as the main ingredient in other foods. Cheese may also be chosen.

Examples of one serving

250 mL (1 cup) milk, yoghurt or
cottage cheese
45 g (1 $\frac{1}{2}$ ounces) cheddar or
process cheese

In addition, a supplement of
vitamin D is recommended
when milk is consumed
which does not contain
added vitamin D.

fruits and vegetables **4-5 servings**

Include at least two vegetables.

Choose a variety of both vegetables
and fruits — cooked, raw or their juices.
Include yellow or green or green leafy
vegetables.

Examples of one serving

125 mL ($\frac{1}{2}$ cup) vegetables or
fruits
125 mL ($\frac{1}{2}$ cup) juice
1 medium potato, carrot,
tomato,
peach, apple, orange or
banana

REVIEW QUESTIONS - LESSON 5

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. When an overweight person plays the "Good-natured me" game, he can stay passive and does not have to work at losing weight. Why is this?

2. The "Good-natured me" game can often lead to more and more overeating. Why?

3. Which contains more calories - a gram of carbohydrates or a gram of protein? _____

4. Sugar, either pure or in processed and junk foods, should not be overeaten because:

Note: Sometimes when you are trying to lose weight others in your home may be making it harder for you to lose weight by their comments and by their behaviour. If this is happening, ask these people not to interfere with your program. It is important that others are not making it more difficult for you to lose weight. If they are not helping you, it is important that they are not hindering you either. Therefore, please tell them that we are asking them to not interfere with your program either by their behaviour or by their comments.

BEHAVIOUR RATINGS - LESSON 5

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I acknowledged that I am not satisfied with my weight.	—	—	—	—	—	—	—
2. I kept on being very involved in my weight loss program.	—	—	—	—	—	—	—
3. I was able to add in little extra activities during the day.	—	—	—	—	—	—	—
4. I practised my 20 minutes of relaxation during the part of the day when it is hardest to stop eating.	—	—	—	—	—	—	—

Total points for week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 5 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week add up how many total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend acknowledged that he/she is not satisfied with his/her weight.	—	—	—	—	—	—	—
2. My friend kept on being very involved in his/her weight loss program.	—	—	—	—	—	—	—
3. My friend was able to add in little extra activities during the day.	—	—	—	—	—	—	—
4. My friend practised 20 minutes of relaxation during a part of the day when it is hardest to stop eating.	—	—	—	—	—	—	—

Total points for week _____

All of the time = 5 points
Most of the time = 3 points
Some of the time = 1 point
None of the time = 0 points

A-1984/2

LESSON 6

Five weeks of the program are finished. How are you doing? It takes work to lose weight, does it not? And this must be accompanied by steady determination not to play games with yourself and others. You should no longer be playing the following games or, if you are, you should know how to stop: "Why don't you - Yes, but", "Harried", "Look how hard I've tried", "Food Alcoholic", and "Good-natured me". You should be accepting responsibility for your weight loss attempts, should no longer be afraid to try to lose weight, should be making time for losing weight, and should be acknowledging that you do not like being fat.

GAME 6 - "WOODEN LEG"

The "Wooden Leg" game is one of those games that is most frequently played by overweight people, especially those who are very much overweight. The idea here is "What do you expect of a person with a wooden leg (emotional problem, handicap, addiction, etc.)"?

Thesis:

The person always finds excuses for her failure to limit her caloric intake and lose weight. "I'm fat because I have a metabolism problem." "My whole family is fat - it's a constitutional thing." "Look, I've been overweight since I was an infant - you don't know what a problem it is." "I don't eat much - I'm just one of those people in whom every morsel of food turns into fat. Even if I drank only water, it would turn into fat." Wooden Leg really does not want to have to go through any discomforts in order to lose weight. She excuses herself readily from any responsibility and this pattern can probably be seen in other areas of her life, too. The player is only fooling herself by playing this game with herself.

Here is how the interchange may be going on two levels:

Social Level:

Wooden Leg (Adult):	"I have a metabolism problem and almost everything I eat turns into fat."
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Psychological Level:

Wooden Leg (Child):	"If people would only understand."
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Aim:

Justification of weight problem; avoidance of guilt for lack of efforts to lose.

Advantages:

The advantage here is that Wooden Leg excuses herself from accepting responsibility for her weight problem. If she is a good player, she can probably get others to go along with her game as they will understand that she cannot (the better word is won't) do anything about her weight. The chances are that if Wooden Leg is a skillful player, she manages to view herself as blameless for many of the other difficulties that she may be having.

Basically, then, this game allows the overweight person to give up responsibility for losing and yet feel not guilty about not losing because she claims that the problem is really out of her hands. Unfortunately, although this is a good way of getting rid of guilt, it is a terrible way of getting rid of fat - you do not. Very seldom are metabolic factors so strong that you cannot lose weight no matter what you do. In other words, it is totally up to you. If you accept the responsibility and work hard, you will lose weight. It may not be fast but speed is not important. It is better to lose a pound a week than five pounds a week.

BAD EFFECTS OF OBESITY

When you are on a weight reduction program, it is good to keep the bad effects of being overweight in mind. On a general level, obesity is related to a number of undesirable physical, psychological, and social consequences. Physical problems which are often noted include respiratory difficulties, cardiovascular dysfunctions, diabetes, kidney disease, toxemia of pregnancy, menstrual abnormalities, and arthritis of the spine and lower extremities. Psychological problems which sometimes seem to come with obesity include feelings of inferiority, inadequacy and shame. Socially, it has been said that obesity often throws a dark shadow over a person's relationships with others because many view the fat person in our culture as being sloppy, irresponsible, and ungainly. Unfortunately, the fat person may often agree with such evaluations of him or herself. Although such problems do not occur in every obese person, they do occur often enough to cause many obese people many problems and feelings of inadequacy. Keep these problems in mind, especially when you find yourself playing games like the "Wooden Leg" game where you are trying to get out of taking the trouble to lose weight.

RELAXATION INSTRUCTIONS

This week we are going to add something different to your relaxation instructions. You are again to follow the relaxation instructions in Lesson 4, practising them for at least 20 minutes a day during that part of the day when you have the most problems with eating. However, once you are relaxed, you are not to simply get up. Instead, you are to remain very relaxed and imagine yourself in some situation where you are totally relaxed, warm, and comfortable. This situation can be a real place or one which you have only dreamt

about in your imagination. As you lay or sit there thinking about it, make sure you think about every detail and think and feel just how warm, relaxed and comfortable you are.

On the following page, is space for you to write a description of your ideal situation. Describe it as fully as possible and every time you think of something more to add to the scene, write it down so that you will not forget it. Once you have outlined your scene, you can take the sheet out of the manual and keep it close to you when you are practising your relaxation in case you forget about some points in the scene. It is necessary for you to pick a scene that is really relaxing for you because you will later use it to help you relax more easily when you are in an anxiety situation. Some examples of a relaxing situation may be sitting in the shade of a palm tree, sinking into a big eiderdown quilt, swimming in a warm, sudsy pool, and the like. Pick something that you would really like. These are only examples. Of course, you will have to describe the scene much more thoroughly. Note that you are not to choose a scene or situation that involves eating.

For your extra activities, keep the same goals that you had last week. These were to do between 100 - 250 extra calories worth of exercise each day. This means a minimum expenditure of 700 extra calories for the week (100 x 7). Also keep working in little extra activities into each day such as walking to post a letter, parking at the other end of the parking lot, standing instead of sitting when you are talking on the phone, etc.

You have the following to do during the next week: not make excuses for your weight problem, keep on sticking to your program, doing your relaxation training plus imagining a relaxing situation, extra activities, answer the review questions, fill in the behaviour ratings, have your weekly weigh in and record and graph your weight. Remember too, that the benefits which you will get out of this program will depend on the degree to which you actually follow it and participate in it.

IDEAL RELAXING SITUATION

Describe your ideal relaxing situation. It does not have to be in sentences but can and possibly should be in point form so that you can review it quickly.

REVIEW QUESTIONS - LESSON 6

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. What are some typical excuses used by overweight people who are playing the "Wooden Leg" game? (Think of some others that are not in the lesson if you can).

2. Why do you not feel guilty when you play the "Wooden Leg" game?

3. What are some of the bad effects of obesity?

BEHAVIOUR RATINGS - LESSON 6

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week, add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I did not make excuses for my weight problem.	—	—	—	—	—	—	—
2. I stuck to my weight reduction program.	—	—	—	—	—	—	—
3. I practised relaxation for a full 20 minutes.	—	—	—	—	—	—	—
4. I imagined my ideal relaxing situation during my relaxation training.	—	—	—	—	—	—	—

Total points for week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 6 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week add up how many total points you awarded your friend for the whole week.

	S	M	T	W	T	F	S
1. My friend did not make excuses for his/her weight problem.	—	—	—	—	—	—	—
2. My friend stuck to his/her weight reduction program.	—	—	—	—	—	—	—
3. My friend practised relaxation for a full 20 minutes.	—	—	—	—	—	—	—
4. My friend imagined his/her ideal relaxing situation during his/her relaxation training.	—	—	—	—	—	—	—

Total points for week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

LESSON 7

By now, after six weeks, you should be able to stop yourself from playing many of the games which we have already discussed. Your ability to stop yourself should be becoming part of your lifestyle and should be easier to do than at the beginning of the program.

GAME 7 - "IF I WEREN'T FAT"

This is another game which the player plays with himself and in which the player ends up hurting only himself. This game is played by almost everyone, even if they are not fat, though there they use some other excuses. It is a game, however, which many fat people play.

Thesis:

In this game, the player is acutely conscious of his weight problem and many of the difficulties he may be experiencing, especially difficulties in getting attention from the opposite sex. He blames his weight problem on spouse's inattentiveness or his failure to get a certain person's attention. His weight is also blamed for other difficulties - his periods of depression, his fatigue, the reason why some people appear to 'look down on him', his boredom with his job. The player may be right in that some of his other difficulties may be related to the fact that he is overweight. Yet he does nothing about his weight problem nor does he take any positive action to cope with his difficulties. Unconsciously, the person who plays this game frequently has a deep fear of rejection. He is really afraid that even if he were not overweight, even if he did try to make himself more attractive to the opposite sex, he would be rejected. His solution is to be apathetic about his weight problem as well as other difficulties. He is afraid to lose weight because if he lost weight and still had other difficulties, he may have to face some of his difficulties honestly, and take positive courses of action.

The interaction on two levels may be going something like this:

Social Level:

Player (Adult): "If I didn't have this weight problem, I'd be more popular."

Psychological Level:

Player (Child): "I probably won't be accepted no matter what I do, so why try."

Aim:

The purpose of this game is avoidance of anxiety which would come from honestly facing one's difficulties. The anxiety is avoided and instead a feeling of apathy and re-occurring "blues" sets in.

Advantages:

This game is played to save face and preserve self-esteem. It shields the player from objectively viewing his/her difficulties. Sometimes this game is played by married women who unconsciously want to ward off their husband's sexual advances. The unconscious reasoning is: "If I'm fat, I'll be less attractive to him sexually and he won't want sex as often." Single people who play this game are sometimes unconsciously afraid of close emotional ties with the opposite sex and remain overweight as a barrier to intimacy (not necessarily sexual intimacy).

After reading about this game, you must admit that being overweight is a good way to get out of a lot of situations. These do not only have to be with the opposite sex. By being fat, you can get out of many sports type activities or team games, you can get out of a lot of certain types of work where you must move a lot because your feet just cannot take it. Unfortunately, all of the things which you are getting out of by being overweight are exactly the kinds of activities you need in order to lose weight. Thus, you are very much working against yourself when you play this game and are making it indeed harder to lose weight. This is an exceptionally easy game to get into the habit of playing. It is also hard to stop playing but it can certainly be done. You must first acknowledge that you are getting out of many activities and many relationships because of your weight. Then you must commit yourself to lose weight regardless of the problems involved. Really just as in other games you must accept responsibility for your weight problem and for doing something about it.

RELAXATION TRAINING

After five weeks of relaxation training, you should be becoming very good at relaxing easily and quickly. You should also be becoming better at imagining your ideal relaxing situation and having this help you stay relaxed as well. This week we are going to move your relaxing more into problem areas. Already you are relaxing in the part of the day that gives you the most problems in regards to eating. Relaxing at this time should make you feel less like eating when you come out of your training. This week you are again to follow the relaxation instructions given in Lesson 4. However, this week, instead of doing them laying down in a quiet room or sitting in a reclining chair or an easy chair, you are to first sit up, and secondly to use a less comfortable chair or chesterfield. You may also try, if you would like, to relax when other people are in the room or if the television is on. By no means, however, try talking

to others during the exercises, nor actually watch the television. These things are in the room so that you can learn to ignore them and totally relax instead. As you did last week, imagine your ideal relaxing situation once you are relaxed and before you get up.

For your extra activities this week, your goals will be increased somewhat from last week's goals. This week do between 150 - 350 extra calories worth of activities a day. This means a minimum expenditure of 1050 calories for the week (150×7). Keep working on the little extra activities which you can do during the day as well such as carrying in the groceries one bag at a time, standing instead of sitting while doing the ironing, parking at the other end of the parking lot, shovelling the snow yourself, and the like.

For the next week, you have the following to do: stop thinking about what you would do if you were not fat and instead start doing something about being fat, practice your relaxation for at least 20 minutes a day in a less comfortable sitting position, fill out your activity records, answer the review questions, fill in your behaviour ratings, have your weekly weigh in and record and graph your weight.

REVIEW QUESTIONS - LESSON 7

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. What is a person afraid of in the "If I weren't fat" game?

2. What are some of the things that the overweight person blames his/her weight for? (Also think of some others not in the lesson)

3. What are some things that a person gets out of by being overweight? (List others not in the lesson too).

BEHAVIOUR RATINGS - LESSON 7

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week add up the total points that you earned during the week.

	S	M	T	W	T	F	S
1. I did not let my weight keep me out of situations that are good for me.	_____	_____	_____	_____	_____	_____	_____
2. I kept on seriously trying to lose weight.	_____	_____	_____	_____	_____	_____	_____
3. I did my relaxation sitting up in a less comfortable chair.	_____	_____	_____	_____	_____	_____	_____
4. I imagined my ideal relaxing situation in my relaxation practice.	_____	_____	_____	_____	_____	_____	_____

Total points for week _____

- All of the time = 5 points
- Most of the time = 3 points
- Some of the time = 1 point
- None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 7 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week add up the total points you awarded your friend for all behaviours and for all days combined.

	S	M	T	W	T	F	S
1. My friend did not let his/her weight keep him/her out of situations that are good for him/her.	_____	_____	_____	_____	_____	_____	_____
2. My friend kept on seriously trying to lose weight.	_____	_____	_____	_____	_____	_____	_____
3. My friend did his/her relaxation sitting up in a less comfortable chair.	_____	_____	_____	_____	_____	_____	_____
4. My friend imagined his/her ideal relaxing situation in his/her relaxation practice.	_____	_____	_____	_____	_____	_____	_____

Total points for week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

LESSON 8

GAME 8 - "IT'S REALLY ALL RIGHT"

In this game, the player says to herself that it is all right to continue being fat and to even get fatter. Here the Player's Child ego state takes over and tries to convince the Parent and Adult that being fat is really alright. It is really then a game played by one ego state with the two other ego states. As in many other of the games already discussed, people use the game as an excuse for not having to exert all of the necessary work to lose weight. If they could take a pill and the fat would fall off, that would be fine and they would try. However, since there is not a magic pill, they are not prepared to lose weight.

Thesis:

This is usually a well stabilized game and it is often extremely difficult to help the Player give it up. The reason for this is that the Child is in a strong position and has been in this position for a long time. Players of this game really are quite indifferent about their weight problems. The undisciplined, pleasure-loving Child has almost won the game of convincing the Adult and Parent ego states that it is really alright to be fat because to lose weight would require sacrifice and some discomfort and why suffer! The Player in this game would gladly lose weight and partake in the advantages of being slim if this could be accomplished by some magical method. People playing this game seldom seek help for their weight problem and continue keeping all their fat as long as they keep getting a minimum number of 'strokes' from various "others" in their world. Often, however, close analysis of the living patterns of the Player shows that she has let the Child take over not only her weight problem but other significant aspects of her life. Study reveals that she is actually settling for much fewer "strokes" than she would be getting if she took more initiative in her interpersonal relationships. She has many assets that could be developed to obtain many satisfactions for her but her undisciplined Child always takes the easy way out, leaving her to be satisfied with fewer "goodies". Sometimes, however, the critical Parent comes more to the fore, making the Player begin to doubt the wisdom of the Child's settling for second-best. When this happens, the Player begins to face up to her indifferent attitude toward her weight and becomes more concerned about her personal development.

The interaction between ego states on two levels may be going something like this:

Social Level:

Player (Child): "It's alright to be overweight. I'm a strong person - I'm not going to let a little thing like that bother me."

Psychological Level:

Player (Parent): "Really I guess I just don't want to be bothered bettering myself if it's going to require any effort."

Aim:

The purpose of this game is to allow the Player to live the easy life. What the individual fails to realize though is that "if nothing is ventured, nothing is gained."

Advantages:

By playing this game, the person can avoid many frustrations - if one does not try to overcome difficulties, one cannot get frustrated in the process of trying to overcome them. This game enables one to fully enjoy momentary pleasures of maladaptive and undisciplined behaviour because the Child protests that long range undesirable consequences of these behaviours do not matter.

Right now you are probably not playing this game. This is because you are currently involved in a weight control program and have been so for seven weeks now. However, this is a game which is easy to begin playing again when you start having problems with motivation. Your Child ego state just steps in and says why bother with all this hard work. It really is much easier to stop trying to lose weight. However, when you are tempted to follow this reasoning and play this game again, you must stop and think. Do you really want to stay fat or do you want to lose weight? Do you want to encounter all of those problems that come with being overweight which we discussed in Lesson 6? The choice is yours. It is a hard choice but one which we all know what you should choose. The choice to lose weight involves a lot of work and a lot of frustration. However, by steady perseverance and sticking to your guns and refusing temptation, you can lose weight. Losses should not be big (not 5 pounds a week), but they should be smaller and they should be steady (about 1 pound per week).

RELAXATION TRAINING

By now you should be able to relax easily and fairly quickly. This week you are to begin using this skill to stop you from eating. Each day during the following week you are to go through your relaxation procedure twice. Once it will be in the usual way. On the other time, you are to relax when you have a strong urge to eat. This may be just before supper, or in the afternoon at coffee break, or at lunch, or even when watching television and you are feeling like snacking. Just sit in your chair and relax yourself as easily as you can. Cut out other distractions and just relax for a few minutes. Imagining your ideal relaxing scene may help greatly. When you are relaxed for a few minutes, come out of it. You should feel relaxed and no longer feel like eating a lot. Instead you will have the confidence to stop you from eating.

Your goals for extra activities this week are the same as those for last week. This week do between 150 - 350 extra calories worth of activities a day. This means a minimum expenditure of 1050 (150 x 7) calories for the week. Keep working on the little extra activities which you can work into your day as well such as taking the stairs instead of the elevator, walking to post a letter, going to the basement to get something instead of sending another member of your family, and purposely parking a block away from the store even though you could park right outside the door.

For the following week, you, therefore, have the following to do: not let yourself begin playing the "It's really alright" game, stick to your guns and keep following your weight reduction program, practice relaxation once as usual and once when you are feeling very tempted to eat, fill out activity records, answer review questions, fill in your behaviour ratings, have your weekly weigh in and record and graph your weight.

REVIEW QUESTIONS - LESSON 8

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. What does the overweight person achieve by playing the "It's really alright" game?

2. Are you playing this game now? Why or why not? _____

3. Which ego state takes over in this game? _____

4. What should you do when you are tempted to play this game?

5. When you relax when you feel like eating, what should happen?

BEHAVIOUR RATINGS - LESSON 8

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week add up the total number of points that you earned during the week.

	S	M	T	W	T	F	S
1. I told myself that being fat is not alright.	—	—	—	—	—	—	—
2. I worked hard at losing weight.	—	—	—	—	—	—	—
3. I relaxed once as usual.	—	—	—	—	—	—	—
4. I relaxed once when I was feeling very hungry.	—	—	—	—	—	—	—

Total points for week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 8 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week add up how many total points you awarded your friend for the week.

	S	M	T	W	T	F	S
1. My friend told him/herself that being fat is not alright.	___	___	___	___	___	___	___
2. My friend worked hard at losing weight.	___	___	___	___	___	___	___
3. My friend relaxed once as usual.	___	___	___	___	___	___	___
4. My friend relaxed once when he/she was feeling very hungry.	___	___	___	___	___	___	___

Total points for week _____

All of the time = 5 points

Most of the time = 3 points

Some of the time = 1 point

None of the time = 0 points

LESSON 9

This is your second last lesson. Remember that as you have been going through these lessons you should be making changes in your attitudes to losing weight that will remain once this program is formally over. In this way, you will be able to keep up your good approach to losing weight and will be able to keep losing weight. Remember that it will be only too easy to slip back into your old habits and begin playing the games that we are discussing. You will have to keep a constant watch and guard against going back to your old ways and attitudes.

GAME 9 - "THERE'S NOTHING YOU CAN DO TO HELP ME"

This is yet another of the games that overweight people play. In this game there is the overweight person and other helpers. It is a game often played in weight reduction programs.

Thesis:

Here the Player expounds on all the difficulties he has in losing weight and tells the helpers how badly he wants to lose weight. He wants others to give him advice but as they do a knowing little smile creeps across his face - "Look, that won't work with me". He will claim that he cuts down on calories but it does not help or else he will go into great detail about how it is almost impossible for him to change his eating habits. He may also play the game by announcing that he is not trying very hard to limit his caloric intake because he just knows it will not work. The motives in this game can be many: rebellion ("You can't tell me what will help."); hostility ("I'll make you feel inadequate - see, your program won't work with me."); demonstration of superiority ("I'm a unique person - that old business of cutting down on calories doesn't apply in my case."). The Player just loves to get the helpers deeply concerned about his weight problem, but just let them try to motivate him to do anything about it.

The interaction on two levels may be going like this.

Social Level:

Player (Adult):	"Oh, I want to lose weight so badly."
Helpers (Parent):	"Try the methods we've been discussing."

Psychological Level:

Player (Child):	"Help me! Help me! I'll bet you can't."
-----------------	---

Aim:

To foul up any procedure or suggestion given to him to help with his difficulties.

Advantages:

The player often obtains many different kinds of payoffs for playing this game. He obtains a large amount of attention from the helpers, especially if they are in a formal weight reduction group. He can turn the resentment felt about being fat toward others because they fail to help. As well, the player can maintain an attitude of superiority by showing the helpers (especially professionals) that they are indeed not as expert as they assume because they cannot help him.

Although this problem is not as common as the rest, it certainly does present a problem with some people who are in a formal treatment program such as ours. You should carefully examine whether you are playing this game. If you are, you must stop because you are only harming yourself again. If you play this game, you will miss using many valuable things and suggestions which programs have to offer. For example, if you had played this game at the beginning of this program, you may have totally decided that relaxation training was worthless and consequently may not have tried it or may have tried it only half heartedly. If you had done either of these things, you would have missed learning a very valuable technique which you could have used to stop you from eating. Always be on watch that you are not playing this game. If you find yourself playing it, stop and give the suggestions offered a fair try before you discount them.

RELAXATION TRAINING

Your relaxation training for this week is essentially the same as that of last week. Again you are to totally relax twice during the day: once during a hard part of the day, and once when you are having a very hard time trying to stop from eating. Again you are to imagine your ideal relaxed situation during both periods of relaxation. When you are through with your relaxation, you will feel refreshed and will no longer have the strong urge to eat. Your relaxation periods no longer have to be a full 20 minutes long. Instead you should be able to relax fully in a much shorter time (around 5 - 10 minutes).

Your goal for extra activity is increased by a small amount again this week. For this week, do between 200 - 500 extra calories worth of expenditure a day. This means a minimum extra expenditure of 1400 calories for the week (200 x 7). Do not be alarmed with this increase. It will be the last one which we give you and is a goal which you should aim for over the next several months. If you would like to, you can set your goals higher over the next several months. Do not, however, go below this goal which we have given you today.

This week you have the following to do: guard against playing the "There's nothing you can do to help me" game, continue sticking to your weight loss program, use your relaxation skills to stop you from eating, answer the review questions, fill in your behaviour ratings, fill out your activity records, have your weekly weigh in and record and graph your weight.

REVIEW QUESTIONS - LESSON 9

You are to answer the questions below as clearly as you can. Feel free to go back to the material in the lesson if you do not remember an answer.

1. When is the "There's nothing you can do to help me" game often played?

2. What are some of the motives for playing this game?

3. What are the advantages of playing this game for the player?

4. If you are trying to lose weight, when should you try to relax?

BEHAVIOUR RATINGS - LESSON 9

I rate myself:

Each day award yourself a certain number of points depending upon how often you were able to do that behaviour during the day. At the end of the week add up the total points that you earned during the week.

	S	M	T	W	T	F	S
1. I worked hard at losing weight.	___	___	___	___	___	___	___
2. I relaxed when I was feeling very tempted to eat.	___	___	___	___	___	___	___

Total points for week _____

All of the time = 5 points

Most of the time = 3 points

Some of the time = 1 point

None of the time = 0 points

I had the most problems with which behaviour? _____

This may be because _____

BEHAVIOUR RATINGS - LESSON 9 (HELPER)

My helper rates me:

Each day award your friend a certain number of points depending upon how often you think that your friend was able to do that behaviour during the day. At the end of the week, add up how many total points you awarded your friend for the week.

	S	M	T	W	T	F	S
1. My friend worked hard at losing weight.	_____	_____	_____	_____	_____	_____	_____
2. My friend relaxed when he/she was feeling very tempted to eat.	_____	_____	_____	_____	_____	_____	_____

Total points for week _____

All of the time = 5 points
 Most of the time = 3 points
 Some of the time = 1 point
 None of the time = 0 points

This is the last week that you will be rating behaviours for your friend. Thank you for your help.

LESSON 10

In this lesson you will not be asked to do anything new nor will you have to do behaviour ratings. Instead, we will discuss one more game that overweight people play followed by a discussion as to how you can keep losing weight until you reach your goal weight and then how you can stay at that weight once you have reached it.

GAME 10 - "AIN'T IT AWFUL"

This game is played by the overweight player and sympathetic friends.

Thesis:

This game finds its most dramatic expression in the weight-loser addicts. Such people are always looking for new ways to lose weight. The Player loves to hear about new methods of weight reduction and enjoys telling everyone of all the methods she has tried. She wears her weight problem on her sleeve and openly admits her deep dissatisfaction with her weight. One Player often finds another who plays the same game and a contest ensues around who can tell the best stories about the problems of being fat. ("Once I kept myself on coffee and cigarettes for four days but I got so weak I could hardly get out of bed"; "I lost 10 pounds on Metracal but gained it all back in two weeks"). While this Player suffers open distress, she secretly wrings satisfactions from having something to complain about. Although she seeks out every solution that has been offered for weight problems, she has an unconscious need to remain overweight. Her weight problem allows her to exploit the sympathy which some friends so readily offer. At a deeper level, the Player often regrets not having accomplished many goals and not having met many expectations which she and others may have held for her. Not having certain achievements to relish, this Player displays her weight problem as if it were some accomplishment.

The interaction on two levels may be going something like this:

Social Level:

Player (Adult): "Oh, if you only knew what a cross this weight problem is to bear."

Sympathetic Friends (Adult):

"It really is terrible isn't it?", OR, "We understand".

Psychological Level:

Player (Child): "See, I've got something to talk about too."

Sympathetic Friends (Parents):

"You poor thing - it's a hard cross to bear, isn't it?"

Aim:

This game is played to forget about other disappointments by concentrating on the difficulties of being overweight. Underneath, the Player really feels "I'm a born loser", or "Poor little me".

Advantages:

By concentrating on her weight problem, the Player avoids becoming depressed about the expectations that she and others have held for her and which she has never met. This game gets considerable sympathy for her.

In all, this game lets the overweight person get a lot of attention or "strokes" while at the same time letting the person shirk any responsibility for trying to lose weight. Although this game is fun to play, one must stop playing it. Otherwise, the overweight person will become fatter and fatter and never get around to doing anything about losing weight.

CONTINUING

After nine weeks in this program, you may now be at your goal weight. However, if you had 20 or more pounds to lose, which is probably the case, then you must continue to follow the program until you reach the weight you want to be. As mentioned throughout your lessons, losing weight is not an easy business and it is very easy to slip back into your old habits and ways of thinking. Thus, it is very important that you continue practising what you have learned in this program. Do not forget about it once the program is over or you most surely will gain back the weight which you lost. Keep working at all of the behaviours which we have taught you. Make changes that are part of your everyday living so that you will do them naturally.

One certain way for you to keep losing weight is to make sure you have a negative energy balance. That is, you should be taking in less energy than you are expending. Do this by eating less and exercising more. If you have problems remembering everything that you learned over the past nine weeks, go back to your lessons and look them up. An index of the topics covered in each lesson is on the next page and will help you look things up. If you are still having problems remembering things, it might pay to work through the lessons again. Just start at the beginning and work right through.

If you still have another 50 to 100 pounds to lose, it still means a long time on the program. Do not get discouraged and give up. It took a long time to put all of that weight on and it is healthiest to take it off slowly. Always be making changes in your daily habits that you can live with. Otherwise, you will soon drop them and go back to your old habits and gain weight.

Once you have reached your goal weight, do not give up the program either. Keep those changes that you have made. That has been the goal of the program. If you do not make permanent changes, you will begin gaining when you go back to your old habits. If you find yourself gaining, go back and be careful to follow the program. Keeping weight off is hard work (maybe more than taking it off) and requires careful attention. That is why permanent changes that you automatically come to do are so important in making a program able to be followed for extended periods of time. If a program is not liveable, then it will not be followed over a long period of time.

Following are some things for you to do to help you continue losing weight and then to keep it off:

1. Decide what weight you would like to be and then keep working until you reach that weight. How fast you do it is not important.
2. Maintain a negative energy balance - less intake, more activity.
3. Keep watching that you are not playing any games with yourself. If you find yourself playing an old game, stop as soon as you can. Do not let yourself deceive yourself even more.
4. Use your relaxation training to stop you from eating. That is, relax for a few minutes when you have a strong urge to eat. This will make you feel less like eating.
5. Weigh yourself weekly probably for the rest of your life. You will then know how you are progressing. If you are gaining, then it means that you must pay more attention to the games you are playing and to your energy balance.
6. Keep on with your extra added activities. As mentioned in Lesson 9, aim for doing between 200 - 500 extra calories worth of activity a day. This means a minimum goal of 1400 calories worth of expenditure a week (200 x 7). If you keep at this level, it will become easier and easier to do. If you drop and then try to go up again, you will find the activity harder to do. Activity is very important to keep up because of the critical role it plays in fat loss.
7. Continue to use the techniques that have helped while you were in the program. We want you to continue losing weight, and most importantly to keep it off for good. If you have problems remembering some of the things to do, feel free to go back to the lessons. Work through them again and again until they become part of your lifestyle.

The formal part of this program is now finished. Hopefully, you have learned how to control your weight effectively, and you will be able to continue to apply what you have learned in the months to come. In order for us to be able to evaluate how well this program has worked for you, and whether it will continue to be useful for you in the future, we will be meeting with you periodically in the months to come. Our first meeting should be coming up shortly, and should have already been arranged. Please refer to the "Client Summary" Page at the very beginning of this manual. Your next appointment is the "10 Week Appointment", where you will be weighed, and various measures taken. This meeting should take no more than about 15 minutes. You should have completed all of the "Post Treatment Questionnaires" handed out at our last meeting (if you do not have these please call us immediately).

You should bring the following materials with you to our next meeting:

- 1) This manual (it is yours to keep, but we would like you to bring it to this next meeting).
- 2) Used ACTIVITY RECORDS,
- 3) Used Behaviour Ratings,
- 4) Completed "Post Treatment Questionnaires".

If for some reason you do not have your first appointment, or you cannot make it at that time, be sure to call me immediately. My phone number is at the beginning of this manual. Remember, these meetings are very important not only for us to evaluate this program, but also for you if you want to try to continue losing weight, or keeping it off. That is why your attendance at these meetings is necessary for your deposit to be returned to you.

We will also be arranging your 3 month followup meeting when we next meet. We look forward to seeing you again.

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Appendix L

Directiveness Ratings Questionnaires

PARTICIPANT'S EVALUATION OF PROGRAM DIRECTIVENESS

As you are probably aware, there are a large number of different weight loss programs to choose from today. One way that various programs differ is in how much DIRECTION they give the reader in guiding them through the various steps of the program. Some programs are very DIRECTIVE -- in other words they will tell you exactly what to eat or what to do, and when to eat it or when to do it, with little or few changes allowed. You are directed what to do.

For example, a program that provides you with a very detailed daily menu plan specifying what you should eat every day right down to the type of meat, vegetable etc., and when to eat the meals would be considered a fairly directive program. On the other hand, a program that simply tells you to "try to watch your calories", would be considered by most to be not very directive at all. Another example would be a program that tells you to take a 60 minute walk every day at precisely 12 noon (directive), compared to a program that simply suggests that you "try to get more exercise" (not very directive at all).

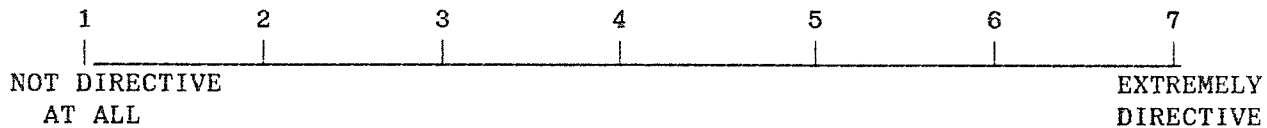
So a program becomes more directive when it directs you more and more about what you should be doing, and a program becomes less directive as it tells you less and less what exactly you should do. In general, the more directive a program is, the less choice you have in what you can or cannot do, and the less directive a program becomes the more choice you have in what you can or cannot do.

It is important to note that neither situation is necessarily good or bad. What is good for one person may not be as good for another. Also, what one person sees as being very directive, another might see as not being very directive at all. Finally, some people like lots of direction in what they do, and others dislike lots of direction.

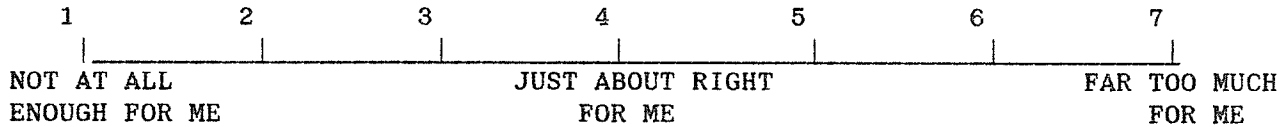
On the following pages we would like your opinion about how directive you found the recommendations of your program.

CIRCLE the number on each scale that most closely matches your rating.

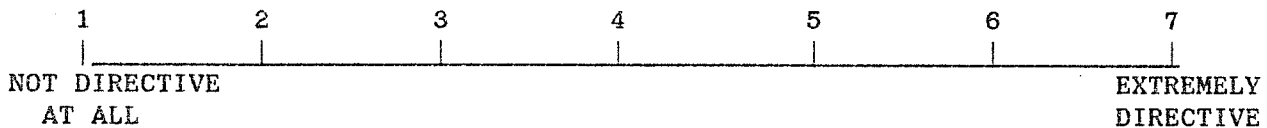
1A. I found the recommendations for my DIET (what I should eat) to be:



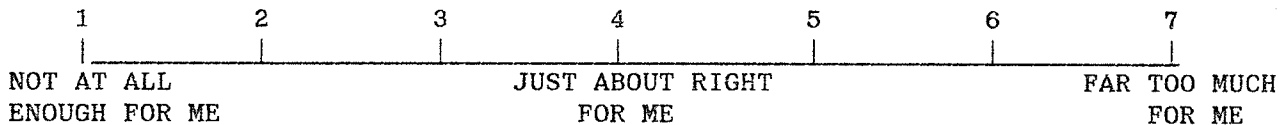
1B. For me personally, I found the amount of direction for DIET to be:



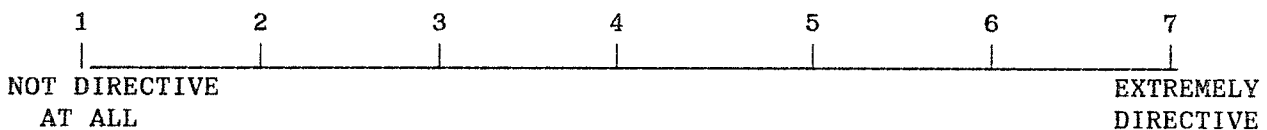
2A. I found the recommendations for PHYSICAL ACTIVITY to be:



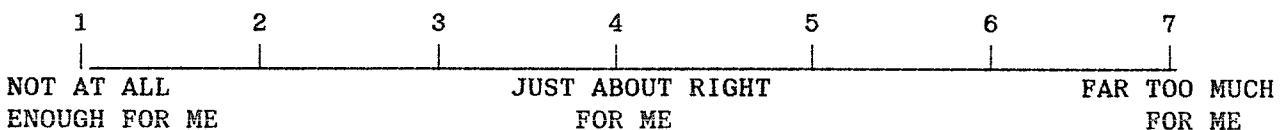
2B. For me personally, I found the amount of direction for ACTIVITY to be:



3A. I found the recommendations for DEALING WITH PROBLEM SITUATIONS (situations in which I might be tempted to overeat) to be:



3B. For me personally, I found the amount of direction for DEALING WITH PROBLEM SITUATIONS to be:



4A. I found the recommendations for FOOD BUYING, FOOD STORAGE, FOOD PREPARATION, FOOD SERVICE, AND FOOD CLEANUP to be:

1	2	3	4	5	6	7

NOT DIRECTIVE						EXTREMELY
AT ALL						DIRECTIVE

4B. For me personally, I found the amount of direction for FOOD BUYING, STORAGE, PREPARATION, SERVICE, AND CLEANUP to be:

1	2	3	4	5	6	7
-----			-----		-----	
NOT AT ALL	JUST ABOUT RIGHT				FAR TOO MUCH	
ENOUGH FOR ME	FOR ME				FOR ME	

5A. OVERALL, I would rate this weight control program to be:

1	2	3	4	5	6	7

NOT DIRECTIVE						EXTREMELY
AT ALL						DIRECTIVE

5B. OVERALL, and for me personally, I found the amount of direction provided by this weight control program to be:

1	2	3	4	5	6	7
-----			-----		-----	
NOT AT ALL	JUST ABOUT RIGHT				FAR TOO MUCH	
ENOUGH FOR ME	FOR ME				FOR ME	

DIR-A

FOR ALTERNATE MANUAL

PARTICIPANT'S EVALUATION OF PROGRAM DIRECTIVENESS

As you are probably aware, there are a large number of different weight loss programs to choose from today. One way that various programs differ is in how much DIRECTION they give the reader in guiding them through the various steps of the program. Some programs are very DIRECTIVE -- in other words they will tell you exactly what to eat or what to do, and when to eat it or when to do it, with little or few changes allowed. You are directed what to do.

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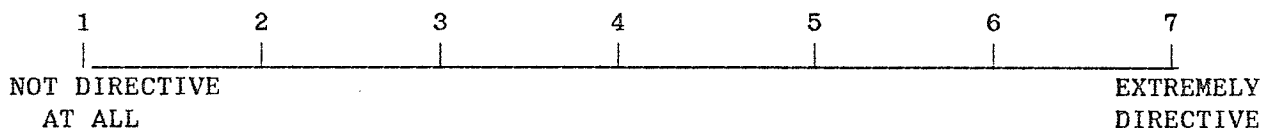
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It is important to note that neither situation is necessarily good or bad. What is good for one person may not be as good for another. Also, what one person sees as being very directive, another might see as not being very directive at all. Finally, some people like lots of direction in what they do, and others dislike lots of direction.

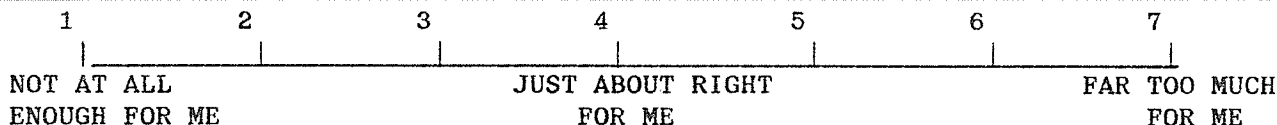
On the following pages we would like your opinion about how directive you found the recommendations of your program.

CIRCLE the number on each scale that most closely matches your rating.

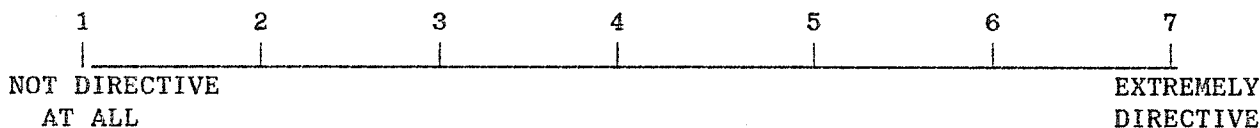
1A. I found the recommendations for my DIET (what I should eat) to be:



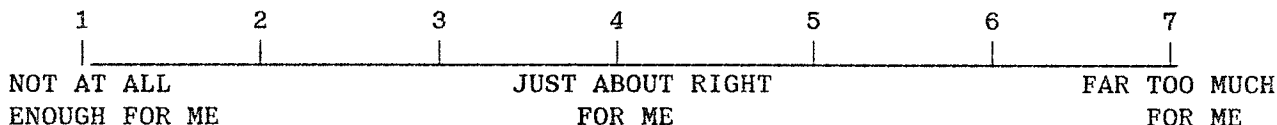
1B. For me personally, I found the amount of direction for DIET to be:



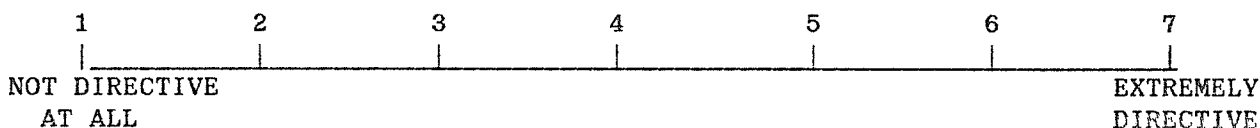
2A. I found the recommendations for PHYSICAL ACTIVITY to be:



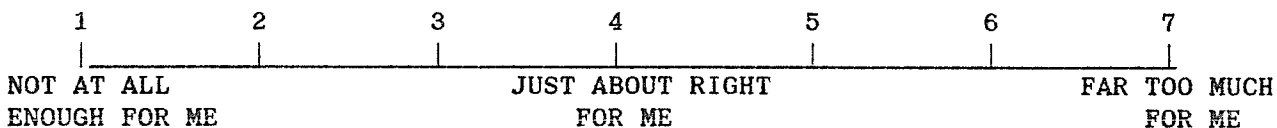
2B. For me personally, I found the amount of direction for ACTIVITY to be:



3A. I found the recommendations for DEALING WITH PROBLEM SITUATIONS (situations in which I might be tempted to overeat) to be:



3B. For me personally, I found the amount of direction for DEALING WITH PROBLEM SITUATIONS to be:



4A. I found the recommendations for DEALING WITH ANXIETY (through relaxation exercises) to be:

1	2	3	4	5	6	7
NOT DIRECTIVE			EXTREMELY			
AT ALL			DIRECTIVE			

4B. For me personally, I found the amount of direction for DEALING WITH ANXIETY (through relaxation exercises) to be:

1	2	3	4	5	6	7
NOT AT ALL		JUST ABOUT RIGHT			FAR TOO MUCH	
ENOUGH FOR ME		FOR ME			FOR ME	

5A. OVERALL, I would rate this weight control program to be:

1	2	3	4	5	6	7
NOT DIRECTIVE			EXTREMELY			
AT ALL			DIRECTIVE			

5B. OVERALL, and for me personally, I found the amount of direction provided by this weight control program to be:

1	2	3	4	5	6	7
NOT AT ALL		JUST ABOUT RIGHT			FAR TOO MUCH	
ENOUGH FOR ME		FOR ME			FOR ME	

DIR-A

Appendix M

Supplementary Analyses and Statistical NotesM.01 Principal Components Analysis of Dependent Variable Sets .

The dependent variables were grouped into five sets according to the dimension of change they were intended to measure. These were: weight change measures (percent weight lost, absolute weight lost, weight reduction quotient), activity change measures (activity goal, activity score, activity days), diet change measures (calorie score), behaviour change/compliance measures (questions completed, ratings, behaviour score, self-monitor index), and cost-effectiveness measures. Each set of dependent variables was analysed separately since they presumably represented different and relatively independent change variables. A principal components analysis of all dependent variables except for the cost-effectiveness index was performed in order to examine the extent to which the variables represented independent sets. Results of this analysis strongly supported the original groupings of the dependent variables, and are presented in Table M-1. Four principal components with eigenvalues greater than one were extracted which together accounted for 79.3% of the variance. The loadings of each variable on the different factors closely paralleled their grouping into sets for the present study.

Table M-1

Varimax Rotated Factor Matrix for Principal Components Analysis of
Dependent Variables

Variable	Factor 1	Factor 2	Factor 3	Factor 4
Activity Goal	.89914*	.17389	.11467	.00809
Activity Score	.89240*	.15277	.13081	-.06125
Activity Days	.79246*	.27874	.24404	.23284
Questions	-.02111	.81416*	.16051	.09977
Ratings	.26644	.78330*	.16314	-.12646
Behaviour Score	.31487	.78140*	.06110	-.10962
Self-monitor	.30811	.56904*	.45269	-.02846
Percent Weight Lost ^a	.25221	.20637	.89717*	-.18233
Absolute Weight Lost ^a	.27392	.21803	.79633*	-.37728
Weight Reduction Index ^a	.00109	.10658	.78063*	.31420
Calorie Score	.09757	-.06197	-.05891	.92388*
Eigenvalues	4.79129	1.56701	1.27209	1.09095
Percent of Variance	43.6	14.2	11.6	9.9

Note. Principal components analysis using SPSSX 2.1 (SPSS Inc., 1983) FACTOR procedure and PA1 (principal components analysis) extraction technique. Only factors with eigenvalues > 1.0 are illustrated. Asterisks indicate variables with highest loadings on each principal component.

^aWeight reduction data at posttreatment.

M.02 Selection of Independent Measures for Analysis

Although a number of measures of locus of control were assessed at pretreatment, Weight Locus of Control (WLOC) was selected a priori, as the most relevant and appropriate measure of locus of control. Thus, all analyses of major hypotheses utilized WLOC in combination with Treatment condition as the independent variables. A median split of WLOC scores was utilized to classify subjects as "external" (WLOC score > 6), or "internal" (WLOC score ≤ 6). All other locus of control and related measures were examined in an exploratory fashion following examination of the major hypotheses, in order to ascertain their possible utility in weight control research. The inclusion of a measure of "value of health" and/or "value of physical appearance" in combination with health or weight specific locus of control measures has been discussed by Wallston and Wallston (1981) and Saltzer (1982). The addition of either or both of these variables, however, would have greatly increased the complexity of the factorial design, a problem acknowledged by Wallston and Wallston (1981), while at the same time potentially reducing the power of the analyses due to the addition of possibly unnecessary variable(s) or factor(s) (see Cohen and Cohen, 1975, p. 159). Thus, rather than automatically include health and/or physical appearance value in the present study, major hypotheses were first examined without them. The effects of taking these values into account on the outcome of analyses could then be examined by repeating the analyses with each value

added. A similar procedure was utilized by Saltzer (1982). Thus, the most parsimonious and powerful solution was sought. In the present study, tests of all of the hypotheses were not affected by the addition of either variable, and in most cases resulted in a higher alpha level on tests of the major hypotheses than when they were excluded. The lack of utility of either measure in combination with locus of control in the present study is contrary to Saltzer's (1982) report. One possible reason is that in the present study a very large proportion (67%) of all subjects ranked value of health as #1 or #2, and approximately 75% ranked value of physical appearance #5 or lower. Thus, perhaps a sufficient range of values was not represented in the present study to have any influence. Consequently, neither variable was included in subsequent analyses.

M.03 Comparisons of Treatment Conditions: Details of Analyses

The first set of hypotheses concerned the comparability of the three treatment conditions. Specifically, the first hypothesis stated that the behavioural manual conditions (directive, non-directive) would produce significantly greater weight reduction from pretreatment to posttreatment, and through to the two followup assessments, than the non-behavioural treatment condition (alternate manual). The second hypothesis stated that the two behavioural manual conditions (directive and non-directive) would not differ in their effects on the dependent

measures at any of the assessment periods, disregarding locus of control (i.e., the average effects of the two treatments across all subjects would be equivalent). A one-way multivariate analysis of variance was performed on each set of dependent variables at posttreatment, and on weight change variables at posttreatment, 3-month, and 6-month followup in order to assess Treatment Manual main effects. There were three planned multivariate tests to assess the first two hypotheses for each set of dependent variables. The first was an overall test of treatment main effects considering all three treatment conditions. A second multivariate test compared the alternate condition to the behavioural conditions (directive + non-directive), while a third contrasted the directive to the non-directive conditions. Utilizing a Bonferroni procedure to control analysis-wise error rate to approximately .05, each of these three tests was conducted with alpha set to .0167 (.05 / 3). Protection from possible further inflation of type I error rate resulting from additional post-hoc comparisons was twofold: a) via a "protected t" procedure -- post-hoc comparisons were conducted only following a significant test for the main effect in question; and b) by utilizing a Scheffe adjusted critical value ($\alpha = .05$) for any such post-hoc comparisons subsequent to a significant main effect finding (Bird & Hadzi-Pavlovic, 1983; Ryan, 1959).

In addition to the above analyses, a repeated measures analysis of variance (Treatment by Time), utilizing the MANOVA approach (O'Brien & Kaiser, 1985) examined the effects of the three treatment conditions on weight reduction quotients over the three assessment periods (posttreatment, 3-month followup, 6-month followup).

The results of the repeated measures analysis, and all ANOVA results utilizing weight reduction quotient as the dependent variable have been reported in the main body of this study. Details of one-way analyses examining treatment main effects for the other sets of dependent variables are detailed below.

Behaviour change/compliance measures. Four measures of behaviour change/compliance were assessed at posttreatment: (1) Behaviour Score for subject (BSCORE), (2) Percent review questions completed by subject (QUESTIONS), (3) Number of days subject rated behaviour change (RATINGS), and (4) an index of compliance with self-monitoring instructions (SELF-MONITOR). A one-way multivariate analysis of variance comparing the three treatment conditions on these four measures was not significant (Pillai's Trace = .07025, approximate F (8, 192) = .87375, p = .540). The planned contrast between the two behavioural conditions and the alternate condition was not significant (Pillai's Trace = .01559, approximate F (4, 95) = .37614, p = .825), nor was the planned contrast between the directive and non-directive behavioural conditions (Pillai's Trace = .05542,

approximate F (1.39353, $p = .242$). Univariate statistics for all measures supported these findings.

Mean values on each of the four measures of behaviour change/compliance for the three treatment conditions are presented in Table M-2.

Activity change measures. Three dependent measures of change in physical activity level were assessed at posttreatment. These were (1) Activity score (ACTSCORE), (2) number of days subject reached or exceeded activity level goal (ACTGOAL), and (3) number of days any extra activity level was recorded (ACTDAYS). Mean values for each of these variables for the three treatment conditions are presented in Table M-3. A one-way multivariate analysis comparing the three treatment conditions on these three measures yielded a significant treatment main effect (Pillai's Trace = .25098, approximate F (6, 156) = 3.73095, $p = .002$). Results of this analysis are presented in Table M-4. Univariate F tests revealed that the treatment main effect was only significant for the ACTDAYS variable (F (2, 79) = 5.63077, $p = .005$). Post-hoc comparisons between groups for the ACTDAYS variable utilizing the Scheffe procedure ($\alpha = .05$) yielded a significant difference between the directive and non-directive conditions only. Inspection of the group means (Table M-3) reveals that the subjects in the directive group recorded extra activities on an average of 36.86 days during treatment compared to only 23.17 days for the non-directive behavioural condition.

Table M-2

Mean Behaviour Change/Compliance Measures for Three Treatment Conditions

Treatment	<u>n</u>	Measure			
		BSCORE	QUESTIONS	RATINGS	SELF-MONITOR
Directive	33	437.55	65.91	53.79	69.36
		(304.68)	(36.31)	(33.51)	(37.07)
Non-directive	35	423.54	70.66	63.51	64.71
		(264.89)	(37.67)	(37.30)	(34.63)
Alternate	33	465.48	76.71	65.15	73.16
		(268.47)	(28.35)	(34.76)	(45.88)

Note. Standard deviations in parentheses.

Table M-3

Mean Activity Change Measures for Three Treatment Conditions

Treatment	<u>n</u>	Measure		
		ACTSCORE	ACTGOAL	ACTDAYS
Directive	28	1101.93 (748.69)	3.93 (2.49)	36.86 (13.98)
Non-directive	24	895.21 (610.91)	3.42 (2.65)	23.17 (11.30)
Alternate	30	1396.10 (1321.49)	4.43 (2.99)	32.70 (18.01)

Note. Standard deviations in parentheses.

Table M-4

One-way (treatment) MANOVA for Activity ChangeI. Multivariate Test of Treatment Effect^a

<u>Pillai's</u>	Approx.	Hypoth.	Error	
<u>Trace</u>	<u>F</u>	<u>df</u>	<u>df</u>	<u>p</u>
.25098	3.73095	6	156	.002

II. Univariate F tests with (2, 79) df

Dependent	Hypoth.	Error		
Variable	<u>MS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
ACTSCORE	1719818.645	941291.956	1.8271	.168
ACTGOAL	6.917	7.456	.9276	.400
ACTDAYS	1255.524	222.975	5.631	.005

^as = 2, M = 0, N = 37 1/2.

The planned multivariate comparison between the alternate and the behavioural conditions was not significant (Pillai's Trace = 0.04272, approximate $F(3, 77) = 1.14540$, $p = .336$), although univariate statistics indicated the difference between the behavioural and alternate conditions to approach significance on the ACTSCORE variable ($F(1, 79) = 3.18702$, $p = .078$).

Examination of group means for this variable reveals the alternate group to have a higher mean activity score (1396.100) than either the behavioural directive (1101.929), or non-directive (895.208).

The planned multivariate comparison between the directive and the non-directive behavioural conditions yielded a significant effect (Pillai's Trace = .20736, approximate $F(3, 77) = 6.71439$, $p = .000$). Univariate F statistics indicate that the ACTDAYS variable again accounted for most of this effect ($F(1, 79) = 10.86290$, $p = .001$).

Diet change. Only subjects in the two behavioural manual conditions kept data on dietary intake. The measure of diet change was the Calorie Score (CALSCOR). The mean calorie score for the directive manual condition was -125.939 (sd = 197.79) and the mean score for the non-directive condition was -203.118 (sd = 274.44). A one-way analysis of variance comparing the directive behavioural condition to the non-directive behavioural condition on the CALSCOR variable indicated this difference to be non-significant ($F(1, 65) = 1.73485$, $p = .192$).

M.04 Treatment by Locus of Control Interactions

The hypotheses pertaining to the interaction between treatment and locus of control were examined via two-way (3 X 2) multivariate analysis of variance (3 Treatment levels by 2 locus of control levels), except for hypotheses concerning weight change which were examined via two-way ANOVA utilizing weight reduction quotient as the dependent variable. A fixed-effects model was employed using the SPSSX-2.1 MANOVA or ANOVA procedures (SPSS inc., 1983). The regression solution for calculating the sums of squares, requested by METHOD = SSTYPE(UNIQUE) in SPSSX, was utilized throughout. This method requests sums of squares corresponding to unweighted combinations of means, a procedure recommended by O'Brien and Kaiser (1985) when a design involves group sizes that are unrelated to the hypotheses being addressed.

Treatment main effects, disregarding locus of control effects were already examined via one-way MANOVA's in order to specifically address hypotheses concerning differential effects of the treatment conditions. These treatment main effects could have been examined as part of the foregoing two-way analyses, but for ease of interpretation were examined separately. In all cases, however, conclusions involving treatment main effects via the one-way analyses were identical to those via the two-way analyses except for minor numerical differences in test statistic and probability values. These differences did not change any of the interpretations concerning treatment main effects outlined in

the preceding section. Tests of both of the main effects (treatment and locus of control) resulting from the two-way analyses have also been reported.

The overall test of the interaction effect for each set of dependent variables was conducted with alpha set to .05. In addition, a number of pairwise comparisons between cell means pertaining directly to the hypotheses were tested. For analyses of weight reduction, there were 6 tests of within cell changes in weight reduction (e.g., directive-internal, directive-external, alternate-internal, etc.), and 3 pairwise comparisons of means (alternate-externals versus alternate-internals, directive-externals versus directive-internals, etc.). Each of these tests was conducted via the appropriate test statistic (one sample ANOVA or two sample t-test) with alpha set at .005 resulting in a total error rate for each set of dependent variables of less than .05 (approximately $9 \times .005 = .045$). Although a "protected t" procedure might have been employed it was deemed unsuitable for two reasons. First, the "protected t" procedure may be only partially effective in protecting against inflation of type I error rate, and simultaneous test procedures or Bonferroni adjusted alpha levels are often recommended, especially when multiple comparisons are to be examined (Bird & Hadzi-Pavlovic, 1983; Cohen & Cohen, 1975; O'Brien & Kaiser, 1985; Ramsey, 1980). Second, the multiple comparisons listed above were of interest whether an overall interaction was

detected or not, since they pertained directly to the major hypotheses of this study. The Bonferroni adjusted alpha levels, although providing a more conservative test per comparison, permitted examination of all relevant mean comparisons without serious inflation of type I error.

Alpha levels for multiple pairwise comparisons of other dependent variable sets needed to be adjusted slightly since multiple dependent variables were employed in two of the sets, and because within subgroup tests were not necessary, as they were for the weight reduction measures. For each set, Bonferroni adjusted alpha levels were utilized to maintain total analysis-wise error rate to close to .05. Thus, for the behaviour change/compliance analysis (4 dependent variables), there were 12 mean comparisons of interest, and each was assessed with $\alpha = .004$. For diet change, there were only two groups and only 1 variable resulting in only two comparisons of interest. Alpha for each comparison was set at .025. For activity change, there were 3 variables and 9 comparisons, resulting in an alpha per comparison of .005.

M.05 Repeated measures analysis of weight reduction. The results of a repeated measures analysis of variance (treatment X locus of control X time) for weight reduction index at posttreatment, 3-month followup, and 6-month followup are presented in Table M-5. The tests for the constant effect ($p < .001$), the treatment effect ($p = .920$), the time effect ($p =$

Table M-5

Repeated Measures Analysis (Treatment X Locus of Control X Time) for
Weight Reduction Quotient

Between Subjects Design

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Constant	1	179879.774	50.394	.000
Treatment	2	296.238	0.083	.920
WLOC ^a	1	2232.246	0.625	.431
Treat. X WLOC	2	10491.376	2.939	.058
Within Cells	90	3569.454		

Within Subjects Design (Multivariate tests)

	<u>Pillai's</u>	Approx.	Hypoth.	Error	
Effect	<u>Trace</u>	<u>F</u>	<u>df</u>	<u>df</u>	<u>p</u>
Time ^b	.11772	5.93752	2	89	.004
Treat. X Time ^c	.1155	2.75794	4	180	.029
WLOC X Time ^d	.00800	0.35897	2	89	.699
T X W X Time ^e	.00939	0.21217	4	180	.931

Note. Multivariate method was utilized for tests of within-subjects components (SPSSX 2.1 MANOVA procedure).

^aWeight Locus of Control main effect.

^b $\underline{s} = 1$, $\underline{M} = 0$, $\underline{N} = 43 \frac{1}{2}$. $\underline{c_s} = 2$, $\underline{M} = -1/2$, $\underline{N} = 43 \frac{1}{2}$.

$\underline{d_s} = 1$, $\underline{M} = 0$, $\underline{N} = 43 \frac{1}{2}$. ^eTreatment X WLOC X Time

interaction: $\underline{s} = 2$, $\underline{M} = -1/2$, $\underline{N} = 43 \frac{1}{2}$.

.004), and the treatment by time interaction ($p = .029$) were consistent with the same tests provided by the treatment by time repeated measures analysis reported earlier. The treatment by locus of control interaction just missed significance at the .05 level ($p = .058$). This was expected as the two-way ANOVA's had demonstrated that the treatment by locus of control interaction was only significant at posttreatment, not significant at the 3-month followup, and approached significance at the 6-month followup. The test of the treatment by locus of control interaction provided by the repeated measures analysis tested the average interaction over the three time periods. The finding that this averaged test was still close to significance is further evidence of the strength of this interaction effect. The tests of the locus of control by time effect ($p = .699$), treatment by locus of control by time effect ($p = .931$), and locus of control main effect ($p = .431$) were all non-significant.

M.06 Tests of Interactions for Other Dependent Variables

Behaviour change/compliance. Measures of behaviour change and compliance at posttreatment were represented by four dependent variables (BSCORE, QUESTIONS, RATINGS, SELF-MONITOR), thus requiring a two-way MANOVA to assess interaction effects. The results of this analysis are presented in Table M-6. The multivariate test of the treatment by locus of control interaction effect was significant (Pillai's Trace = .18167, approximate $F(8, 188) = 2.34794$, $p = .020$). None of the univariate F statistics were significant.

Table M-6

Results of Two-way MANOVA (Treatment X Locus of Control) for
Behaviour Change/Compliance Measures

Effect	<u>Pillai's</u> <u>Trace</u>	Approx. <u>F</u>	Hypoth. <u>df</u>	Error <u>df</u>	<u>p</u>
Treatment ^a	.07594	0.92756	8	188	.495
WLOC ^b	.01594	0.37654	4	93	.825
Treat. X WLOC ^c	.18167	2.34794	8	188	.020

Univariate F tests for Treatment X WLOC Interaction with (2, 96) df

Variable	Hypoth. <u>MS</u>	Error <u>MS</u>	<u>F</u>	<u>p</u>
SELF-MONITOR	1425.052	1555.390	0.916	.404
BSCORE	101598.119	77827.302	1.305	.276
QUESTIONS	362.976	1246.483	0.291	.748
RATINGS	690.280	1256.606	0.549	.579

^as = 2, M = 1/2, N = 45 1/2.

^bWeight Locus of Control effect, s = 1, M = 1, N = 45 1/2.

^cs = 2, M = 1/2, N = 45 1/2.

Examination of the cell means for the behaviour change/compliance variables (Table M-7) reveals that for the SELF-MONITOR variable, a measure of compliance with self-monitoring instructions, mean values were consistent with hypotheses. Thus, in the directive condition, external subjects were more compliant with self-monitoring instructions (mean = 71.92) than internal subjects (mean = 63.73), although this difference was not statistically significant ($t(32) = -0.63$, $p = .532$). Findings were reversed for the non-directive condition. External subjects were less compliant with self-monitoring instructions in the non-directive condition (mean = 60.99) than were internal subjects (mean = 66.91), although this difference was also not statistically significant ($t(33) = 0.48$, $p = .632$). In the alternate condition differences between internals and externals were even more pronounced. Internal subjects were more compliant (mean = 81.93) than external subjects (mean = 63.84) ($t(31) = 1.14$, $p = .264$).

Cell means for the QUESTIONS variable were partially consistent with hypotheses. Externals completed more review questions (66.25%) than internals (60.71%) in the directive condition; a difference that was small and not statistically significant ($t(32) = -0.42$, $p = .679$), but in the predicted direction. Findings were reversed for subjects in the non-directive condition, with internals completing more questions (73.34%) than externals (66.11%). This difference was in the

Table M-7

Mean Behaviour Change/Compliance Measures for Specific Treatment/Locus
of Control Combinations (Cell Means)

Variable	Treatment	Locus of Control Orientation ^a	
		Internal	External
SELF-MONITOR	Directive	63.73 (14)	71.92 (20)
	Non-directive	66.91 (22)	60.99 (13)
	Alternate	81.93 (17)	63.84 (16)
BSCORE	Directive	491.86 (14)	393.25 (20)
	Non-directive	377.50 (22)	501.46 (13)
	Alternate	460.35 (17)	470.94 (16)
QUESTIONS	Directive	60.71 (14)	66.25 (20)
	Non-directive	73.34 (22)	66.11 (13)
	Alternate	75.54 (17)	77.96 (16)
RATINGS	Directive	58.36 (14)	49.95 (20)
	Non-directive	62.32 (22)	65.54 (13)
	Alternate	60.47 (17)	70.13 (16)

Note. n in parentheses.

^aLocus of control orientation based on Weight Locus of Control Scale score.

predicted direction, but again was not statistically significant ($t(33) = 0.54, p = .591$). Differences between subjects in the alternate condition were negligible (75.54% for internals versus 77.96% for externals; $t(31) = -0.24, p = .811$).

For the remaining two variables, mean differences between externals and internals in each condition were completely opposite to predictions. On the BSCORE variable, used to measure compliance with certain behavioural recommendations, internals in the directive condition scored higher (mean = 491.86) than externals (mean = 393.25) ($t(32) = 0.94, p = .355$), while in the non-directive condition it was the externals who scored higher (mean = 501.48 for externals; 377.50 for internals: $t(33) = -1.35, p = .185$). Similarly, in the alternate condition, it was the externals who scored highest (470.94 vs 460.35; $t(31) = -0.11, p = .912$). On the RATINGS variable, results were similar. From Table M-7 it can be seen that externals were superior to internals in non-directive conditions (non-directive behavioural and alternate conditions), while internals had a higher RATINGS score than externals in the directive condition. None of these differences between externals and internals within each group were significant (directive: $t(32) = 0.72, p = .474$; non-directive: $t(33) = -0.24, p = .809$; alternate: $t(31) = -0.79, p = .434$).

Diet change. Only the two behavioural conditions self-monitored dietary intake and were given specific dietary recommendations. The only measure of diet change was the calorie score. Thus a two-way analysis of variance (2 X 2) was required. The results of this analysis are reproduced in Table M-8. The interaction was not significant ($F(1, 64) = .15245, p = .697$). Examination of the cell means reveals, however, that the direction of differences within treatment groups were consistent with the hypotheses of this study. External subjects had a slightly greater negative calorie score ($t(32) = 0.17, p = .869$) of -121.65 as compared to internals (-109.79) in the directive condition, but the reverse was true in the non-directive condition: internals had a better calorie score (-215.77) than did the externals (-179.92) ($t(32) = -0.36, p = .722$).

Activity change measures. There were three dependent measures of activity change: (1) activity score (ACTSCORE), (2) number of weeks activity expenditure goal was achieved or exceeded (ACTGOAL), and (3) number of days any extra activity was recorded (ACTDAYS). Results of the two-way multivariate analysis of variance are displayed in Table M-9. The test of the interaction effect approached significance (Pillais Trace = .14053, approximate $F(6, 150) = 1.88932, p = .086$). Univariate F tests indicated that no single dependent variable appears to have contributed to the interaction when considered in isolation from the others.

Table M-8

Two-way ANOVA (Treatment X Locus of Control) for Diet Change

Source	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Treatment	1	107823.731	107823.731	1.806	.184
WLOC	1	2300.429	2300.429	0.039	.845
Treatment X WLOC	1	9101.046	9101.046	0.152	.697
Within Cells	64	3820617.687	59697.151		

Table M-9

Results of Two-way MANOVA (Treatment X Locus of Control) for
Activity Change Measures

Effect	<u>Pillai's</u> <u>Trace</u>	Approx. <u>F</u>	Hypoth. <u>df</u>	Error <u>df</u>	<u>p</u>
Treatment ^a	.23712	3.36267	6	150	.004
WLOC ^b	.04164	1.07168	3	74	.366
Treat. X WLOC ^c	.14053	1.88932	6	150	.086

Univariate F tests for Treatment X WLOC Interaction with (2, 76) df

Variable	Hypoth. <u>MS</u>	Error <u>MS</u>	<u>F</u>	<u>p</u>
ACTSCORE	1663059.315	884727.742	1.880	.160
ACTDAYS	440.770	213.106	2.068	.133
ACTGOAL	10.367	7.292	1.422	.248

$a_s = 2, \underline{M} = 0, \underline{N} = 36.$ $b_s = 1, \underline{M} = 1/2, \underline{N} = 36,$ $c_s = 2, \underline{M} = 0,$
 $\underline{N} = 36.$

Examination of the cell means (see Table M-10) indicates mixed results with respect to the hypotheses. For the ACTSCORE variable, the mean for the internals was higher than for the externals in the directive condition, although this difference was not significant ($t(26) = 1.96, p = .061$), while the mean for the externals was higher in the non-directive behavioural condition ($t(22) = -0.77, p = .451$), findings which are inconsistent with the hypotheses. In the alternate condition, internals had a higher mean score than externals ($t(28) = 1.74, p = .093$), consistent with the hypotheses. For the ACTDAYS variable, results were similar. Internals appear to have performed better than externals in the directive condition ($t(26) = 2.42, p = .023$), while externals were superior in the non-directive behavioural condition ($t(22) = -1.02, p = .317$). In the alternate condition it was the internal group that displayed the higher mean score on ACTDAYS ($t(28) = 0.98, p = .344$). This pattern of results was repeated again when the ACTGOAL variable was considered. T tests of mean comparisons between externals and internals on the ACTGOAL variable for the directive, non-directive, and alternate conditions, respectively, were: $t(26) = 2.51, p = .019$; $t(22) = -0.27, p = .792$; $t(28) = 0.42, p = .677$.

M.07 Body Mass Index as an Estimate of Body Fat

Measures of fatness were not collected during this study due to unforeseen practical difficulties encountered during the

Table M-10

Mean Activity Change Measures for Specific Treatment/Locus of Control
Combinations (Cell Means)

Variable	Treatment	Locus of Control Orientation ^a	
		Internal	External
ACTSCORE	Directive	1429.82 (11)	889.77 (17)
	Non-directive	826.88 (16)	1031.88 (8)
	Alternate	1802.33 (15)	989.87 (15)
ACTDAYS	Directive	44.18 (11)	32.12 (17)
	Non-directive	21.50 (16)	26.50 (8)
	Alternate	35.93 (15)	29.47 (15)
ACTGOAL	Directive	5.27 (11)	3.06 (17)
	Non-directive	3.31 (16)	3.63 (8)
	Alternate	4.67 (15)	4.20 (15)

Note. n in parentheses.

^aLocus of control orientation based on Weight Locus of Control Scale score.

screening process. Various anthropometric measures were to have been utilized to estimate body fat. Unfortunately, this data was extremely unreliable owing to the variations in clothing thickness worn by subjects. It was not possible for subjects to remove their clothing, and efforts to have them take their own measurements resulted in the unreliable measures. Because the screening process was well underway it was not possible to train the research assistant in the use of skinfold calipers as an alternative method of fat estimation.

Bray (1976), in a review of various methods of fat estimation recommended the body mass index ($\text{weight}/\text{height}^2$). He reviewed research indicating that this index correlated highly with body fat. Correlations between the index and body fat ranged from $r = .909$ to $r = .827$ (see Bray, 1976, pp. 13-14). This measure has also been recommended by Brownell (1982) where body fat estimation is necessary, and more direct assessments are not available.

In the present study, body mass index correlated very highly with absolute weight and with percent overweight at all assessment periods. For absolute weight, correlations ranged from $r = 0.88$ to 0.89 (all p 's $< .001$). For percent overweight the correlations were all 0.99 . The correlations between changes in body mass index following treatment and the various measures of weight reduction were also all highly significant ($p < .001$) and ranged from $r = .67$ to $r = .83$ for the correlation

between body mass index and weight reduction index. Higher correlations were found between changes in the body mass index and the other two measures of weight reduction (pounds lost and percent weight lost).

Tests of within group and within cell changes in body mass index yielded identical results to respective tests utilizing the weight reduction index. Between cells tests also resulted in identical conclusions. These data show that significant changes in weight reduction index reported in the main results correspond to significant changes in body mass index.

Body mass index was also examined as a dependent variable in analyses of the interaction between locus of control and treatment. The two way ANOVA's yielded no significant main effects, consistent with the previous findings using weight reduction index as a dependent variable. The findings concerning the interaction effect were not consistent, however. When body mass index was utilized as the dependent variable, the two-way interaction (weight locus of control X treatment) was not significant at posttreatment ($F(2, 101) = 2.325, p = .103$), 3-month followup ($F(2, 94) = 1.309, p = .275$), or at the 6-month followup ($F(2, 90) = 2.146, p = .123$).

Appendix N
Supplementary Data and Tables

Table N-1

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Distribution of Other Pretreatment Subject Characteristics

Characteristic	Treatment		
	Directive	Non-Directive	Alternate
Sex			
Male	7	7	5
Female	33	33	35
Marital Status			
Married	27	24	25
Single	8	6	8
Divorced/widowed	4	6	4
Spouse's weight ^a			
Overweight	14	14	13
Average	10	9	11
Underweight	4	3	4
Effect of weight ^b			
No - some effect	21	15	13
Often interferes	11	14	15
Extreme effect	7	6	9
Activity level ^c			
Active - very active	5	4	3
Average	12	17	9
Inactive - very inactive	22	14	25

^aSubject's rating of spouse's weight. ^bSubject's rating of effect of weight on daily activities. ^cSelf-reported.

Table N-2

Mean Pretreatment Scores: Self-control Measures and Rankings of
Value of Health and Physical Appearance

Measure	Treatment		
	Directive	Non-directive	Alternate
WLOC ^a	7.40 (2.64)	6.66 (3.11)	7.26 (2.56)
FSR ^b	20.18 (4.60)	19.25 (4.47)	18.32 (5.78)
IHLC ^c	27.80 (3.30)	28.26 (3.82)	28.05 (5.07)
CHLC ^d	15.63 (5.49)	14.53 (4.55)	14.45 (3.88)
PHLC ^e	15.23 (5.11)	15.71 (5.39)	17.21 (5.31)
Value of Health ^f	2.90 (2.15)	2.29 (1.89)	2.05 (1.31)
Value of Physical Appearance ^g	5.90 (2.92)	5.68 (1.95)	6.39 (2.42)

Note. Standard deviations in parentheses.

Results of MANOVA to test equivalency of groups: Pillai's Trace = .16108, $F(14, 216) = 1.3515$, $p = .179$.

^aWeight Locus of Control Scale. ^bFrequency of Self-reinforcement Scale. ^cInternal Health Locus of Control Scale. ^dChance Health Locus of Control Scale. ^ePowerful-Others Health Locus of Control Scale. ^fRanking of value of health among 11 items with "1" being the highest ranking. ^gRanking of value of physical appearance among 11 items, with "1" being the highest ranking.

Table N-3

One-way Multivariate and Univariate Tests of Treatment Effect for
Absolute Weight Loss, Percent Weight Loss, and Weight Reduction Quotient

I. Multivariate Tests

Assessment	<u>Pillai's</u>	Approx.	Hypoth.	Error	
Period	<u>Trace</u>	<u>F</u>	<u>df</u>	<u>df</u>	<u>p</u>
Posttreatment	.04990 ^a	.87852	6	206	.512
3-month	.04717 ^b	.77291	6	192	.592
6-month	.06122 ^c	.96830	6	184	.448

II. Univariate Tests

Assessment	Dependent	Hypothesis	Error		
Period	Variable	<u>MS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Posttreat. ^d	Weight Loss	59.216	76.190	.777	.462
	% Weight Loss	9.111	18.889	.482	.619
	W.R. Quotient	792.956	1138.776	.696	.501
3-month ^e	Weight Loss	55.429	127.467	.435	.649
	% Weight Loss	7.796	32.875	.237	.789
	W.R. Quotient	16.450	1548.121	.011	.989
6-month ^f	Weight Loss	215.777	139.082	1.551	.217
	% Weight Loss	54.865	35.740	1.535	.221
	W.R. Quotient	1158.267	1561.748	.742	.479

^a $\underline{s} = 2$, $\underline{M} = 0$, $\underline{N} = 50$. ^b $\underline{s} = 2$, $\underline{M} = 0$, $\underline{N} = 46 \frac{1}{2}$. ^c $\underline{s} = 2$,

$\underline{M} = 0$, $\underline{N} = 44 \frac{1}{2}$.

^d $\underline{df} = 1$, 104. ^e $\underline{df} = 2$, 97. ^f $\underline{df} = 2$, 93.

Table N-4

Mean Absolute Weight Lost for Specific Treatment/Locus of Control
Combinations at Posttreatment, 3-month, and 6-month Assessments

Assessment	Treatment	Locus of Control Orientation ^a	
		Internal	External
Posttreatment	Directive	8.09 (14)	10.30 (21)
	Non-directive	10.31 (22)	8.58 (13)
	Alternate	10.23 (19)	4.29 (18)
3-month	Directive	8.04 (13)	9.21 (19)
	Non-directive	11.66 (22)	9.21 (12)
	Alternate	11.94 (17)	4.95 (17)
6-month	Directive	2.50 (13)	6.61 (19)
	Non-directive	10.88 (21)	7.86 (11)
	Alternate	12.53 (16)	5.20 (16)

Note. n in parentheses. Weight loss in pounds. 1 lb = 0.45359 kg.

^aLocus of Control orientation based on Weight Locus of Control Scale score.

Table N-5

Mean Percent Weight Lost for Specific Treatment/Locus of Control
Combinations at Posttreatment, 3-month, and 6-month Assessments

Assessment	Treatment	Locus of Control Orientation ^a	
		Internal	External
Posttreatment	Directive	3.60 (14)	5.53 (21)
	Non-directive	4.85 (22)	4.78 (13)
	Alternate	5.39 (19)	2.38 (18)
3-month	Directive	3.47 (13)	4.91 (19)
	Non-directive	5.37 (22)	4.99 (12)
	Alternate	6.24 (17)	2.78 (17)
6-month	Directive	0.65 (13)	3.53 (19)
	Non-directive	4.97 (21)	4.14 (11)
	Alternate	6.26 (16)	2.86 (16)

Note. n in parentheses.

^aLocus of Control Orientation based on Weight Locus of Control
 Scale score.

Table N-6

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Results of Two-way ANOVA for Weight Reduction Quotient at each AssessmentPeriod: Treatment X Internal Health Locus of Control

Assessment	Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Posttreatment	Treatment	2	776.263	0.678	.510
	IHLC ^a	1	89.040	0.078	.781
	Treatment X IHLC	2	1380.087	1.206	.304
	Error	101	1144.309		
3-month	Treatment	2	23.479	0.015	.985
	IHLC	1	418.113	0.267	.606
	Treatment X IHLC	2	1357.971	0.868	.423
	Error	94	1563.595		
6-month	Treatment	2	1222.819	0.779	.462
	IHLC	1	2202.996	1.403	.239
	Treatment X IHLC	2	865.538	0.551	.578
	Error	90	1570.324		

^aInternal Health Locus of Control sub-scale of the Multidimensional Health Locus of Control Scale.

Table N-7

Results of Two-way ANOVA for Weight Reduction Quotient at each AssessmentPeriod: Treatment X Chance Health Locus of Control

Assessment	Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Posttreatment	Treatment	2	529.463	0.473	.625
	CHLC ^a	1	157.664	0.141	.708
	Treatment X CHLC	2	2576.848	2.301	.105
	Error	101	1120.114		
3-month	Treatment	2	16.495	0.011	.989
	CHLC	1	0.170	0.000	.992
	Treatment X CHLC	2	2878.334	1.874	.159
	Error	94	1536.263		
6-month	Treatment	2	1391.308	0.904	.409
	CHLC	1	33.313	0.022	.883
	Treatment X CHLC	2	3340.777	2.170	.120
	Error	90	1539.231		

^aChance Health Locus of Control sub-scale of the Multidimensional
Health Locus of Control Scale.

Table N-8

Results of Two-way ANOVA for Weight Reduction Quotient at each AssessmentPeriod: Treatment X Powerful-Others Health Locus of Control

Assessment	Source	df	MS	F	p
Posttreatment	Treatment	2	403.529	0.378	.686
	PHLC ^a	1	8362.359	7.842	.006
	Treatment X PHLC	2	1121.284	1.052	.353
	Error	101	1066.319		
3-month	Treatment	2	3.927	0.003	.997
	PHLC	1	6342.962	4.183	.044
	Treatment X PHLC	2	646.598	0.426	.654
	Error	94	1516.536		
6-month	Treatment	2	1353.052	0.851	.430
	PHLC	1	1875.117	1.180	.280
	Treatment X PHLC	2	174.120	0.110	.896
	Error	90	1589.323		

^aPowerful-Others Health Locus of Control sub-scale of the
Multidimensional Health Locus of Control Scale.

Table N-9

Results of Two-way ANOVA for Weight Reduction Quotient at each Assessment
Period: Treatment X Frequency of Self-Reinforcement Score

Assessment	Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Posttreatment	Treatment	2	1099.812	0.965	.384
	FSR ^a	1	1274.061	1.118	.293
	Treatment X FSR	2	1100.673	0.966	.384
	Error	101	1139.198		
3-month	Treatment	2	52.295	0.033	.967
	FSR	1	285.344	0.181	.672
	Treatment X FSR	2	715.410	0.453	.637
	Error	94	1579.739		
6-month	Treatment	2	909.404	0.586	.558
	FSR	1	492.422	0.317	.575
	Treatment X FSR	2	2591.675	1.671	.194
	Error	90	1550.969		

^aFrequency of Self-Reinforcement.

Appendix O

Literature Review

Obesity is a major health problem in North America today, afflicting approximately 30% of men and 40% of women aged 40-49 (Metropolitan Life Insurance Company, 1960; U.S. Senate, 1977). Stuart and Davis (1972) estimated that there were some 40-80 million obese Americans, depending on the criteria used to define obesity, and it appears that this number is increasing (Van Itallie, 1977, cited in Brownell, 1981). These figures translate into an enormous demand for effective weight control strategies -- a demand reflected by the proliferation and immense popularity of self-help weight loss groups (Brownell, 1981; Stuart, 1977), diet books and magazines (Dzeguze, 1983; Kimbrell, 1975; LeBow, 1981), and professional weight loss services (Brownell, 1981). For example, it has been estimated that in the U.S. alone, well over one million people receive treatment for obesity under the auspices of self-help and commercial weight loss groups each week. Self-help weight loss books are also enormously popular, accounting for 5-10 percent of all book sales combined (Dzeguze, 1983).

The huge demand for weight reduction services has thus produced a dizzying array of books, clinics, groups, professional services, and diets for the obese. Unfortunately, these offerings vary greatly in their effectiveness and, equally

important, in their costs. Studies evaluating the short-term effectiveness of self-help groups for weight loss have reported losses ranging from 14 to 19 lbs (Ashwell, 1978; Stunkard, Levine & Fox, 1970). Attrition rates are often in excess of 50%, however, and long term maintenance of weight losses has not been demonstrated (Ashwell, 1978; Dwyer & Berman, 1978; Stuart & Guire, 1978, cited in Ashwell, 1978; Stunkard, 1972b; Stunkard & Brownell, 1979). There has been little controlled research investigating the effectiveness of popular "diet books".

Professionally administered treatments based upon behavioural principles appear to be effective for controlling mild to moderate obesity in adults (Abramson, 1973, 1977; Jeffery, Wing & Stunkard, 1978; Leon, 1976; Stuart, 1975; Stunkard, 1972a; Stunkard & Mahoney, 1976; Wilson & Brownell, 1980). These treatments typically emphasize teaching individuals to permanently alter their eating and exercise habits. Until recently, behavioural treatments have typically been administered by professionals in an individual or group format. Such an approach is costly, however, and unable to meet the enormous service demand.

The successful incorporation of behavioural strategies for weight loss into programs requiring little or no professional contact, typically with the aid of self-help "manuals" (e.g., Hagen, 1974; Hall, Hall, Hanson & Borden, 1974; Pezzot-Pearce, LeBow & Pearce, 1982) has been a way to provide larger numbers of

individuals with effective treatment strategies at a reduced cost. Behavioural self-administered manuals for weight loss usually incorporate self-monitoring instructions, nutritional information, stimulus control procedures, and self-reinforcement concepts (Glasgow & Rosen, 1978). One of the first such manuals to be published was Stuart and Davis's Slim Chance in a Fat World (1972). Balch and his associates demonstrated that this manual was effective only a minimal degree of therapist contact (Balch & Ross, 1974; Balch & Balch, 1976; Lindstrom, Balch & Reese, 1976). Hagen (1974) was one of the first to systematically evaluate the effectiveness of a self-help manual for weight reduction, adapting Wollersheim's (1970) therapist manual. Hagen and others (Fernan, 1973; Hagen, Foreyt & Durham, 1976; Hall, Hall, Hanson & Borden, 1974; Tobias & MacDonald, 1977), demonstrated the utility of this manual with a minimal degree of therapist contact. Other similar manuals have also been found to be effective under conditions of full to minimal therapist contact (e.g., Brownell, Heckerman & Westlake, 1978; Hanson, Borden, Hall, & Hall, 1976; Mahoney, 1974). The importance of therapist contact, however, was unclear in these studies owing largely to methodological difficulties and to a lack of agreement concerning the conditions defining varying degrees of therapist involvement (Glasgow & Rosen, 1978). Others studies addressing the importance of therapist contact have also failed to yield consistent results (e.g., Bellack, 1976; Bellack, Schwartz &

Rozensky, 1974; Brownell, Heckerman & Westlake, 1978; Jeffery & Wing, 1979; Lindstrom, Balch & Reese, 1976; Mahoney, Rogers, Straw & Mahoney, 1977; Marston, Marston & Ross, 1977).

Dilley, Balch and Balch (1979) examined the effectiveness of a behavioural treatment for obesity, varying the amounts of therapist time and contact. Specifically, they compared group versus group plus individual contact, and trained therapists versus non-trained agents. Of particular relevance to the present study was the "bibliotherapy" condition. Subjects reported weekly to an untrained agent to be weighed and to have their deposits reimbursed. They were instructed to pick up written materials, consisting of nine weekly lessons on behavioural weight control. The untrained agent was an undergraduate psychology student with no prior knowledge or experience in the treatment program, and who was unaware of the research question or design. Other treatment conditions consisted of a group (once a week with a trained therapist), group plus individual therapist, bibliotherapy plus trained therapist, and a notreatment control. Except for the no treatment control, all groups exhibited significant weight reduction at posttreatment and at a six-month followup. There were no differences between treatment conditions. It was concluded that if bibliotherapy materials are adequately presented and an external agent is available, there is only minimal need for professional contact.

Pezzot-Pearce (1980) conducted an ambitious study which permitted a systematic evaluation of the efficacy of behavioural self-help manuals administered under varying degrees of therapist contact. She compared a behavioural self-help manual adapted from Hagen (1974), and modified to include a physical activity component, to an alternate (non-behavioural) weight loss manual under four different degrees of therapist contact. Results at post-treatment and at 3-, 6-, and 16-month followups (Pezzot-Pearce et al., 1982) supported the behavioural manual's superiority over the non-behavioural manual in producing weight losses. Most important, it was demonstrated that the behavioural manual could be applied under varying degrees of therapist contact without significant changes in effectiveness, but with accompanying increases in cost-effectiveness as therapist contact decreased.

A "stepped approach to weight control is another potentially cost-effective method that requires minimal professional contact (Black, Hyner, Melby, & Hovell, 1985). It involves the introduction of one program after another, beginning first with the "simplest" and least costly intervention. The intensity of interventions is increased in steps depending on an individual's performance. The objective is to provide an optimal level of professional support and program structure that will enable each individual to reach a predetermined health goal. Black and Threlfall (1986) utilized this approach successfully in a two

step weight control program. In the first step, self-initiated weight loss was encouraged without being overly intrusive or restrictive. Subjects were given minimal guidelines on how to lose weight safely. They were instructed to self-monitor calorie intake and expenditure, and to weigh and record their weight daily. Data were collected by mail. The second step consisted of a ten lesson behavioural bibliotherapy program. Step one was effective for all subjects ($\bar{M}$ weight loss after 12 weeks = 14 lbs), and sufficient for 11.5% of subjects ($\bar{M}$ weight loss after one year for subjects completing only step one = 30.0 lbs). Subjects completing both steps lost an average of 21.0 lbs at posttreatment and were able to maintain their losses ($\bar{M}$ after one year = 22.1 lbs).

The above studies support the superior cost-effectiveness of self-administered behavioural treatments compared to behavioural and alternate treatments for obesity administered under higher levels of therapist contact. Unfortunately, the clinical utility of behavioural self-help manuals remains questionable owing to at least two major problems. The first of these concerns the variable, inconsistent, and often contradictory findings between studies that have investigated the efficacy of self-help behavioural manuals for weight loss. The second problem is the huge inter-individual variability in outcome observed within studies. Each of these will now be briefly addressed and summarized.

Variability in Outcome between Studies

The results of research investigating the efficacy of self-help manuals in this area have not been clear-cut. For example, Hagen (1974) concluded that the importance of therapist contact was overrated, and that a written manual could be substituted at a nominal cost without any loss in treatment effectiveness. Fernan (1973) partially replicated Hagen's study and concluded that minimal contact was necessary. This position was supported by Rozensky and Bellack (1976), Bellack, Glanz and Simon (1976), Bellack et al. (1974), Hanson et al. (1976), Mahoney et al. (1977), Marston et al. (1977), Tobias and MacDonald (1977), and Glasgow and Rosen (1978). Jeffery and Gerber (1982) found a correspondence (i.e., via mail) treatment to be effective for weight loss at posttreatment and at a 12-month followup, but not for all subjects. Only active participants (more than 50% homework completion) were successful, and they comprised only 25% of those enrolled in the program. Brownell, Heckerman and Westlake (1978) found that minimal therapist contact with a manual procedure produced less of a weight loss than a therapist administered condition, and challenged the use of "do-it-yourself" treatment manuals for obesity. In contrast, Pezzot-Pearce's findings (Pezzot-Pearce et al., 1982) indicated that under certain conditions, a self-administered behavioural manual was almost as effective for inducing weight loss as a therapist administered condition.

Many of the inconsistencies in this area may be partly attributable to methodological differences. Especially problematic have been the varying definitions of level of therapist contact (see Glasgow & Rosen, 1978). Another problem concerns the actual treatments. Although all of the above investigators reported utilizing "behavioural" manuals, the actual content, style, format, and structure of the manuals was not always identical from one study to the next. The importance of the different components of the various self-help manuals is unknown. The effect of differences in content between behavioural manuals, however, was evident in Pezzot-Pearce et al.'s (1982) study. The manual she utilized was an adaptation of Hagen's (1974). This manual had been used in previous studies, but not as successfully as in Pezzot-Pearce's study. An important difference between Pezzot-Pearce's version and Hagen's original manual was the addition of a physical activity component by Pezzot-Pearce. Compliance with physical activity was the only measure of compliance related to both weight and fat loss one-half year after treatment ended.

The style or format in which materials and prescriptions for change are presented to the reader may also be important. Although most behavioural manuals contain a number of "core" behavioural principles (e.g., self-monitoring, stimulus control, self-reinforcement), a survey of different manuals quickly reveals that they are all different in ways which cannot be

totally accounted for by the idiosyncracies of the authors.

LeBow (1981) described three general formats of behavioural self-help manuals for weight loss: (1) "cookbooks", designed to be followed step-by-step; (2) "menus", allowing limited choices for individuals and thus greater tailoring of recommendations; and (3) "cover best-bets", plans that show readers how to treat themselves based upon their current practices. These categories, although not exhaustive, highlight the differences in style of presentation of similar principles to readers. These three "types" focus on differences in the degree of direction and structure given to the reader. For example, a "cookbook" type would be fairly directive insofar as it "directs" the reader what to do step-by-step. The reader might be provided with a specific daily meal plan, explicit instructions for stimulus control techniques to be followed on a pre-determined schedule, and daily assignments for specific physical activities. A "menu" approach would be less directive, by providing a number of alternative strategies along with the principles underlying them and allowing the reader to choose those strategies most appropriate to him or her. The least directive type of self-help manual might simply provide education on behavioural principles of weight control, along with instruction on how the reader could devise their own individual program. All such types of manuals either exist on the market today or have been utilized in the studies reviewed above. All vary greatly in the amount of direction and structure

that they provide to the reader. These are factors which have been overlooked in research on self-help behavioural treatments for obesity, and which may partly account not only for the inconsistencies between studies, but also for some of the variability in response within studies. The research on behavioural self-control reviewed below strongly suggests that treatment directiveness may interact with individual variables to affect success in self-control treatments.

Inter-individual Variability in Outcome

A consistent finding in studies examining the effectiveness of behavioural manuals for weight loss has been the huge inter-individual variability in treatment outcome (Glasgow & Rosen, 1978). For example, in Pezzot-Pearce et al.'s (1982) study weight losses (6-month) for individuals using the self-administered behavioural manual ranged from 2.25 lbs to 37.75 lbs, and three subjects gained weight. Both Pezzot-Pearce's and Jeffery and Gerber's (1982) studies indicated that self-administered behavioural programs were utilized very effectively by some individuals but not by all. Such variability has been typical of not only self-administered behavioural treatments, but also behavioural treatments for weight loss in general, and has highlighted the need for further research in treatment program development and the identification of subject predictor variables related to treatment success (Abramson, 1977; Brownell, 1982; Jeffery & Gerber, 1982; Jeffery, Snell & Forster,

1985; Kincey, 1980, 1983; Stunkard & Mahoney, 1976; Wilson, 1978; Wilson & Brownell, 1980). This raises the perennial issue of specificity of treatment effects reiterated by Wilson and Brownell (1980) in their review of obesity treatment:

The ultimate outcome question ... is what treatment method(s) applied to what problems, in which patients, by what therapists, have what effects on what measure and at what cost. (p. 67)

In the following discussion, the relationship between one potentially useful subject predictor variable (locus of control) and a promising model of behavioural self-control proposed by Kanfer (1971) will be examined. Research will be reviewed which suggests that locus of control potentially interacts with the directiveness of behavioural treatment programs. The present study examined this suggestion.

Self-control as it Relates to Treatment Directiveness and Locus of Control.

Kanfer (Kanfer, 1971; Kanfer & Karoly, 1972; Kanfer, 1977) has described a behavioural model of self-regulatory behaviour. Briefly, according to this model, the self-regulation process is a three-stage feedback system in which the individual first self-monitors, then self-evaluates, and then self-reinforces depending upon the outcome of the self-evaluation. Each of the three regulatory processes may be influenced by a number of factors, both overt and covert, external and internal. Changes or differences in any of the three regulatory processes can

result in changes in self-regulatory behaviour. Similarly, individual differences in the way an individual self-monitors, self-evaluates, or self-reinforces would, according to this model, result in individual differences in self-control behaviour. A number of researchers have suggested that all subjects are not equally adept at or amenable to self-control procedures (e.g., Bellack & Schwartz, 1976; Kanfer, 1977; Rozensky & Bellack, 1976; Tobias & MacDonald, 1977). Rozensky and Bellack (1976) argued that many self-control programs have been administered with the assumption that patients all have similar skills and stylistic patterns; a belief described by Kiesler (1966) as the "patient uniformity myth". Bellack and Schwartz (1976) noted:

In conducting SC (self-control) programs one is struck by the high degree of variability among patients. Some individuals follow programs faithfully, while others simply do not employ the procedures regularly or contingently, regardless of the simplicity of demands. The procedures are effective for most patients who employ them as directed, but some require other forms of intervention (e.g., therapist management). (p. 123)

There is some empirical support for the notion that individuals can differ substantially in their ability to engage in self-regulatory behaviour. For example, the results of a number of analogue studies suggest that self-control behaviours may be learned through modeling (Bandura, Grusec & Menlove, 1967; Bandura and Kupers, 1964; Bandura & Whalen, 1966), or influenced by prior experience (Dorsey, Kanfer & Duerfeldt, 1971; Kanfer & Duerfeldt, 1968; Marston & Kanfer, 1963). A number of studies

have demonstrated inter-individual variability in self-evaluative, self-reinforcement, and self-punishment style (Bellack, 1975; Bellack & Tillman, 1974). These individual styles have further been shown to be consistent across situations (Kanfer, Duerfeldt & LePage, 1969; Marston, 1964). Bellack and his colleagues, in a series of studies, provided strong evidence that measurable differences in self-reinforcement style may be directly related to performance in self-control weight loss programs (see Bellack et al., 1976; Rozensky & Bellack, 1974).

Locus of control is a variable which has shown some promise as a predictor of performance in self-control weight loss programs, and which can be understood in terms of the preceding model. Briefly, locus of control is an expectancy variable, first described by Rotter (1966) which, simply stated, refers to the degree to which an individual perceives the events that happen to him/her as dependent on his/her own behaviour (internal orientation), or as a result of powers beyond his/her personal control (external orientation). The relationship between locus of control and outcome in weight control treatments has been demonstrated (Balch & Ross, 1975; Bellack & Tillman, 1974; Chambliss & Murray, 1979; Chapman & Jeffrey, 1979; Chavez & Michaels, 1980; Kinsey, 1981, 1983; Ross, Kalucy & Morton, 1983; Saltzer, 1979; Schreiber, Schauble, Epting & Skovholt, 1979; Wallston, Wallston, Kaplan & Maides, 1976), although not all studies have supported these findings (e.g., Jacobs & Wagner,

1984; Tobias & MacDonald, 1977). Some of these studies (Chapman & Jeffrey, 1979; Kinsey, 1981; Ross et al., 1983; Schreiber et al., 1979) indicated that internal-external differences in outcome did not become evident until maintenance or long term followup. These latter results consistently showed that internals either lost more weight during followup, or maintained treatment losses better than externals.

Some very promising research on the clinical utility of locus of control measures in weight control treatment has been reported in a series of studies designed to develop more problem-specific locus of control measures. The results of studies utilizing Rotter's (1966) locus of control measure have not always been consistent, because it was originally developed as a general measure. Rotter (1975) argued that his original scale was developed as a broad gauge instrument for providing "a low degree of prediction of behaviour across a wide range of potential situations" (p. 62), rather than a very high degree of prediction in specific situations. This led to the development of more specific locus of control scales. Relevant to the present study, the Health Locus of Control Scale (Wallston et al., 1976), followed by the Multidimensional Health Locus of Control Scale (Wallston, Wallston & DeVellis, 1978) were developed for use in health-related areas and found to be superior to Rotter's more general measure for predicting health-related behaviours (Chavez & Michaels, 1980; Wallston et al., 1976; Wallston & Wallston,

1981). The Weight Locus of Control Scale (Saltzer, 1979, 1982) is a specific measure of expectancies for locus of control with respect to personal weight developed for the prediction of behaviours in relation to weight reduction. In a series of studies (see Saltzer, 1982) Saltzer was able to demonstrate the superiority of this weight loss-specific locus of control measure over the more generalized Rotter measure, the Health Locus of Control Scale, and the Multidimensional Health Locus of Control Scale for predicting both success and completion of subjects in a weight control program.

In a review of internal-external expectancies and health related behaviours, Strickland (1978) noted that a number of consistent findings had emerged. First, the bulk of research indicated that when faced with health problems, internals appeared to engage in more generally adaptive responses (i.e., assuming responsibility for their difficulties and attempting to change) than externals. Strickland cautioned, however, that internal beliefs should only be facilitative in situations where events are actually controllable, as in the case, for example, of self-control treatment programs. Strickland also concluded that congruence of locus of control expectancies and the structure of therapeutic endeavour appeared to enhance behaviour change. Specifically, when given the opportunity, internals reported a preference for more client control in varied treatments than externals. Internals responded more positively to non-directive

approaches in which therapist intervention was minimal and little structure was imposed from the outside. Externals, on the other hand, appeared more positively influenced by structured approaches. Consistent with these findings, DuCette and Wolk (DuCette & Wolk, 1972, 1973; Wolk & DuCette, 1974) conceptualize locus of control as a cognitive and motivational variable and contend that externals not only perceive a lack of own control, but prefer non-control and actively seek external control. Internals, on the other hand, are presumed to perceive and prefer self-control; they avoid or reject the control of external agents. This differential preference for and responsivity to external input has also been suggested by others (Bellack & Tillman, 1974; Lefcourt, 1967). It suggests that locus of control orientation may interact with the extent to which a treatment emphasizes self-direction versus external direction.

Some empirical support for the above contentions has been reported. Wallston et al. (1976) examined the interaction between Health Locus of Control and success and satisfaction with two weight reduction treatments. The two treatments differed in their emphasis on personal versus external direction for change. One treatment was a self-directed program, hypothesized to be more consistent with internal locus of control beliefs (as noted above), and the other treatment was a group program, hypothesized to be more consistent with external beliefs. On the program satisfaction measure, there was a significant interaction between

locus of control and type of treatment. As predicted, the internals evaluated the self-directed program more positively, and externals evaluated the group program more positively. Although the treatment by locus of control interaction was not significant for weight loss, trends were in the predicted direction. Externals lost more weight in the group program than in the self-directed program, and internals lost more weight in the self-directed program than in the group program.

In another study assessing the interaction between locus of control and treatment for weight loss, Chambliss and Murray (1979) reported similar results. All subjects were given a placebo medication during the first two weeks of treatment. At the third meeting subjects in one group (self-efficacy condition) were given information designed to reattribute their weight losses to their own effort rather than to the medication (they were informed that the medication was a placebo). Subjects in the other condition were not so informed but were encouraged to continue to attribute weight losses to the medication (external/drug efficacy condition). Results revealed a significant treatment condition by locus of control interaction. Internal subjects lost weight in the self-efficacy condition and gained weight in the drug efficacy condition. Results for externals were completely opposite. Externals gained in the self-efficacy condition and lost weight in the drug efficacy condition. These findings clearly demonstrated the importance of

congruence between personal expectations as measured by locus of control, and the extent to which a program emphasizes personal versus external responsibility for change.

Similar findings of an interaction between treatment directiveness (i.e., externally versus self-directed) and subject variables have been reported by Bellack utilizing a measure of self-reinforcement style instead of locus of control, thus suggesting an important link between locus of control and Kanfer's model of behavioural self-control. Beginning with a retrospective study, Rozensky and Bellack (1974) interviewed a number of individuals and found that those who had been able to lose weight or quit smoking in the past tended to administer significantly more self-reinforcement for behaviour on a simple learning task than individuals who had been unsuccessful. In a subsequent study, Bellack, Glanz and Simon (1976) found that high self-reinforcers lost significantly more weight in a self-control program than low self-reinforcers, and showed better maintenance of weight losses. On the basis of these findings, and utilizing Kanfer's model, Rozensky and Bellack (1976) reasoned that high self-reinforcers would be most successful in a program emphasizing self-control (as opposed to external control) of behaviour change, because they would use self-reinforcement more often and more effectively to self-modify behaviour. Similarly, low self-reinforcers would be more successful in a program emphasizing external (i.e. therapist) control, because they would

rely more heavily on external sources of reinforcement for behaviour change owing to their relatively low tendency to self-reinforce. Subjects were classified as either high or low self-reinforcers on the basis of a learning task, and then were assigned to one of two weight control programs. The first program emphasized self-control while the second program emphasized external (therapist control). As predicted, the high self-reinforcers lost a substantial amount of weight in the self-control program and an inconsequential amount of weight in the external-control program, while the low self-reinforcers did only moderately well in both conditions, all of them losing less weight than the high self-reinforcers in the self-control condition. Thus, Rozensky and Bellack demonstrated not only that self-reinforcement style was related to performance in a behavioural program for weight loss, but also demonstrated that the type of treatment (externally directed versus self-directed) interacted with self-reinforcement style in predictable ways.

Bellack (1975) noted a striking similarity between patterns of behaviour exhibited by low and high self-reinforcers in self-control programs and that of externals and internals. He suggested that externals and internals may differ in their ability to apply self-regulation procedures effectively. He reasoned that the greater one's tendency to administer self-reinforcement, the less dependent one should be on external consequence for one's behaviour, and hence more internally

oriented. Conversely, the less effectively one self-reinforces, the more dependent one should be on external reinforcement, and hence more externally oriented. In support of these arguments, a number of studies have reported that externals are highly dependent upon external input and that they manifest performance deficits in the absence of such input (Bellack, 1972; Bellack & Tillman, 1974; Lefcourt, 1967; Pines, 1973; Sherman, 1973). These findings are highly similar to those expected of individuals deficient in the use of self-reinforcement.

Bellack (1975) directly assessed the hypothesis that individuals with an external locus of control orientation are deficient in the use of self-reinforcement. His results indicated significant self-reinforcement differences between externals and internals: internals consistently gave themselves higher self-evaluations, and administered more positive self-reinforcement and less negative self-reinforcement than externals. He concluded that external locus of control could be viewed as a self-regulation deficit. Specifically, he suggested that externals are unable to evaluate their own behaviour adequately in the absence of external input, and therefore do not make effective use of self-reinforcement.

The presence or absence of external input may also influence maintenance of weight losses achieved during active treatment. According to the above arguments, low self-reinforcers/externals should rely heavily on external reinforcement to develop and

maintain the self-regulatory abilities necessary for weight control, while the high self-reinforcers/internals should rely more on self-reinforcement to develop and maintain changes. When external reinforcement is withdrawn, as when active treatment ends, only the internals should be able to maintain changes.

Some support for these arguments is derived from studies by Chapman and Jeffrey (1979), Kinsey (1981); and Schreiber et al., (1979). In these studies, internal-external differences in weight reduction did not show up until follow-up (internals fared better than externals), presumably when the external reinforcement and guidance provided by the treatments were no longer available.

Kanfer's model also suggests that external structure and guidance may interact with self-control for other reasons. According to this model, the establishment of a performance contract is a critical element in self-regulatory behaviour, and serves as a basis for self-evaluation of behaviour. Among variables hypothesized by Kanfer (Kanfer & Karoly, 1972) to increase the probability of initiating behaviour that leads to fulfillment of a contract (i.e., increased "motivation") is the explicitness or clarity of the contract (i.e., specifying the desired outcome in detail, providing performance standards for facilitating self-evaluation, delineating consequences, and outlining methods for achievement of desired goals). Kanfer (1977) reviewed a study by Seidner (1973) indicating that

providing a client with a high degree of information about treatment strategies and specification of expected goals enhanced client efforts. Bellack (1975) and Bellack and Schwartz (1976) noted, however, that even when individuals were provided with the same information upon which to formulate performance contracts, they still exhibited differences in their self-evaluative style. Bellack's (1975) findings suggested that individuals with an external locus of control orientation were highly dependent on external input for self-evaluation; in the absence of such input, they were hesitant and conservative in their evaluations. Bellack and Schwartz (1976) thus argued that for externally oriented individuals, performance criteria should be made as explicit and objectified as possible (i.e., occurrence-nonoccurrence of responses, rate and frequency of behaviours required, detailed definitions of acceptable variations).

An assumption of Kanfer's model is that individuals highly skilled in implementing self-control procedures would be more likely to establish appropriate performance contracts than those with deficits in self-control skills. Thus, for internals, only minimal external guidelines for performance should be necessary, provided sufficient relevant information is supplied. For externals, the provision of relevant information would need to be coupled with more explicit, externally-provided guidelines for performance, against which the individual could evaluate. The

more specific and objective the guidelines, the less likely the individual would inappropriately self-evaluate. Thus, for example, in a weight control program internals could be provided with information on behavioural control of eating, stimulus control, nutrition, etc., along with general recommendations for minimal daily caloric intake required to both lose weight and stay healthy. The individual would assume responsibility for planning daily meals within those guidelines. Externals would be provided with the same information plus more specific guidelines and structure (e.g., daily meal plans, daily exercise regimens). The assumption is that the internals would be capable of developing appropriate performance contracts on the basis of the information provided, they would effectively self-evaluate and self-reinforce, and that any further structure or external guidance would be unnecessary and in fact unwelcomed by the internals. Externals, on the other hand, would both require and prefer more external guidance. If left to their own devices they would likely develop inappropriate performance contracts and thus ineffectively self-evaluate and self-reinforce.

References for Appendices

- Abramson, E. E. (1973). A review of behavioral approaches to weight control. Behaviour Research and Therapy, 11, 547-556.
- Abramson, E. E. (1977). Behavioral approaches to weight control: An updated review. Behaviour Research and Therapy, 15, 355-363.
- Ashwell, M. (1978). Commercial weight loss groups. In G. A. Bray (Ed.), Recent advances in obesity research: II, Proceedings of the 2nd International Congress on Obesity (pp. 266-276). London: Newman.
- Balch, P., & Balch, K. (1976). Establishing a campus-wide behavioral weight reduction program through a university health service: The use and training of health service personnel as behavioral weight therapists. Journal of the American College Health Association, 25, 148-152.
- Balch, P., & Ross, A. W. (1974). A behaviorally oriented didactic-group treatment for obesity: An exploratory study. Journal of Behavior Therapy and Experimental Psychiatry, 5, 239-243.
- Balch, P., & Ross, A. W. (1975). Predicting success in weight reduction as a function of locus of control: A unidimensional and multidimensional approach. Journal of Consulting and Clinical Psychology, 43, 119.

- Bandura, A., Grusec, J. E., & Menlove, F. L. (1967). Vicarious extinction of avoidance behavior. Journal of Personality and Social Psychology, 5, 16-23.
- Bandura, A., & Kupers, C. J. (1964). Transmission of patterns of self-reinforcement through modeling. Journal of Abnormal and Social Psychology, 69, 1-4.
- Bandura, A., & Whalen, C. K. (1966). The influence of antecedent reinforcement and divergent modeling cues on patterns of self-reward. Journal of Personality and Social Psychology, 3, 373-382.
- Bellack, A. (1972). Internal vs. external locus of control and the use of self-reinforcement. Psychological Reports, 31, 723-733.
- Bellack, A. S. (1975). Self-evaluation, self-reinforcement and locus of control. Journal of Research in Personality, 9, 158-167.
- Bellack, A. S. (1976). A comparison of self-reinforcement and self-monitoring in a weight reduction program. Behavior Therapy, 7, 68-75.
- Bellack, A. S., Glanz, L., & Simon, R. (1976). Self-reinforcement style and covert imagery in the treatment of obesity. Journal of Consulting and Clinical Psychology, 44, 490-491.

- Bellack, A. S., & Schwartz, J. S. (1976). Assessment for self-control programs. In M. Hersen & A. S. Bellack (Eds.), Behavioral assessment: A practical handbook (pp. 111-142). New York: Pergamon.
- Bellack, A. S., Schwartz, J., & Rozensky, R. H. (1974). The contribution of external control to self-control in a weight reduction program. Journal of Behavior Therapy and Experimental Psychiatry, 5, 245-249.
- Bellack, A. S., & Tillman, W. (1974). The effects of task and experimenter feedback on the self-reinforcement behavior of internals and externals. Journal of Consulting and Clinical Psychology, 42, 330-336.
- Bird, K. D. & Hadzi-Pavlovic, D. (1983). Simultaneous test procedures and the choice of a test statistic in MANOVA. Psychological Bulletin, 93, 167-178.
- Black, D. R. & Threlfall, W. E. (1986). A stepped approach to weight control: a minimal intervention and a bibliotherapy problem-solving program. Behavior Therapy, 17, 144-157.
- Black, D. R., Hyner, G. C., Melby, C. L., & Hovell, M. F. (1985). The Purdue model of health promotion and disease prevention: Implications for treatment and evaluation. Journal of American College Health, 34, 78.
- Bray, G. A. (1976). The obese patient. Philadelphia: W. B. Saunders Company.

- Brownell, K. D. (1981). Assessment of eating disorders. In D. H. Barlow (Ed.), Behavioral assessment of adult disorders (pp. 329-404). New York: Guilford Press.
- Brownell, K. D. (1982). Obesity: understanding and treating a serious, prevalent, and refractory disorder. Journal of Consulting and Clinical Psychology, 50, 820-840.
- Brownell, K. D., Heckerman, C. L., & Westlake, R. J. (1978). Therapist and group contact as variables in the behavioral treatment of obesity. Journal of Consulting and Clinical Psychology, 46, 593-594.
- Chambliss, C. A., & Murray, E. J. (1979). Efficacy attribution, locus of control, and weight loss. Cognitive Therapy and Research, 3, 349-353.
- Chapman, S. L., & Jeffrey, D. B. (1979). Processes in the maintenance of weight loss with behavior therapy. Behavior Therapy, 10, 566-570.
- Chavez, E. L., & Michaels, C. (1980). Evaluation of the Health Locus of Control Scale for obesity treatment. Psychological Reports, 47, 709-710.
- Cohen, J., & Cohen, P. (1975). Applied multiple regression/correlation analysis for the behavioral sciences. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Dilley, D., Balch, P., & Balch, K. (1979). A comparison of strategies for behavioral obesity treatment. Journal of Behavior Therapy and Experimental Psychiatry, 10, 193-197.

- Dorsey, T. E., Kanfer, F. H., & Duerfeldt, P. H. (1971). Task difficulty and noncontingent reinforcement schedules as factors in self-reinforcement. Journal of General Psychology, 84, 323-334.
- DuCette, J., & Wolk, S. (1972). Locus of control and extreme behavior. Journal of Consulting and Clinical Psychology, 39, 253-258.
- DuCette, J., & Wolk, S. (1973). Cognitive and motivational correlates of generalized expectancies for control. Journal of Personality and Social Psychology, 26, 420-426.
- Dwyer, J. T., & Berman, E. M. (1978). Battling the bulge: A continuing struggle. Two-year follow-up of successful losers in a commercial dieting concern. In G. A. Bray (Ed.), Recent advances in obesity research: II, Proceedings of the 2nd International Congress on Obesity (pp. 277-294). London: Newman.
- Dzeguze, K. (1983, April 4). A new wave of diets. MacLean's Magazine (pp. 52a-53).
- Fernan, W. (1973). The role of experimenter contact in behavioral bibliotherapy. Unpublished master's thesis, Pennsylvania State University.
- Glasgow, R. E., & Rosen, G. M. (1978). Behavioral bibliotherapy: A review of self-help behavior therapy manuals. Psychological Bulletin, 85, 1-23.
- Hagen, R. L. (1974). Group therapy versus bibliotherapy in weight reduction. Behavior Therapy, 5, 222-234.

- Hagen, R. L., Foreyt, J. P., & Durham, T. W. (1976). The dropout problem: reducing attrition in obesity research. Behavior Therapy, 7, 463-471.
- Hall, S. M., Hall, R. G., Hanson, R. W., & Borden, B. L. (1974). Permanence of two self-managed treatments of overweight in university and community populations. Journal of Consulting and Clinical Psychology, 42, 781-786.
- Hanson, R. W., Borden, B. L., Hall, S. M., & Hall, R. G. (1976). Use of programmed instruction in teaching self-management skills to overweight adults. Behavior Therapy, 7, 366-373.
- Jacobs, S. B., & Wagner, M. K. (1984). Obese and nonobese individuals: Behavioral and personality characteristics. Addictive Behaviors, 9, 223-226.
- Jeffery, R. W. & Gerber, W. M. (1982). Group and correspondence treatments for weight reduction used in the multiple risk factor intervention trial. Behavior Therapy, 13, 24-30.
- Jeffery, R. W., Snell, M. K., & Forster, J. L. (1985). Group composition in the treatment of obesity: Does increasing group homogeneity improve treatment results? Behaviour Research and Therapy, 23, 371-373.
- Jeffery, R. W., & Wing, R. R. (1979). Frequency of therapist contact in the treatment of obesity. Behavior Therapy, 10, 186-192.
- Jeffery, R. W., Wing, R. R., & Stunkard, A. J. (1978). Behavioral treatment of obesity: The state of the art, 1976. Behavior Therapy, 9, 189-199.

- Kanfer, F. H. (1971). The maintenance of behavior by self-generated stimuli and reinforcement. In A. Jacobs & L. B. Sachs (Eds.), The psychology of private events (pp. 39-57). New York: Academic Press.
- Kanfer, F. H. (1977). The many faces of self-control, or behavior modification changes its focus. In R. B. Stuart (Ed.), Behavioral self-management: Strategies, techniques and outcomes (pp. 1-43). New York: Brunner/Mazel.
- Kanfer, F. H., & Duerfeldt, P. H. (1968). Age, class-standing, and commitment as determinants of cheating in children. Child Development, 39, 545-557.
- Kanfer, F. H., Duerfeldt, P. H., & LePage, A. L. (1969). Stability of patterns of self-reinforcement. Psychological Reports, 24, 663-670.
- Kanfer, F. H., & Karoly, P. (1972). Self-control: A behavioristic excursion into the lion's den. Behavior Therapy, 3, 398-416.
- Kiesler, D. J. (1966). Some myths of psychotherapy research and the search for a paradigm. Psychological Bulletin, 65, 110-136.
- Kimbrell, G. McA. (1975). Note: Diet Dilettantism. The Psychological Record, 25, 273-274.
- Kincey, J. (1980). Target setting, self-reinforcement pattern, and locus of control orientation as predictors of outcome in a behavioural weight loss programme. Behaviour Research and Therapy, 18, 139-145.

- Kincey, J. (1981). Internal-external control and weight loss in the obese: Predictive and discriminative validity and some possible clinical implications. Journal of Clinical Psychology, 37, 100-103.
- Kincey, J. (1983). Compliance with a behavioural weight-loss programme: Target setting and locus of control. Behaviour Research and Therapy, 21, 109-114.
- LeBow, M. D. (1981). Weight control: The behavioural strategies. New York: Wiley.
- Lefcourt, H. M. (1967). Effects of cue explication upon persons maintaining external control expectancies. Journal of Personality and Social Psychology, 5, 372-378.
- Leon, G. R. (1976). Current directions in the treatment of obesity. Psychological Bulletin, 83, 557-578.
- Lindstrom, L. L., Balch, P., & Reese, S. (1976). In person versus telephone treatment for obesity. Journal of Behavior Therapy and Experimental Psychiatry, 7, 367-369.
- Mahoney, B. K., Rogers, T., Straw, M., & Mahoney, M. J. (1977, December). Results and implications of a problem-solving treatment program for obesity. Paper presented at the eleventh Annual Convention of the Association for the Advancement of Behavior Therapy, Atlanta, GA.
- Mahoney, M. J. (1974). Self-reward and self-monitoring techniques for weight control. Behavior Therapy, 5, 48-57.

- Marston, A. R. (1964). Variables affecting incidence of self-reinforcement. Psychological Reports, 14, 879-884.
- Marston, A. R., & Kanfer, F. H. (1983). Human reinforcement: Experimenter and subject controlled. Journal of Experimental Psychology, 66, 91-94.
- Marston, A. R., Marston, M. R., & Ross, J. (1977). A correspondence course behavioral program for weight reduction. Obesity and Bariatric Medicine, 6, 140-147.
- Metropolitan Life Insurance Company. (1960). Frequency of overweight and underweight. Statistical Bulletin, 41, 4-7.
- O'Brien, R. G., & Kaiser, M. K. (1985). MANOVA method for analyzing repeated measures designs: an extensive primer. Psychological Bulletin, 97, 316-333.
- Pezzot-Pearce, T. D. (1980). Effectiveness and cost-effectiveness of behavioral self-help manuals for the treatment of obesity: A study of degree of therapist contact and group versus individual format. Unpublished doctoral dissertation, University of Manitoba, Winnipeg, Canada.
- Pezzot-Pearce, T. D., LeBow, M. D., & Pearce, J. W. (1982). Increasing cost-effectiveness in obesity treatment through use of self-help behavioral manuals and decreased therapist contact. Journal of Consulting and Clinical Psychology, 50, 448-449.

- Pines, H. (1973). An attributional analysis of Locus of Control orientation and source of informational dependence. Journal of Personality and Social Psychology, 26 262-272.
- Ramsey, P. H. (1980). Choosing the most powerful pairwise multiple comparison procedure in multivariate analysis of variance. Journal of Applied Psychology, 65, 317-326.
- Ross, M. W., Kalucy, R. S., & Morton, J. E. (1983). Locus of control in obesity: Predictors of success in a jaw-wiring programme. British Journal of Medical Psychology, 56, 49-56.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs: General and Applied, 80(1, Whole No. 609).
- Rotter, J. B. (1975). Some problems and misconceptions related to the construct of internal versus external control of reinforcement. Journal of Consulting and Clinical Psychology, 43, 56-67.
- Rozensky, R. H., & Bellack, A. S. (1974). Behavior change and individual differences in self-control. Behaviour Research and Therapy, 12, 267-268.
- Rozensky, R. H., & Bellack, A. S. (1976). Individual differences in self-reinforcement style and performance in self- and therapist-controlled weight reduction programs. Behaviour Research and Therapy, 14, 357-364.
- Ryan, T. A. (1959). Multiple comparisons in psychological research. Psychological Bulletin, 56, 26-47.

- Saltzer, E. B. (1979). Causal beliefs and losing weight: a study of behavioral intention theory and locus of control in the prediction of health-related behavior (Doctoral dissertation, University of California, Irvine, 1979). Dissertation Abstracts International, 40.
- Saltzer, E. B. (1982). The Weight Locus of Control (WLOC) Scale: A specific measure for obesity research. Journal of Personality Assessment, 46, 620-628.
- Schreiber, F. M., Schauble, P. G., Epting, F. R., & Skovholt, T. M. (1979). Predicting successful weight loss after treatment. Journal of Clinical Psychology, 35, 851-854.
- Sherman, S. (1973). Internal-external control and its relationship to attitude change under different social influence techniques. Journal of Personality and Social Psychology, 26, 23-29.
- SPSS Inc. (1983). SPSS-X User's Guide. New York: McGraw-Hill.
- Strickland, B. R. (1978). Internal-external expectancies and health-related behaviors. Journal of Consulting and Clinical Psychology, 46, 1192-1211.
- Stuart, R. B. (1975). Behavioral control of overeating: A status report. In G. R. Bray (Ed.), Obesity in perspective (Vol. 2, part 2) (pp. 367-382) (DHEW publication #75-708, National Institute of Health). Washington D. C.: U.S. Government Printing Office.

- Stuart, R. B. (1977). Self-help group approach to self-management. In R. B. Stuart (Ed.), Behavioral self-management: Strategies, techniques and outcomes (pp. 278-305). New York: Brunner/Mazel.
- Stuart, R. B., & Davis, B. (1972). Slim chance in a fat world: Behavioral control of obesity. Champaign, IL: Research Press.
- Stunkard, A. J. (1972a). New therapies for the eating disorders: Behavior modification of obesity and anorexia nervosa. Archives of General Psychiatry, 26, 391-398.
- Stunkard, A. J. (1972b). The success of TOPS, a self-help group. Postgraduate Medicine, 51, 143-147.
- Stunkard, A. J., & Brownell, K. D. (1979). Behavior therapy and self-help programs for obesity. In J. F. Munro (Ed.), The treatment of obesity. London: MTP Press.
- Stunkard, A. J., & Mahoney, M. J. (1976). Behavioral treatment of eating disorders. In H. Leitenberg (Ed.), Handbook of behavior modification (pp. 45-73). New York: Prentice-Hall.
- Stunkard, A. J., Levine, H., & Fox, S. (1970). The management of obesity. Archives of Internal Medicine, 125, 1067-1072.
- Tobias, L. L., & MacDonald, M. L. (1977). Internal locus of control and weight loss: An insufficient condition. Journal of Consulting and Clinical Psychology, 45, 647-654.
- United States Senate Select Subcommittee on Nutrition and Human Needs. (1977). Proceedings from hearings. Washington D.C.: U.S. Government Printing Office.

- Wallston, B. S., Wallston, K. A., Kaplan, G. D., & Maides, S. A. (1976). Development and validation of the Health Locus of Control (HLC) Scale. Journal of Consulting and Clinical Psychology, 44, 580-585.
- Wallston, K. A., & Wallston, B. S. (1981). Health locus of control scales. In H. M. Lefcourt (Ed.), Research with the locus of control construct: Vol. 1. Assessment methods (pp. 189-243). New York: Academic Press.
- Wallston, K. A., Wallston, B. S., & DeVellis, R. (1978, Spring). Development of the Multidimensional Health Locus of Control (MHLC) Scales. Health Education Monographs, 6(2), 160-170.
- Wilson, G. T. (1978). Methodological considerations in treatment outcome research on obesity. Journal of Consulting and Clinical Psychology, 46, 687-702.
- Wilson, G. T., & Brownell, K. D. (1980). Behavior therapy for obesity: An evaluation of treatment outcome. Advances in Behaviour Research and Therapy, 3, 49-86.
- Wolk, S., & DuCette, J. (1974). Intentional performance and incidental learning as a function of personality and task dimensions. Journal of Personality and Social Psychology, 29, 90-101.
- Wollersheim, J. P. (1970). Effectiveness of group therapy based upon learning principles in the treatment of overweight women. Journal of Abnormal Psychology, 76, 462-474.
- Yates, B. T. (1978). Improving cost-effectiveness of obesity programs: Three basic strategies for reducing the cost per pound. International Journal of Obesity, 2, 249-266.