UNIVERSITY OF MANITOBA

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

by

Terry Dianne Pezzot-Pearce

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A thesis submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements of the degree of

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ABSTRACT

One-hundred and twenty-six community subjects were used to evaluate the effectiveness and cost-effectiveness of a behavioral self-help manual for weight reduction. Four groups (n=14) used the behavioral manual, four groups (n=14) used an alternate treatment manual, and one group (n=14) served as a delayed-treatment control condition. Under each manual condition, treatment was applied under four different degrees of therapist guidance. These were therapist-administered - group format, therapist-administered - individual format, minimal contact, and self-administered. The results at posttreatment, 3-month, and 6-month follow-ups supported the effectiveness of the behavioral manual in producing weight loss and in increasing cost-effectiveness. Also, the manual could be applied under varying degrees of therapist contact without significant changes in effectiveness but with accompanying increases in cost-effectiveness when lesser amounts of professional time were involved. Fat loss was not related to manual condition, degree of therapist guidance, or individual versus group format but was related to activity increase. Weight loss was also related to activity increase. This stressed the inclusion of activity change components in obesity reduction programs. The study's findings should make all therapists involved in the treatment of obesity, question the effectiveness as well as the efficiency of their programs.

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INTRODUCTION

Obesity is a serious health problem in North America which poses a treatment challenge for psychologists. In 1972, Stuart and Davis estimated that depending on the criteria used, 40 to 80 million Americans were obese. Its seriousness is readily apparent when the relationship between obesity and various somatic disorders is observed. Kaplan and Kaplan (1957) stated that many conditions are aggravated when associated with obesity. These include diabetes, heart disease, toxemias of pregnancy, arthritis, emphysema, cirrohosis, hernia, varicose veins, and operative complications. They also claimed that obesity may be causally related to increased blood pressure, atherosclerosis, and diabetes. It is imperative that an effective treatment approach be developed. Treatment must be economical as well as effective, however. The number of people seeking treatment for this serious problem will only increase as the population grows, as more energy saving devices are invented, and as our society continues its stress of youth, beauty, and thinness.

In 1959, Stunkard viewed the success of obesity treatment very pessimistically. He stated that most obese people would not stay in treatment. If they did, most would not lose weight or if they lost, most would regain. In more recent years, a much more optimistic attitude has developed. This has been primarily due to the application of behavior modification techniques to this clinical problem. Mann (1974) and Stunkard and Mahoney (1976) emphasized the superiority of behavioral approaches. Mann (1974) stated that behavior modification produced results which equalled and likely far surpassed those of

medical approaches. These grand claims were soon moderated, however (Stunkard, 1977; Mahoney, Rogers, Straw, & Mahoney, 1977). In 1977, Mahoney et al. said that behavioral procedures were being described as more effective rather than very effective, that weight losses were said to be modest rater than impressive, and that outcomes were being seen as variable rather than consistent. Jeffery, Wing, and Stunkard (1978) added that weight losses were consistent though modest, that these could be maintained for a year or more, and that large intersubject variability occurred and could not be accounted for by known subject or program characteristics. Moderate confidence in the use of behavioral approaches in weight reduction appears to be in evidence. These conclusions are based on a growing body of more sophisticated and controlled investigations than those on which earlier rash claims of astounding success were based.

A survey of controlled studies shows that behavioral treatments are nearly always superior to no treatment controls and are generally superior to placebo and other traditional approaches on a short-term basis. Stunkard and Penick (1979) stated that at least 30 controlled studies have shown the superiority of behavioral approaches over alternate approaches. The data are less definite in regards to long-term maintenance. In 1974 Jeffrey said that follow-up data were insufficient and allowed only guarded optimism. Later Stunkard and Penick (1979) stated that losses were not well maintained. Levitz, Jordan, LeBow, and Coopersmith (1978), however, claimed losses could be maintained or increased 1 to 5 years posttreatment. Currently research studies are beginning to include longer-term follow-ups and investigate factors

producing maintenance of weight loss. Identification of the effective components of treatment programs is also occurring (Bellack, 1975; Mahoney, Moura, & Wade, 1973; Stunkard & Mahoney, 1976). Bellack (1975) after reviewing behavioral studies of obesity treatment, concluded that the most effective approach was likely stimulus control in combination with other techniques. Virtually all of the results of the well-controlled studies of multi-component approaches which he reviewed were positive. Few showed stimulus control or other procedures to be useful when applied alone. Levitz et al.'s (1978) program which produced maintenance of losses for 5 years, was a multi-component approach.

Multi-component approaches appear to be increasingly employed and accepted in both research and clinical spheres. Emphasis is being placed on determining how to maximize the effectiveness of this particular approach. At this point in time, however, emphasis must also be placed upon another important aspect of obesity treatment. Since the consensus appears to be that behavioral treatment is at least moderately successful, the question arises as to how it can be delivered in an economical yet effective manner so that a large segment of the obese population can be affected (Stunkard, 1975). Wilson (1978) stressed that magnitude of weight losses should not be the only criterion in evaluating treatments. Efficiency must also be considered. Here he included such aspects as duration, ease of administration, and disseminability. He stated that many alternative treatment approaches are available which are of comparable effectiveness. Cost is therefore an important consideration in selecting a specific treatment strategy.

Yates (1978) has also stressed that measuring and decreasing cost

of obesity treatment may be just as important as measuring and increasing effectiveness. As well, Glasgow and Rosen (1978) and Jeffrey (1974, 1975, 1976) have emphasized the necessity of evaluating both efficiency and effectiveness. The importance of examining cost-effectiveness was aptly shown by Yates (1978). He compared two programs of equal duration. One was administered to small groups by professional therapists while the other was administered to large groups by lay therapists. While both were equally effective in producing weight loss, the latter was significantly more efficient. It cost much less because of the use of low-cost lay therapists and smaller therapist-patient ratios.

In 1978, Yates described some basic strategies for improving cost-effectiveness of obesity treatments. First he suggested the development of new theories and technologies. He qualified this tactic by stating that such advances have done little to date to increase either the understanding of obesity or its treatment. He next said that cost may be lowered by identifying and applying treatment only to those behaviors that are most strongly related to obesity. Such behaviors have not yet been identified and multi-component approaches are advocated be most investigators. Another strategy focused on both the monetary and non-monetary costs of implementing various treatment components. Cost in terms of degree of involvement of expensive professionals in treatment and subjective costs to the client of implementing different approaches are being investigated here. A final strategy involved the use of cost-effective systems for applying various techniques. Service delivery systems can vary greatly in the resources they consume and in their efficiency in translating procedures into weight loss. Thus of two

equally effective programs, one may cost much less to implement and thus be more cost-efficient. Conversely, two programs may cost the same but one may be much more effective and thus much more cost-efficient.

Generally psychological treatment for obesity is administered by a professional on either an individual or group basis. This is a costly procedure. Various alternate service delivery systems which would increase cost-effectiveness have been suggested by several authors. Stuart (1977) recommended that increased use of lay people may be one method of reducing the necessity for expensive professional services. He said that such leaders have been shown to be very effective in weight reduction programs where self-help is emphasized in a group setting. Israel and Saccone (1979) emphasized that the use of significant others as therapists may be very economical. This approach has shown good effectiveness in studies by Brownell, Heckerman, Westlake, Hayes, and Monti (1977), Israel and Saccone (1979), Matson (1978), Pearce (1980), and Saccone and Israel (1978). Another method of simplifying the treatment of obesity and thereby reducing, if not eliminating, the need for expensive professional involvement is the use of self-help written manuals. Abramson (1977), Hagen (1974), Marston, Marston, and Ross (1977), and Stunkard (1975) all advocated the use of manuals in weight reduction for such reasons. Several manuals such as those of Stuart and Davis (1972), Hagen (1974), Bellack (1976), and Brownell, Heckerman, and Westlake (1975) are currently in use.

Although weight reduction manuals present exciting possibilities in terms of cost-reduction, various authors suggest that manuals cannot

be best used alone without any therapist contact. Glasgow and Rosen (1978) after reviewing the use of self-help manuals in obesity treatment, concluded that such programs appear to be effective under therapist-administered and minimal contact conditions. Their utility under totally self-administered conditions is in doubt. This has implications for both the effectiveness and the efficiency of this approach. It suggests that therapist involvement is necessary, at least on a partial contact basis, in order to maximize effectiveness. Increased contact adds to cost, however, and can produce decreased cost-effectiveness if effectiveness is not appreciably increased as well. This presents an interesting research question. At issue is the determination of the degree of therapist contact which maximizes weight loss yet minimizes cost in terms of professional time involvement. The present investigation's major purpose was to examine the effect on both effectiveness and cost-effectiveness of using varying degrees of therapist guidance with a behavioral self-help manual. This was accomplished by comparing manual use under three degrees of therapist contact. These were therapist-administered on an individual basis (weekly in-person contact), minimal contact (weekly by mail), and self-administered (no contact).

According to Mahoney et al. (1977), the role of the therapist in weight reduction is a major research issue. Of concern is the client's dependence on the therapist for support in applying the program. Hanson, Borden, Hall, and Hall (1976) claim that little permanent weight change occurs because clients cease applying techniques once this support is withdrawn. Hall (1972) stresses the need for treatments that are effective when the therapist is absent and Abramson (1973, 1977)

says that self-control approaches in which the client controls the contingencies would be most likely to achieve this. Self-help manuals are essentially a form of self-control if used with limited or no therapist guidance. In his study, Hagen (1974) concluded that therapist contact could be dispensed with in favor of a written manual. Fernan (1973) however, concluded the reverse and stated that therapist contact was of critical importance even though it did not have to be on a face-to-face basis. Hanson et al. (1976) found that clients fared best during follow-up if they had experienced low levels of therapist contact during treatment. Likewise Jeffrey (1974) found that clients who controlled their own contingencies during treatment did better than those whose contingencies had been controlled by the therapist. These as well as other studies discussed in the literature review section, support Abramson's (1973, 1977) assertions that clients must be taught to rely on themselves. This appears to be best accomplished through minimal therapist contact.

These conclusions are not firmly established, however, as contradictory evidence exists. Brownell, Heckerman, and Westlake (1978) found that minimal contact did not produce even temporary weight loss. After considering the negative consequences of unsuccessful dieting, they challenged the use of "do-it-yourself" treatment manuals for obesity. Jeffery and Wing (1979) found high contact levels (three times per week by telephone or in person) to be superior to once-a-week contact at posttreatment. The role of the therapist in producing weight loss is thus a controversial issue. The evidence is contradictory in regards to what degree of therapist contact produces maximal effectiveness.

Cost-effectiveness of varying degrees of therapist contact has not yet been examined in regards to this issue.

A secondary issue concerning format of therapist contact was also examined in the present investigation. Various authors have advocated group approaches in treatment while others have strongly recommended individual formats. Research evidence regarding the effectiveness of these two approaches is scanty. Ferster, Nurnberger, and Levitt (1962), Stuart (1967), Mahoney (1974), and Mahoney and Mahoney (1976) suggested that individual approaches were necessary to optimize weight loss. All but Stuart (1967) offered no empirical support for this assertion. Horan, Baker, Hoffman, and Shute (1975) found no significant differences between the two formats while Ashby (1977) and Hoel (1976) offered weak support for group format superiority. Kingsley and Wilson (1977) undertook the only controlled study of this question. At a 12-month follow-up, individually treated subjects had regained while group-treated subjects had continued to lose weight. Kingsley and Wilson (1977) concluded that the group situation was more powerful because it promoted sustained commitment and motivation to follow treatment recommeandations and strategies. In the present investigation, effectiveness and cost-effectiveness comparisons were made between group and individual formats in which subjects had weekly contact with a therapist.

The major research question thus used a three-group comparison in order to examine effectiveness and efficiency of varying degrees of therapist contact in the use of a self-help manual. The three degrees were therapist-administered - individual format, minimal contact, and self-administered as outlined by Glasgow & Rosen (1978). The secondary

research question used a two-group comparison in order to examine effectiveness and efficiency of group versus individual format in the use of therapist-administered self-help manuals. The behavioral manual employed was an adaptation of that devised by Hagen, Wollersheim, and Paul (Hagen, 1970). An activity component was added as this has been shown to be an important part of a behavioral program (Dahlkoetter, Callahan, & Linton, 1979; Gwinup, 1975; Harris & Hallbauer, 1973; LeBow & Perry, 1977; Stalonas, Johnson, & Christ, (1979). (See Appendix F for a copy of the behavioral manual). An additional treatment condition and a delayed treatment control group condition were also included in the research design. These are recommended by both Glasgow and Rosen (1978) and Wilson (1978). The additional treatment condition employed an alternate treatment manual adapted from Wollersheim's (1970) non-specific therapy condition therapist manual. (See Appendix G for a copy of the alternate manual). It was administered under the same conditions as the behavioral manual: therapist-administered - individual format, minimal contact, and self-administered to assess degree of therapist contact and therapist-administered individual and group conditions to assess individual versus group format. Glasgow and Rosen (1978) and Stunkard (1977) stressed the inclusion of such a group in order to check on expectancy effects. Wilson (1978) also emphasized the critical necessity of an alternate treatment condition in research. He said that causal relationships between specific therapeutic techniques and consequent weight loss could only be demonstrated with its inclusion and that a no-treatment control group alone is insufficient to establish treatment effectiveness. The no-treatment control group

was a delayed treatment condition where subjects were offered behavioral treatment after subjects in the other groups finished their active treatment phase. Other considerations noted by Glasgow and Rosen (1978) as necessary in the evaluation of self-help manuals were also incorporated. Clinically relevant subjects, treatments that can be employed clinically, and longer follow-ups of at least six months duration were included. Wilson (1978) likewise stressed that treatment research must approximate the clinical situation as closely as possible in order for an adequate assessment of effectiveness to be made. Another included consideration concerned measures of treatment outcome. Wilson (1978) stressed that weight and fat measures were both necessary. Multiple measures were also advised by LeBow (1977 a, 1977 b) and Bellack and Rozensky (1975). Finally, an attempt was made to identify factors correlating with successful treatment outcome in order to later use them as predictors as recommended by Mahoney et al. (1977).

The following hypotheses are proposed:

1. Subjects using the behavioral manual under four different kinds of therapist guidance (therapist-administered - group format, therapist-administered - individual format, minimal contact, self-administered) would lose significantly more weight than subjects using the alternate treatment manual under the four conditions of therapist guidance (therapist-administered - group format, therapist-administered - individual format, minimal contact, self-administered) at each assessment period.

2. Subjects using the behavioral manual with some degree of therapist guidance (therapist-administered - group format, therapist-

administered - individual format, minimal contact) would lose significantly more weight at posttreatment and at 3-month and 6-month follow-ups than subjects who self-administered the behavioral manual without any therapist guidance.

METHOD

Subjects

One-hundred and twenty-six respondents to newspaper advertisements announcing a weight reduction program were selected. Potential subjects were invited for a brief screening interview after meeting basic criteria of being between 20 and 60 years old and of having 20 or more pounds to lose. The program and the random assignment process to use one of two different manuals were briefly described. The Stanford Eating Disorders Clinic Questionnaire (Agras, Ferguson, Greaves, Qualls, Rand, Ruby, Taylor, Werne, & Wright, 1976) (Appendix A) was given to each subject. Questionnaires had to be filled out and returned before admission to the program. Weights on a physician's beam balance were recorded to the nearest quarter pound after removal of shoes, outdoor clothing, and heavy jewelry. Heights were recorded to the nearest quarter inch.

Final selection was made on the basis of the initial interview and returned assessment questionnaire. Subjects were eliminated who: 1) were not 20% overweight based on 1959 Metropolitan Life Insurance Company norms (U.S. Department of Health, Education, and Welfare, 1967). The midpoint of the medium frame desirable weight ranges was used to determine ideal weights for subjects. A table of ideal weights used is in Appendix B; 2) were currently involved in other organized weight control programs or in psychotherapy; 3) were suffering from any obesity-related physical malady such as diabetes, thyroid dysfunction, colitis, or ulcers; 4) were taking medication that might effect water retention, appetite, or metabolism; 5) were pregnant or

planning to become so during the following 9 months if female; 6) were unwilling to commit themselves to a long-term, 9-month program; 7) were unwilling to place a $50 deposit, refundable contingent upon meeting specific attendance requirements. All subjects were required to obtain written physician consent for program participation. This stated that the subject did not suffer from any physical condition that would contraindicate weight loss (Form in Appendix C). Subjects also signed a consent for use of data form (Appendix D).

Subjects had a mean pretreatment weight of 185.39 pounds (84.27 kg.), were a mean of 59.03 pounds (26.83 kg.) or 47.31% overweight, and had a mean of 37.93% fat. Percent fat was determined by a four-site skinfold measurement technique (Durnin & Womersley, 1974; Mahoney et al., 1977). Average age was 39.42 years. Most had been overweight for a number of years with onset before age of 20 years in 51.69% of the subjects and before age of 25 years in 72.88%. All but three subjects reported previous attempts at weight loss. Average number of reported attempts was 10. This was likely an underestimate as many subjects reported continual unsupervised fad diets and could not give accurate estimates of numbers of previous dieting attempts.

Therapists

Therapists were senior Ph.D. clinical psychology students who had previous experience in behavioral treatment of obesity as well as clinical practica. Two therapists treated subjects in in-person therapist contact groups. Each conducted one group in the two therapist-administered conditions - group format as well as equal shares of individual sessions in the two therapist-administered conditions -

individual format. Mail replys in the minimal contact group were made by the writer. Weekly therapist meetings ensured uniformity of treatment procedures across therapists.

Procedure

Once subjects had met all eligibility criteria, they were randomly assigned to one of nine groups from blocks of subjects stratified according to percentage overweight. Equal numbers of married couples and males were assigned to each group. Although 14 subjects were assigned to each group, 5 subjects could not begin the program at the scheduled time. Of these, 2 were hospitalized for illness, 1 had a child who was terminally ill in hospital, and 2 had lost interest over the 1-month waiting period. Replacements could not be made because of the lengthy process involved in interview, questionnaire return, and selection. The nine groups with the number of subjects beginning the program in each were: 1) therapist-administered behavioral manual - group format (n=14), 2) therapist-administered behavioral manual - individual format (n=12), 3) minimal contact behavioral manual (n=14), 4) self-administered behavioral manual (n-14), 5) therapist-administered alternate manual - group format (n=14), 6) therapist-administered alternate manual - individual format (n=14), 7) minimal contact alternate manual (n=13), 8) self-administered alternate manual (n=12), 9) delayed treatment control (n=14).

All but delayed treatment control subjects signed contingency contracts that specified the terms of attendance which would result in total refund of their $50 deposit. Requirements were attendance at nine of ten meetings and two follow-up sessions for in-person groups,

weekly mail-ins and attendance at posttreatment and two follow-up sessions for mail-contact groups, and attendance at posttreatment and two follow-up meetings for self-administered groups (See Appendix E for copies of contracts). It was repeatedly emphasized that refund depended solely upon attendance and not upon weight loss or habit change. Deposits were in the form of cheques made out to the Heart Fund or other charity. The cheques were returned to the subjects at 6-month follow-up if attendance requirements had been met. Cheques were forwarded to the appropriate charity if they had not. Deposits were required to reduce attrition as this strategy had previously been shown effective in reducing dropout rates (Hagen et al., 1976).

All behavioral treatment subjects received a written multi-component self-help behavioral manual for weight reduction adapted from Hagen (1974a). It was modified to include an activity component in addition to an eating modification component. The manual was designed to allow subjects to lose weight at a slow rate of 1 to 2 pounds per week. Slow but progressive changes in eating and activity habits which could become part of a subject's lifestyle were stressed. Drastic measures such as starvation, rigid diets, and hours of jogging were strongly not recommended. Alternate treatment subjects received a written self-help manual which emphasized anxiety as the cause of over-eating. It recommended relaxation procedures and insight into motivations for over-eating as remedies. Since such a manual was previously unavailable, it was developed using Wollersheim's (1970) non-specific therapy condition as a basis. Both manuals were organized similarly. Each was divided into 10 weekly lessons consisting of a

lesson, review questions concerning the lesson, and an outline of specific behaviors required for the coming week. Both also stressed that weight loss could only be achieved by decreasing caloric intake and increasing energy expenditure. Record keeping, specific exercises, and other assignments were required on a daily basis in each manual. Thus each involved a considerable amount of time expenditure and continual awareness of weight reduction attempts. Copies of the two manuals are in Appendix F and Appendix G respectively.

The body change data from which the dependent variable measures were calculated were taken on all treatment groups at four time periods. These were pretreatment, posttreatment, 3-month follow-up, 6-month follow-up. The delayed-treatment control group was measured at the screening interview and at the posttreatment assessment for the other eight groups. Their weights following later treatment were also recorded. Behavioral data was collected throughout the program on the eight treated groups. Behavior change measures were computed for these groups at posttreatment. The behavioral groups also continually kept energy data throughout the program. Energy change measures were computed for these groups at posttreatment.

Treatment Conditions

Therapist-Administered Behavioral Manual - Group Format (TAB-Grp) - After the screening interview, subjects met on a group basis for 10 weekly, 60-minute sessions. Seven subjects and a therapist met together in each group. The subjects were weighed, problems of the previous week were discussed, a new lesson was distributed, and

questions concerning the coming week's requirements were answered at each meeting. Group support and help in weight reduction were stressed. Subjects were encouraged to rely on others in the group for aid.

Therapist-Administered Behavioral Manual - Individual Format (TAB-Ind) - After the screening interview, subjects met on an individual basis for 10 weekly, 30-minute sessions with the therapist. At each session, the subject brought in his records from the week before and received the next lesson of his manual. He was weighed, the past week was reviewed, problems were discussed, and questions concerning the coming week's requirements were answered.

Minimal Contact Behavioral Manual (MCB) - Subjects were seen for a brief pretreatment interview in groups of one to three persons. They were weighed and these were recorded. They were also given the behavioral manual and told to do one lesson a week for the succeeding 10 weeks. They returned various records weekly to this writer who in turn sent back comments, suggestions, and answers to questions asked by the subject. As in all other groups, it was stressed that the manual was of demonstrated effectiveness if followed closely. Subjects were told that in-person contact was not necessary to derive benefit from the manual but that questions were important and could be easily answered by return mail. They were instructed to do weekly home weigh ins but were not required to send these records to the therapist. A posttreatment in-person meeting was held 10 weeks later to evaluate progress.

Self-Administered Behavioral Manual (SAB) - After the screening

interview, subjects were seen for a brief pretreatment inverview in groups of one to three people. They were weighed and these were recorded. They were also given the behavioral manual and instructed to complete one lesson a week for 10 weeks. Subjects were told that they had been given a manual which was effective without therapist help if applied with diligence and hard work. Emphasis was placed on completing all lessons in order to derive the greatest benefit. After any questions were briefly answered, subjects were sent home with the manual. They were informed that they would be seen again in 10 weeks in order to evaluate progress. Weekly weigh ins which did not have to be reported to the therapist were required during the 10 week no-contact period. Behavior change and energy change data were turned in at the posttreatment meeting.

Therapist-Administered Alternate Manual - Group Format (TAA-Grp) - Procedures paralleled those of the therapist-administered behavioral manual - group format condition except that the alternate manual was used instead of the behavioral manual. Subjects in this as well as in the other alternate treatment conditions were offered behavioral treatment after the 6-month follow-up weigh in. This was because subjects using the behavioral manual had lost significantly more weight. They were given the behavioral manual to use in a self-administered format as treatment in this format cost little but was no less effective during the previous treatment and follow-up periods. All but three subjects wanted to use the behavioral manual when it was offered.

Therapist-Administered Alternate Manual - Individual Format (TAA-Ind) - Procedures were the same as those in the therapist-administered

behavioral manual - individual format condition except that the alternate manual was used instead of the behavioral manual. As in other alternate treatment groups, subjects were offered the behavioral manual at 6-month follow-up. Only one subject did not take the behavioral manual.

Minimal Contact Alternate Manual (MCA) - Procedures were the same as those in the minimal contact behavioral manual condition except that the alternate manual was used instead of the behavioral manual. All but two subjects wanted to try the behavioral manual which was offered at 6-month follow-up.

Self-Administered Alternate Manual (SAA) - Procedures were the same as those in the self-administered behavioral manual condition except that the alternate manual was used instead of the behavioral manual. All subjects were offered and wanted to use the behavioral manual at 6-month follow-up.

Delayed Treatment Control (DTC) - Subjects did not receive treatment until the 10-week treatment phase for the other subjects was complete. They were told that time limitations did not permit treatment at the program's start but were promised and given full treatment 10 weeks later. Measures taken at the screening interview constituted the pretreatment measures for this group.

Dependent Variable Measures

Four types of dependent variables were measured. These included body change measures, behavior change measures, and energy change measures as recommended by LeBow (1977b) and a measure of cost-effectiveness as devised by Jeffrey (1974) and Yates (1978).

Body Change: Body change dependent variables were computed at posttreatment, 3-month, and 6-month follow-up assessments. They were derived from weight and fat data collected at pretreatment, posttreatment, 3-month, and 6-month follow-up assessments.

1) Absolute Pounds Lost - Weight lost in pounds was calculated by subtracting a subject's weight at posttreatment and follow-up assessments from the pretreatment weight.

2) Percent Body Weight Lost - This was calculated by the formula:

$$\text{Percent weight lost} = \frac{\text{pounds lost}}{\text{initial body weight}} \times 100$$

3) Weight Reduction Index - This index was developed by Feinstein (1959) and equals the percent of excess weight lost X relative initial obesity. It was computed as follows:

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

4) Relative Fat Change Index - This measure was developed by K. Mahoney et al. (1977) and yields the percent excess fat lost. It was computed as follows:

$$\text{RELFATCH} = \frac{\text{fat lost}}{\text{excess fat}} \times 100 = \frac{\text{pre \% body fat - post \% body fat}}{\text{pre \% body fat - ideal \% body fat}} \times 100$$

Ideal fat for males was set at 14% and for females at 24% as suggested by K. Mahoney et al. (1977).

Body fat was determined by a four-site skinfold measurement technique recommended by Durnin and Womersley (1974) and K. Mahoney et al. (1977). This yielded an estimate of percentage of body fat. Measurements were obtained using Harpendin Skinfold calipers in the following manner. All measures were taken on the right side of the

body with the subject standing. The measurement site was located and marked. The caliper was held in the dominant hand and a firm full fold of tissue was grasped just below the designated site (about 1/2 inch) with the thumb and forefinger of the other hand. The fat fold was pulled as cleanly away from the muscle as possible. The caliper was applied to the site and allowed to stabilize. The caliper jaws were allowed to exert their full pressure on the skin by the removal of the measurer's fingers of his dominant hand from the caliper trigger. Once the caliper needle stabilized, the reading at each site was taken and recorded. In instances where the fat fold was difficult to pull away from the muscle, several readings were taken until three consistent readings at the site were obtained. In a few instances, fat folds were so thick that they could not be grasped nor fit into the caliper jaws. At these times, an estimate of thickness was made which was larger than the maximum of the caliper's scale.

The four sites used in the measurements were triceps, biceps, subscapular, and supra-iliac. The sites were located as follows: triceps - midpoint of right triceps halfway between acromion (top of shoulder) and olecranon (elbow) processes using a vertical fold; biceps - midpoint of muscle belly with vertical fold; subscapular - at inferior angle of right shoulder blade using vertical fold; supra-iliac - at midaxillary line (divides body into "front" and "rear") using vertical fold just above bony protrusion of hip (iliac crest). Body fat estimates were obtained by summing the four skinfold measures and using the total to arrive at an estimate for sex and age as outlined in Durnin and Womersley's (1974) table of estimates.

Skinfold measures at pretreatment and posttreatment were taken by each subject's therapist for in-person groups. Measurements at the two follow-up periods for these two groups were taken by the senior therapist who also took all measurements for the mail-in and at home groups.

Behavior Change: During the 10-week treatment phase, subjects in the behavioral groups kept a daily log of their compliance with specific behaviors required by the manual. Each day subjects had awarded themselves certain numbers of points depending upon their compliance. They awarded themselves 5 points for doing the behavior all day, 3 points for doing the behavior most of the day, 1 point for doing the behavior some of the day, and 0 points for not doing the behavior. A total behavior score for the 10 weeks was derived at posttreatment by summing the daily point totals. A record of the number of weeks that behavior records were kept was also made and used as a measure of compliance. Subjects using the alternate treatment manual also kept daily logs of their compliance with behaviors required in their manual. They awarded themselves points in the same manner as subjects using the behavioral manual. A total behavior score was likewise computed and a record was made of the number of weeks that behavior ratings were made by each subject at posttreatment. Another subjective measure of subject compliance with the activity requirements was made by the therapist at 3-month and 6-month follow-ups. The therapist asked the subject about his activity level over the preceding 3 months. She then rated the subject's reported level as low, medium, or high and assigned these levels 1, 2, or 3 points respective-

ly.

Energy Change: Energy change data was gathered by subjects using the behavioral manual. Only behavioral subjects kept daily records of their caloric intake and expenditure. A calorie score was calculated at posttreatment for each subject in the following manner. The mean recorded caloric intake was computed by summing caloric intake across the program duration and dividing by the number of days that recordings were made. Maximum recommended daily caloric intake level was then subtracted to yield an average calorie score for the program. Daily limit was calculated by multiplying the subject's pretreatment weight by 7. LeBow and Perry (1977) recommended this as a procedure to establish daily intake levels which produce a weekly 1 to 2 pound loss. An activity score for each behavioral subject was also calculated at posttreatment. Subjects had been asked to increase participation in various activities and to record the number of calories that they expended in these activities daily. The activity score was computed by summing the number of calories expended weekly over the treatment phase and then dividing by the number of weeks such records were kept.

Cost-Effectiveness Index: The following cost-effectiveness index was used:

$$\text{CE Index} = \frac{\text{mean weight reduction index}}{\text{mean treatment time per subject}}$$

This was derived from an index devised by Jeffrey (1974) and used by Yates (1978). Mean treatment time per subject was recorded in minutes. For subjects treated in groups, total minutes were divided by the number of subjects per group. The index was computed for each

subject at posttreatment, 3-month, and 6-month follow-ups. It yielded a mean unit of weight loss per minute of professional time spent in delivering therapeutic contact to the subject.

Other Measures: Since the alternate treatment manual used anxiety and its relief as its treatment rationale, a measure of anxiety was made in order to determine whether high anxious subjects did better using the alternate manual than low anxious subjects. The Taylor Manifest Anxiety Scale (Taylor, 1953) was used. The initial score and an anxiety change score (pretreatment score - post-treatment score) were recorded for all subjects.

Reliability Measures

Reliability was computed for weight and skinfold body measures. Weight was recorded independently by subject and therapist. Reliability was determined by computing Pearson product-moment correlation coefficients between these pairs of weights for all subjects. Reliability for skinfold measurements was determined by computing Pearson product-moment correlation coefficients between the sums of the four-site skinfold measures taken by the two therapists for each subject at 6-month follow-up.

Reliability measures were obtained for the behavior scores of subjects in both manual conditions. A spouse or family member was asked to independently estimate the subject's compliance with each behavior requested in the manual. These raters assigned points to the subject each day using the same criteria that the subject was using to award points to himself. Thus a behavior score for the subject could be derived from the rater's ratings. The rater's behavior score was

correlated with the subject's own behavior score using Pearson product-moment correlation coefficients. Correlations were computed separately for the behavioral and alternate treatment groups based on 34 and 30 subjects respectively. These numbers are lower than the total subjects in each manual condition. Some subjects lived alone and did not have anyone to do the ratings. Others did not have people living with them who would co-operate in doing the daily ratings.

Reliability measures were not made for the therapist's subjective ratings of subject reported activity levels at 3-month and 6-month follow-up. Also, reliability measures could not be computed for caloric intake and expenditure data because only the subject recorded this data.

RESULTS

Pretreatment Analyses

The mean pretreatment characteristics of the nine groups for age, weight, pounds overweight, percent overweight, age of earliest onset of obesity, and percentage fat estimate are shown in Table 1. A one-way multivariate analysis of variance involving these six variables was done. It indicated that groups differed significantly, F (48, 511) = 1.32, $p < .08$. A .10 statistical significance level was used due to the conservativeness of the MANOVA test. The stepdown F statistics presented in Table 2, however, indicated that the variable, age, accounted for the majority of the differences. Once the effect of this variable was removed, the differences among groups were no longer significant. Since later correlational analyses showed that age was not related to weight loss, the groups were considered not to differ significantly on variables that might be related to weight loss.

Subject Attrition

Although 14 subjects were assigned to each condition, 5 subjects could not begin the program. Since they were excluded prior to the treatment phase, 121 subjects began the program. During the treatment phase, 4 subjects dropped out. This resulted in a posttreatment drop-out rate of 3.3 percent. Of these subjects, one was in the therapist-administered - individual format behavioral condition, two were in the therapist-administered - individual format alternate manual condition, and one was in the minimal contact alternate manual condition. These subjects were dropped from the pretreatment analyses reported above. At 3-month follow-up, data could not be obtained from another 4 subjects.

Table 1

Mean Pretreatment Characteristics[a]

Condition	Characteristic					
Behavioral Manual	Age (Years)	Weight (Pounds)	Pounds Overweight	Percent Overweight	Age Onset[b]	Percent Fat
TAB-Grp (n=14)	35.2 (9.0)	196.4 (38.2)	67.0 (39.2)	53.9 (34.7)	5.0 (1.8)	37.5 (8.4)
TAB-Ind (n=11)	40.2 (11.0)	185.8 (32.2)	61.5 (32.6)	50.7 (29.1)	5.0 (2.4)	38.2 (7.0)
MCB (n=14)	40.6 (10.1)	184.1 (26.1)	61.1 (26.7)	51.2 (25.0)	4.6 (1.4)	38.0 (7.1)
SAB (n=14)	35.9 (11.7)	183.1 (47.6)	56.3 (33.3)	43.1 (22.6)	4.2 (1.4)	37.1 (5.3)
Alternate Manual						
TAA-Grp (n=14)	40.1 (10.9)	184.3 (39.6)	56.8 (25.2)	44.1 (17.0)	4.1 (1.7)	38.2 (3.2)
TAA-Ind (n=12)	51.6 (7.4)	181.9 (30.6)	60.4 (25.2)	49.7 (20.2)	6.2 (2.0)	41.5 (3.5)
MCA (n=12)	31.8 (9.7)	184.8 (44.4)	56.8 (31.6)	43.4 (20.6)	4.4 (1.1)	36.4 (5.5)
SAA (n=12)	35.8 (8.5)	169.2 (22.1)	52.4 (25.2)	41.8 (19.6)	4.8 (1.1)	37.2 (4.7)
Delayed Treatment Control (n=14)	43.4 (13.6)	184.1 (28.6)	58.3 (20.7)	46.7 (17.3)	4.9 (1.6)	37.8 (4.5)

[a] Standard deviations in parentheses

[b] Where 1=0-5 years, 2=5-10 years, 3=10-15 years, 4=15-20 years, 5=20-25 years, 6=25-30 years, 7=30-35 years, 8=35-40 years, 9=40-45 years, 10=45-50 years, 11=50-55 years

Table 2

Pretreatment One-way MANOVA with Six Dependent Variables

F-Ratio for Multivariate Test of Equality

$F\ (48, 511) = 1.32,\ p < .08$

Stepdown *F* Statistics

Variable	MS	Univariate *F*	*p* less than	Stepdown *F*	*p* less than
Age	413.98	3.81	.001	3.81	.001
Weight	610.44	.48	.865	.65	.734
Pounds Overweight	226.31	.26	.977	.30	.965
Percent Overweight	243.31	.44	.896	1.59	.137
Age Onset	4.58	1.66	.116	1.42	.199
Percent Fat	25.19	.77	.632	.51	.845

Of these, one was in the minimal contact behavioral condition, two were in the self-administered behavioral condition, and one was in the minimal contact alternate manual condition. Reasons for data loss were pregnancy, move without forwarding address, extended mid-East tour, and lack of weight loss respectively. No further subjects were lost by 6-month follow-up. This resulted in a 6.6 percent dropout rate over 9 months total contact. Equal numbers of subjects had dropped out of each manual condition by 3-month follow-up. Chi-square analyses of subject dropout at pretreatment, posttreatment, and 3-month follow-up were not significant. Subject attrition therefore did not bias groups at these time periods.

Reliability Measures

Pearson product-moment correlation analyses for weight measures yielded a correlation of .97 ($p < .001$). The same analyses for the sums of four-site skinfold measures yielded a correlation of .96 ($p < .001$). Separate Pearson product-moment correlation coefficients were computed for the behavior ratings made by the subject and his rater for the two manuals. The resulting coefficients were r (32) = .91, $p < .001$, for the behavioral manual and r (28) = .96, $p < .001$, for the alternate treatment manual.

Posttreatment Analyses

Three dependent variables were computed from weight measurements at posttreatment for the nine groups. These were pounds lost, percent weight lost, and Weight Reduction Index. The means of each group on these variables are presented in Table 3. A one-way MANOVA using these dependent measures was significant indicating a treatment effect,

Table 3

Mean Weight Changes in Nine Groups at Posttreatment[a]

Condition		Weight Change Measure		
		Weight Loss (Pounds)	Percent Lost	Weight Reduction Index
Behavioral Manual				
TAB-Grp	(n=14)	-12.91 (6.92)	-6.41 (3.01)	33.29 (18.91)
TAB-Ind	(n=11)	-14.27 (7.10)	-7.80 (3.71)	39.61 (20.58)
MCB	(n=14)	-9.66 (8.69)	-5.48 (4.64)	28.54 (24.88)
SAB	(n=14)	-7.71 (11.72)	-4.14 (5.50)	19.73 (27.41)
Alternate Manual				
TAA-Grp	(n=14)	-7.79 (4.90)	-4.22 (2.50)	21.90 (14.20)
TAA-Ind	(n=12)	-5.04 (3.83)	-2.93 (2.37)	14.66 (12.49)
MCA	(n=12)	-2.60 (6.10)	-1.55 (3.86)	13.50 (25.76)
SAA	(n=14)	-1.94 (4.92)	-1.19 (2.97)	7.09 (18.27)
Delayed Treatment				
Control	(n=14)	3.02 (7.89)	1.52 (4.14)	-6.65 (19.09)

[a]Standard deviations in parentheses

F (24, 308) = 2.94, $p < .001$. The stepdown F statistics presented in Table 4 indicated that the variable, pounds lost, accounted for the majority of the differences. Once the effect of this variable was removed, group differences were no longer significant. This occurred because variables were highly correlated (all derived from pounds lost). Any one variable could have been used and would have produced the same significant results.

A planned multivariate contrast was used to compare weight losses at posttreatment of the eight groups who received treatment with the losses of the delayed treatment control group over the same period. It indicated that treatment was significantly superior to no treatment over the 10-week treatment phase in producing weight loss, F (3, 106) = 9.36, $p < .001$. All treated groups lost weight while the delayed treatment group had gained.

At this point in the analyses, the delayed treatment control group dropped out as it was offered behavioral treatment at posttreatment. It is absent from 3-month and 6-month follow-up analyses as well as from further posttreatment analyses in which fat change measures were included. Relative fat change indexes could not be computed for this group at posttreatment because fat was not measured until posttreatment weighins for treated groups. Weight losses were recorded for this group in their later treatment period. The subjects lost a mean of 9.73 pounds with a standard deviation of 8.53.

Remaining analyses of the eight treated groups employed three dependent masures of body change which were pounds lost, weight reduction index, and relative fat change index. The group means for

Table 4

Posttreatment One-way MANOVA Across Nine Groups

F-Ratio for Multivariate Test of Equality

$F\ (24,\ 308) = 2.94,\ p < .001$

Stepdown *F* Statistics

Variable	MS	Univariate *F*	*p* less than	Stepdown *F*	*p* less than
Pounds Lost	393.65	7.27	.001	7.27	.001
Percent Lost	106.86	7.42	.001	.69	.699
WRI	2553.41	5.90	.001	1.64	.123

these variables at posttreatment, 3-month, and 6-month follow-up are shown in Table 5. Figures 1 and 2 present the changes in weight reduction index and fat change index respectively. A summary of percentages of subjects in each group who lost various amounts of weight at the three measurement periods can be found in Appendix H.

Behavioral Manual Versus Alternate Manual Comparisons

Hypothesis 1 stated that subjects using the behavioral manual under four different formats would lose significantly more weight than subjects using the alternate treatment manual under the same four formats. At each assessment period, a 2 X 4 MANOVA with three body change dependent variables was executed to test this hypothesis. The results are presented in Table 6. The manual variable had a significant effect at posttreatment, 3-month, and 6-month follow-ups, F (3, 93) = 6.98, $p < .001$; F (3, 89) = 7.53, $p < .001$; and F (3, 89) = 4.52, $p < .01$ respectively. The effect, however, was not exerted on each dependent variable. Stepdown F statistics indicated that manual effects were exerted on weight change data but not on fat change data. These statistics are presented in Appendix H. Thus the behavioral manual produced significantly greater weight loss but not significantly greater fat loss than the alternate manual. A format effect was present at posttreatment and 6-month follow-up. An examination of a degree of contact effect at this point, however, was not possible because of a confound between group and individual treatment formats.

The existence of a significant manual effect on weight change but not fat change was supported by repeated measures ANOVA across three time periods on the three dependent variables. The results are pre-

Table 5

Means of Body Change Variables at Three Time Periods for Eight Treatment Groups[a]

Condition	n[b]	Body Change Variables								
		Pounds Lost			WRI			RELFATCH		
Behavioral Manual		Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU
TAB-Grp	14/14	-12.91	-11.48	-13.43	33.29	28.27	32.53	25.89	39.25	34.63
		(6.92)	(10.99)	(11.49)	(18.91)	(32.73)	(29.42)	(35.84)	(41.27)	(21.32)
TAB-Ind	11/11	-14.27	-14.25	-12.00	39.61	38.04	32.71	20.97	30.39	36.70
		(7.10)	(12.11)	(10.78)	(20.58)	(24.01)	(23.26)	(13.07)	(22.29)	(19.25)
MCB	14/13	-9.66	-11.08	-11.35	28.54	33.99	34.14	23.86	32.33	37.15
		(8.69)	(10.40)	(11.37)	(24.54)	(30.45)	(31.11)	(16.42)	(21.53)	(20.03)
SAB	14/12	-7.71	-12.35	-11.27	19.73	37.65	25.17	16.64	27.53	31.31
		(11.72)	(14.82)	(15.76)	(27.41)	(37.54)	(43.84)	(15.01)	(18.40)	(14.98)

(continued on next page)

Table 5 (continued from previous page)

Means of Body Change Variables at Three Time Periods for Eight Treatment Groups

Condition	n[b]	Body Change Variables								
		Pounds Lost			WRI			RELFATCH		
Alternate Manual		Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU
TAA-Grp	14/14	-7.79	-6.13	-6.00	21.90	12.97	13.40	13.01	18.68	23.79
		(4.90)	(7.40)	(6.95)	(14.20)	(22.06)	(22.42)	(8.08)	(12.89)	(14.01)
TAA-Ind	12/12	-5.04	-3.13	-2.96	14.66	9.83	9.39	12.26	13.94	17.58
		(3.83)	(5.77)	(5.87)	(12.49)	(13.76)	(16.16)	(10.42)	(12.72)	(13.90)
MCA	12/11	-2.60	-4.77	-8.93	13.50	15.45	33.04	22.48	33.83	36.66
		(6.10)	(6.56)	(7.53)	(25.76)	(21.95)	(33.79)	(32.51)	(35.71)	(34.95)
SAA	12/12	-1.93	0.52	-0.17	7.09	-0.09	1.18	24.97	26.82	36.84
		(4.92)	(9.54)	(8.21)	(18.27)	(22.66)	(20.77)	(20.54)	(24.91)	(27.70)

[a]Standard deviations in parentheses

[b]First number indicates number of subjects upon which posttreatment means are based. Second number indicates number of subjects upon which follow-up means are based

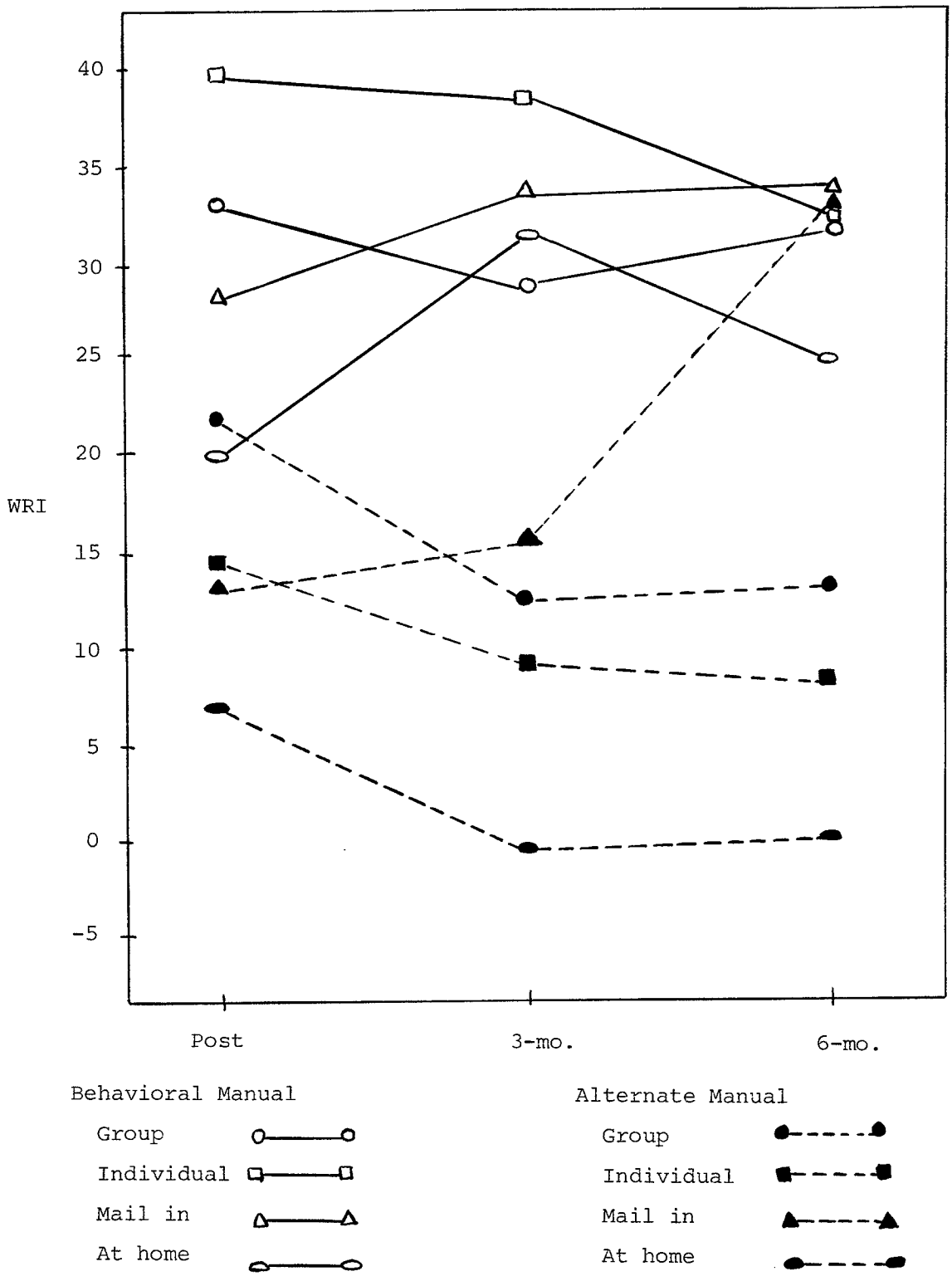

Figure 1. Weight Reduction Index Changes.

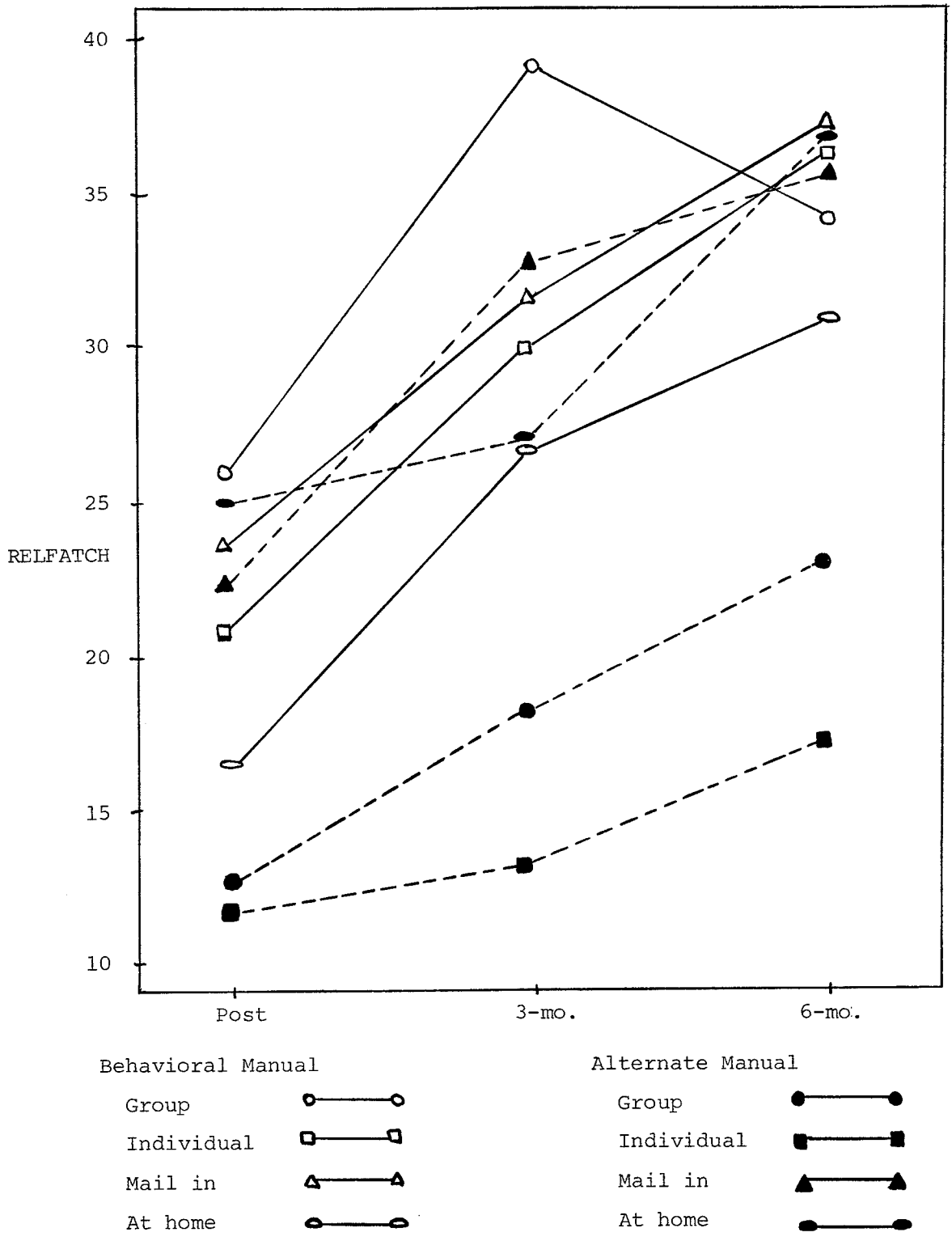

Figure 2. Relative Fat Change Index changes.

Table 6

2 X 4 MANOVA Results at Three Time Periods

(Manual Effectiveness Comparison)

Posttreatment MANOVA		
Manual Effect	1 D.F.	F (3, 93) = 6.98 ****
Format Effect	3 D.F.	F (9, 226) = 2.18 **
Interaction	3 D.F.	F (9, 217) = .93
3-Month Follow-up MANOVA		
Manual Effect	1 D.F.	F (3, 89) = 7.53 ****
Format Effect	3 D.F.	F (9, 217) = 1.10
Interaction	3 D.F.	F (9, 217) = 1.81 *
6-Month Follow-up MANOVA		
Manual Effect	1 D.F.	F (3, 89) = 4.52 ***
Format Effect	3 D.F.	F (9, 217) = 1.69 *
Interaction	3 D.F.	F (9, 217) = .97

* $p < .10$

** $p < .05$

*** $p < .01$

**** $p < .001$

sented in Table 7. There was a significant manual effect across time on the pounds lost and weight reduction index variables, F (1) = 19.34, $p < .001$ and F (1) = 16.82, $p < .001$, but not on the fat change variable. Thus both the MANOVA and the repeated measures ANOVA results provided very strong support for the behavioral manual's superiority in producing weight but not fat loss. Fat loss occurred but was not related to manual used. Instead, subjects in all groups lost significant amounts of fat over the 9-month period as indicated by the significant time effect on the fat change index, F (2) = 25.46, $p < .001$.

Cost-effectiveness was analyzed separately. The mean cost-effectiveness indexes at the three assessment periods for the eight groups are presented in Table 8. A 2 X 4 repeated measures ANOVA was used to compare the cost-effectiveness of the behavioral manual with that of the alternate manual. The results are presented in Table 9. The significant manual effect, F (1) = 6.07, $p < .025$, indicates that the behavioral manual was significantly more cost-effective. As occurred in the body change analyses, an examination of the degree of contact effect at this point was not possible because of a group confound.

Behavioral Manual - Therapist Contact Versus Self-Administered Comparisons

Hypothesis 2 stated that subjects using the behavioral manual with some degree of therapist guidance would lose significantly more weight than subjects who self-administered the manual without therapist guidance at posttreatment, 3-month, and 6-month follow-up. Planned multivariate contrasts were used to compare losses of behavioral

Table 7

Repeated Measures ANOVA on Pounds Lost, WRI, and RELFATCH for a 2 X 4 Design

		Dependent Variables					
		Pounds Lost		WRI		RELFATCH	
Source	D.F.	MS	F	MS	F	MS	F
Mean	1	18925.57	84.18****	148756.96	92.99****	208038.80	158.94****
Manual	1	4348.26	19.34****	26905.02	16.82****	2550.72	1.95
Format	3	222.01	.98	1810.28	1.13	1070.88	.82
Manual X Format	3	131.40	.58	955.50	.60	2000.75	1.53
Error	91	224.82		1599.69		1308.88	
Time	2	4.87	.29	13.77	.07	3529.83	25.46****
Time X Manual	2	32.52	1.92	628.72	3.23*	272.48	1.97
Time X Format	6	39.33	2.32*	542.57	2.79**	64.23	.46
Time X Manual X Format	6	26.95	1.59	301.40	1.55	91.80	.66
Error	182	16.98		194.62		138.62	

* $p < .05$ *** $p < .01$

** $p < .025$ **** $p < .001$

Table 8

Mean Cost-Effectiveness Indexes[a]

Condition	n[b]	Assessment Period					
		Post		3-mo FU		6-mo FU	
Behavioral Manual							
TAB-Grp	14/14	.409	(.260)	.352	(.394)	.394	(.343)
TAB-Ind	11/11	.143	(.077)	.136	(.096)	.120	(.098)
MCB	14/13	.489	(.370)	.567	(.449)	.540	(.444)
SAB	14/12	1.312	(1.940)	2.947	(3.135)	1.759	(3.790)
Alternate Manual							
TAA-Grp	14/14	.237	(.159)	.139	(.246)	.226	(.177)
TAA-Ind	12/12	.058	(.047)	.040	(.052)	-.353	(1.398)
MCA	12/11	.288	(.636)	.361	(.524)	.836	(.716)
SAA	12/12	.630	(1.401)	.051	(2.020)	.421	(1.409)

[a]Standard deviations in parentheses

[b]First number indicates number of subjects upon which posttreatment means are based. Second number indicates number of subjects upon which follow-up means are based

Table 9

Cost-Effectiveness Repeated Measures ANOVA for 2 X 4 Design

(Manual Cost-Effectiveness Comparison)

		Cost-Effectiveness Index	
Source	D.F.	MS	F
Mean	1	76.51	23.60****
Manual	1	19.68	6.07**
Format	3	17.98	5.54***
Manual X Format	3	10.56	3.26
Error	91	3.24	
Time	2	.33	.39
Time X Manual	2	2.20	2.63
Time X Format	6	.76	.91
Time X Manual X Format	6	2.04	2.43*
Error	182	.84	

* $p < .05$

** $p < .025$

*** $p < .01$

**** $p < .001$

subjects in the therapist-administered - group format, therapist-administered - individual format, and minimal contact conditions with losses of the self-administered condition. The contrasts were not significant at the three time periods, F (3, 93) = 1.34, $p < .26$; F (3, 89) = 1.64, $p < .19$; F (3, 89) = $p < .68$ respectively. Subjects having therapist contact did not lose more weight than subjects who self-administered the behavioral manual.

Planned comparisons of cost-effectiveness indexes for the four behavioral conditions were also undertaken at posttreatment, 3-month, and 6-month follow-up. Again the three groups having some therapist guidance were compared with the self-administered group. These comparisons were significant at each time period, t (95) = 3.41, $p < .001$; t (91) = -5.88, $p < .001$; t (91) = -2.79, $p < .01$ respectively. This indicated that self-administered use of the behavioral manual was more cost-effective than use with some degree of therapist guidance.

Within Group Changes

Single sample t tests using a conservative .01 significance level were used to determine if groups changed signficantly in terms of pounds lost and weight reduction index from pretreatment to posttreatment. Change from posttreatment through 6-month follow-up was evaluated by within group ANOVA and by Tukey comparisons using a conservative .025 significance level to control for inflated alpha across variables.

All three therapist-administered groups using the behavioral manual lost significant amounts of weight from pretreatment to posttreatment. The single sample t statistics for pounds lost and weight reduction index respectively were: therapist-administered - group

format, t (13) = -6.73, $p < .002$, and t (13) = 6.35, $p < .001$; therapist-administered - individual format, t (10) = -6.36, $p < .001$, and t (10) = 6.09, $p < .001$; minimal contact, t (13) = -4.01, $p < .001$, and t (13) = 4.14, $p < .001$. These groups did not lose further significant amounts of weight during follow-up. The self-administered group did not lose a significant amount of weight from pretreatment to posttreatment but losses during follow-up were nearly significant on the two variables, F (2) = 2.55, $p < .10$, and F (2) = 1.85, $p < .18$.

Two groups using the alternate manual lost significant amounts of weight from pretreatment to posttreatment but not through follow-up. These were the therapist-administered - group format, t (13) = 5.73, $p < .001$, t (13) = 5.56, $p < .001$, and therapist-administered - individual format conditions, t (11) = 4.36, $p < .001$, t (11) = 3.89, $p < .01$. The minimal contact condition did not lose significant amounts from pretreatment to posttreatment but did through follow-up on pounds lost and weight reduction index, F (2) = 4.94, $p < .02$, F (2) = 6.21, $p < .01$. The self-administered condition did not change significantly over any of the time periods.

A summary of these significant within group changes is presented in Table 10. The majority of significant weight changes occurred during active treatment. Further significant losses over follow-up occurred only in the self-administered behavioral condition and in the minimal contact alternate condition. No Tukey comparisons of change from posttreatment to 3-month follow-up or from 3-month to 6-month follow-up were significant.

Table 10

Occurrence of Significant Within Group Weight Changes

	Weight Change Variable			
	Pounds Lost		WRI	
Condition	Pre-post	Post-6-mo.	Pre-post	Post-6-mo.
Behavioral Manual				
TAB-Grp	Yes	No	Yes	No
TAB-Ind	Yes	No	Yes	No
MCB	Yes	No	Yes	No
SAB	No	Near Significance	No	Near Significance
Alternate Manual				
TAA-Grp	Yes	No	Yes	No
TAA-Ind	Yes	No	Yes	No
MCA	No	Yes	No	Yes
SAA	No	No	No	No

Degree of Therapist Contact Comparisons

The major question in this study concerned the effectiveness and cost-effectiveness of using varying degrees of therapist guidance in the use of self-help weight reduction manuals. To examine this, three degrees of therapist contact provided on an individual basis were examined. These were therapist-administered - individual format, minimal contact, and self-administered. The therapist-administered - group format condition involved in previous analyses was not included in order to eliminate the possibility of a group treatment confound. A 2 X 3 design was thereby created (manual X degree).

In order to determine if degree of therapist contact influenced manual effectiveness, MANOVA were executed at posttreatment, 3-month, and 6-month follow-ups. Dependent variables were pounds lost, weight reduction index, and relative fat change index. The results are presented in Table 11. The manual variable had a significant effect at all three periods, F (3, 67) = 7.12, $p < .001$, F (3, 63) = 9.65, $p < .001$, F (3, 63) = 3.21, $p < .05$ respectively. The effects were exerted primarily on weight change variables only as the stepdown F statistics presented in Appendix H indicated. There was also a degree of contact effect at posttreatment and 6-month follow-up, F (6, 134) = 2.62, $p < .05$, F (6, 126) = 1.80, $p < .10$.

The MANOVA degree of contact effect was not highly significant, however, and was not supported by later repeated measure ANOVA across time periods on each of the three dependent variables. The ANOVA results are presented in Table 12. A degree of contact effect did not occur on any variable. The repeated measures ANOVA supported the

Table 11

2 X 3 MANOVA Results at Three Time Periods

(Manual X Degree of Therapist Contact)

Posttreatment MANOVA

Manual Effect	1 D.F.	F (3, 67) = 7.12 ****
Degree of Contact Effect	2 D.F.	F (6, 134) = 2.62 **
Interaction	2 D.F.	F (6, 134) = .46

3-Month Follow-up MANOVA

Manual Effect	1 D.F.	F (3, 63) = 9.65 ****
Degree of Contact Effect	2 D.F.	F (6, 126) = .92
Interaction	2 D.F.	F (6, 126) = 1.34

6-Month Follow-up MANOVA

Manual Effect	1 D.F.	F (3, 63) = 3.21 **
Degree of Contact Effect	2 D.F.	F (6, 126) = 1.80 *
Interaction	2 D.F.	F (6, 126) = 1.22

* $p < .10$

** $p < .05$

*** $p < .01$

**** $p < .001$

Table 12

Repeated Measures ANOVA on Pounds Lost, WRI, and RELFATCH for a 2 X 3 Design

		Dependent Variables					
		Pounds Lost		WRI		RELFATCH	
Source	D.F.	MS	F	MS	F	MS	F
Mean	1	11872.39	48.46****	103206.96	60.05****	152509.50	120.21****
Manual	1	3615.58	14.76****	22063.45	12.84****	454.15	.36
Degree	2	190.83	.78	2626.48	1.53	1576.88	1.24
Manual X Degree	2	158.37	.53	1240.59	.72	1917.31	1.51
Error	65	245.01		1718.57		1268.69	
Time	2	7.13	.45	54.91	.30	2771.22	31.16****
Time X Manual	2	45.93	2.89	791.63	4.29**	215.94	2.43
Time X Degree	4	49.32	3.11**	618.08	3.35**	33.23	.37
Time X Manual X Degree	4	26.68	1.68	293.72	1.59	76.43	.86
Error	130	15.88		184.45		88.94	

* $p < .05$ *** $p < .01$

** $p < .025$ **** $p < .001$

significant MANOVA manual effect on weight change only, pounds lost - F (1) = 14.76, $p < .001$, weight reduction index - F (1) = 12.84, $p < .001$, Fat loss was significant over time, F (2) = 31.16, $p < .001$, but was unrelated to either manual condition or to degree of contact condition. Thus the behavioral manual produced significantly more weight but not fat loss than the alternate manual. Degree of contact did not significantly effect either weight or fat loss.

No significant interactions occurred in the MANOVA analyses but two occurred in the repeated measures ANOVA analyses. A time X degree interaction for pounds lost and weight reduction index, F (4) = 3.11, $p < .025$, F (4) = 3.35, $p < .025$, indicated that minimal contact conditions experienced continued weight loss, therapist-administered conditions experienced regain, and self-administered conditions maintained their weight losses from posttreatment to 6-month follow-up. A time X manual interaction for weight reduction index, F (2) = 4.29, $p < .025$, indicated continued loss followed by partial regain in the behavioral manual condition and regain followed by partial reloss in the alternate manual condition. Weights at 6-month follow-up were just below posttreatment weight for both manual conditions.

Cost-effectiveness was examined separately using a 2 X 3 repeated measures ANOVA of the cost-effectiveness indexes for the six groups. The results are presented in Table 13. A significant manual effect occurred, F (1) = 4.68, $p < .05$, indicating that the behavioral manual was more cost-effective than the alternate manual. A significant degree of contact effect, F (2) = 5.43, $p < .01$, showed that lesser degrees of contact were more cost-effective. A manual X degree inter-

Table 13

Cost-Effectiveness Repeated Measures ANOVA for 2 X 3 Design

(Manual X Degree of Therapist Contact)

	Cost-Effectiveness Index		
Source	D.F.	MS	F
Mean	1	71.85	16.07****
Manual	1	20.91	4.68*
Degree	2	24.31	5.43***
Manual X Degree	2	14.31	3.20*
Error	65	4.47	
Time	2	.59	.51
Time X Manual	2	2.71	2.34
Time X Degree	4	.97	.83
Time X Manual X Degree	4	2.70	2.33
Error	130	1.16	

* $p < .05$

** $p < .025$

*** $p < .01$

**** $p < .001$

action, F (2) = 3.20, $p < .05$, also occurred. While no contact greatly increased cost-effectiveness in the behavioral manual condition, minimal contact produced best efficiency in the alternate manual condition with decreased efficiency under both high contact or no contact conditions.

Group Versus Individual Treatment Comparisons

The secondary question in this study concerned the comparative effectiveness and cost-effectiveness of group and individual treatment formats in the use of self-help weight reduction manuals. Therapist-administered treatment under group and individual contact conditions were compared. The minimal contact and self-administered conditions involved in previous analyses were not included in these analyses. This resulted in a 2 X 2 design (manual X group-individual contact).

MANOVA were executed at posttreatment, 3-month, and 6-month follow-ups with pounds lost, weight reduction index, and relative fat change index as dependent variables. The results are shown in Table 14. A significant manual effect occurred at all three time periods, F (3, 45) = 6.36, $p < .001$, F (3, 45) = 3.91, $p < .01$, F (3, 45) = 4.61, $p < .01$. The stepdown F statistics for these manual effects indicated that they were exerted on weight change data. The effects on fat change data neared significance. These statistics are presented in Appendix H. Kind of contact (group versus individual), however, did not have a significant effect on either weight or fat loss.

These results were supported by repeated measures ANOVA across time periods on each of the three dependent variables. The results are presented in Table 15. Significant manual effects on each dependent

Table 14

2 X 2 MANOVA Results at Three Time Periods

(Manual X Group-Individual Contact)

Posttreatment MANOVA		
Manual Effect	1 D.F.	F (3, 45) = 6.36 ****
Kind of Contact Effect	1 D.F.	F (3, 45) = .34
Interaction	1 D.F.	F (3, 45) = 1.34
3-Month Follow-up MANOVA		
Manual Effect	1 D.F.	F (3, 45) = 3.91 ***
Kind of Contact Effect	1 D.F.	F (3, 45) = 2.49 *
Interaction	1 D.F.	F (3, 45) = .69
6-Month Follow-up MANOVA		
Manual Effect	1 D.F.	F (3, 45) = 4.61 ***
Kind of Contact Effect	1 D.F.	F (3, 45) = .82
Interaction	1 D.F.	F (3, 45) = .28

* $p < .10$

** $p < .05$

*** $p < .01$

**** $p < .001$

Table 15

Repeated Measures ANOVA on Pounds Lost, WRI, and RELFATCH for a 2 X 2 Design

		Dependent Variables					
		Pounds Lost		WRI		RELFATCH	
Source	D.F.	MS	F	MS	F	MS	F
Mean	1	12576.45	73.60****	86349.06	77.59****	86647.63	81.60****
Manual	1	2352.67	13.77****	15723.87	14.13****	8216.03	7.77***
Kind of Contact	1	38.91	.23	3.70	.00	575.82	.54
Manual X Kind	1	138.71	.81	987.18	.89	.00	.00
Error	47	170.88		1112.84		1061.80	
Time	2	30.10	1.80	459.39	2.86	1399.78	8.23****
Time X Manual	2	4.73	.28	47.39	.30	187.99	1.11
Time X Kind	2	15.25	.91	91.98	.57	81.15	.48
Time X Manual X Kind	2	13.79	.83	86.32	.54	162.10	.96
Error	94	16.69		160.52		169.04	

* $p < .05$ *** $p < .01$

** $p < .025$ **** $p < .001$

variable occurred, F (1) = 13.77, $p < .001$, F (1) = 14.13, $p < .001$, F (1) = 7.77, $p < .01$. Kind of contact did not have a significant effect on either weight or fat change. Fat loss increased significantly over time, F (2) = 8.23, $p < .001$, but was not related to manual condition or to kind of therapist contact. No significant interactions occurred in either MANOVA or repeated measures ANOVA analyses.

Cost-effectiveness was examined separately with a 2 X 2 repeated measures ANOVA in order to determine whether group treatment by a therapist was more efficient than individual treatment by a therapist. The results are presented in Table 16. They indicated a significant manual effect, F (1) = 5.97, $p < .025$, and a significant kind of contact effect, F (1) = 10.72, $p < .01$. Thus the behavioral manual was more efficient than the alternate manual and treatment in a group format was more efficient than treatment in an individual format. No significant interactions occurred.

Program Compliance and Treatment Outcome

Various program compliance measures were correlated with the three treatment outcome measures at each assessment period. These were computed separately for each manual. The results are presented in Table 17. The compliance measures used were behavior score, activity score (behavioral manual only), calorie score (behavioral manual only), numbers of weeks the data for each of these measures were recorded, and therapist ratings of subject activity levels at 3-month and 6-month follow-up.

The first six measures correlated highly with weight change measures in the behavioral conditions at posttreatment. Only the

Table 16

Cost-Effectiveness Repeated Measures ANOVA for 2 X 2 Design

	Cost-Effectiveness Index		
Source	D.F.	MS	F
Mean	1	3.80	14.89****
Manual	1	1.53	5.97**
Kind of Contact	1	2.74	10.72***
Manual X Kind	1	.01	.04
Error	47	.26	
Time	2	.17	1.01
Time X Manual	2	.14	.81
Time X Kind	2	.25	1.48
Time X Manual X Kind	2	.18	1.05
Error	94	.17	

* $p < .05$

** $p < .025$

*** $p < .01$

**** $p < .001$

Table 17

Correlations of Program Compliance Measures with Treatment Outcome[a]

	Pounds Lost			WRI			RELFATCH		
Behavioral Manual	Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU
Behavior Score	-.41**	-.29*	-.25	.33*	.21	.17	-.00	-.00	.26
Weeks of Behavior Score	-.42**	-.28*	-.25	.40**	.24	.21	.08	.08	.34
Activity Score	-.54***	-.46***	-.46***	.49***	.37**	.37**	.22	.25	.43**
Weeks of Activity Score	-.42**	-.31*	-.31*	.41**	.28*	.25	.11	.13	.42**
Calorie Score	.38**	.28*	.23	-.15	-.06	-.13	.14	.19	.29*
Weeks of Calorie Score	-.36**	-.22	-.26	.33*	.16	.20	.08	.07	.25
Activity Rating - 3 Mo.	--	-.45***	-.38**	--	.58***	.51***	--	.71***	.65***
Activity Rating - 6 Mo.	--	--	-.49***	--	--	.47***	--	--	.68***
Alternate Manual									
Behavior Score	-.34*	-.49***	-.51***	.23	.49***	.48***	.09	.25	.15
Weeks of Behavior Score	-.37**	-.57***	-.65***	.26	.58***	.58***	.18	.37**	.25
Activity Rating - 3 Mo.	--	-.45***	-.44**	--	.54***	.49***	--	.77***	.61***
Activity Rating - 6 Mo.	--	--	-.48***	--	--	.41***	--	--	.47***

[a](two-tailed tests) * $p < .05$ ** $p < .01$ *** $p < .001$

activity score, however, was strongly related to weight loss at 6-month follow-up, r (45) = -.46, $p < .001$ for pounds lost, r (45) = .37, $p < .01$ for weight reduction index. Significant correlations with the fat change index followed a different pattern. They were not significant at posttreatment or 3-month follow-up, but became so by 6-month follow-up. The activity score correlation, r (45) = .43, $p < .01$, and the calorie score correlation, r (45) = .29, $p < .05$, were significant at 6-month follow-up but the behavior score correlation was not. Thus the activity score was the only compliance measure consistently related to both weight and fat change. The therapist subjective ratings of subject activity levels supports this. As Table 17 indicates, these ratings were highly related to both weight and fat change. Activity therefore appeared to be an important factor related to longer term weight and fat loss.

With the alternate treatment manual, behavior scores were not significantly correlated with weight loss at posttreatment but were at 6-month follow-up. The behavior scores were not related to fat change. Although activity and calorie scores were not obtained for this manual condition, therapist subjective ratings of subject activity levels were made. These were significantly related to both weight and fat change, again indicating the importance of activity in obesity reduction.

Factors Correlating With Positive Outcome

A final purpose of the present research concerned identification of factors correlating with treatment success. A series of correlations between several possible factors and weight and fat treatment outcome

variables at the three assessment periods were made. These were obtained for all eight groups combined and for each manual condition separately. The correlations are shown in Table 18. Loss at Week 5 of the program was the only variable which correlated with positive outcome for all dependent variables at all time periods. The more weight a subject lost by Week 5, the more he was likely to lose at later points. When the manuals were considered separately, the relationship to both weight and fat change was significant for the alternate manual and was significant only for weight change for the behavioral manual. A significant correlation with weight change but not fat change was found for the spouse in program variable. Subjects in all groups lost significantly more weight if their spouses also participated as subjects in the program. No other possible factors showed consistently strong relationships to weight loss regardless of whether the manuals were considered separately or together. There was a tendency for males to lose more weight initially, but correlations had disappeared by 6-month follow-up.

Significant correlations with fat change were evident for several additional variables. Table 18 indicates that across all subjects, those who were younger, had shorter histories of obesity, weighed less initially, and had a lower pretreatment percentage of fat lost relatively more fat as gauged by the relative fat change index. All were significant when only alternate manual condition subjects were considered. They were consistently found for only initial weight and fat measures in the behavioral condition. A final correlation between sex and fat change was found in the behavioral manual condition. Males

Table 18

Correlations of Various Factors with Treatment Outcome[a]

Across Eight Groups	Pounds Lost			WRI			RELFATCH		
	Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU
Age	-.06	.01	.04	-.05	-.10	-.11	-.35***	-.42***	-.35***
Sex	.27**	.24**	.14	-.17**	-.17**	-.06	-.21*	.20*	-.07
Age of Obesity Onset	-.06	.00	-.03	.05	-.02	.06	-.04	-.11	-.06
Duration of Obesity	-.04	-.01	.04	-.07	-.08	-.15	-.33***	-.35***	-.32***
Initial Pounds Overweight	-.08	-.13	-.11	-.26***	-.13	-.13	-.42***	-.48***	-.48***
Initial Percent Fat	.13	.10	.07	-.27**	-.20*	-.14	-.59***	-.59***	-.44***
Pretreatment Gain (1 Mo)	.02	-.06	-.09	-.02	.07	.15	-.07	.02	.02
Anxiety Score - Pre	.08	.10	.06	-.05	-.06	-.04	.03	-.05	-.01
Anxiety Score - Change	-.14	-.13	-.13	.10	.10	.09	.00	.02	.10
Loss at Week 5	.89***	.81***	.67***	-.70***	-.74***	-.57***	-.32**	-.47***	-.46***
In Program with Spouse, Friend, or Alone	.41***	.40***	.39***	-.32***	-.33***	-.34***	-.07	-.18	-.22*

(continued on next page)

Table 18 (continued)

Correlations of Various Factors with Treatment Outcome

	Pounds Lost			WRI			RELFATCH		
Behavioral Manual Only	Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU
Age	-.09	-.08	-.12	-.01	-.06	.08	-.26	-.39**	-.14
Sex	.33**	.20	.10	-.30*	-.18	-.06	-.46***	-.41**	-.26
Age Onset	-.24	-.12	-.16	.23	.07	.20	.03	-.04	.13
Duration	.06	-.01	-.04	-.16	-.08	-.05	-.27*	-.34*	-.22
Initial Pounds Over	-.12	-.13	-.16	-.25	-.20	-.10	-.40**	-.50***	-.49***
Initial Percent Fat	.14	.05	.01	-.33*	-.23	-.08	-.69***	-.67***	-.44***
Pretreatment Gain	.07	-.04	-.06	-.04	.04	.14	-.13	-.06	-.08
Anxiety Score - Pre	.08	-.14	-.11	.08	.21	.14	.10	.07	.16
Anxiety Score - Change	-.17	-.16	-.14	.14	.10	.07	.05	.04	.22
Loss at Week 5	.87***	.80***	.56**	-.62***	-.74***	-.44*	-.25	-.36	-.25

(continued on next page)

Table 18 (continued)

Correlations of Various Factors with Treatment Outcome

	Pounds Lost			WRI			RELFATCH		
Alternate Manual Only	Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU	Post	3-mo FU	6-mo FU
Age	-.10	.05	.21	-.05	-.11	-.30*	-.43**	-.46***	-.49***
Sex	.12	.31*	.18	.08	-.11	-.01	.12	.10	.12
Age Onset	.24	.17	.15	-.19	-.13	-.10	-.13	-.20	-.21
Duration	-.32*	.09	.12	.10	-.01	-.26	-.39**	-.36**	-.39**
Initial Pounds Over	.14	-.06	.07	-.42**	-.12	-.25	-.46***	-.53***	-.54***
Initial Percent Fat	.14	.15	.22	-.18	-.10	-.23	-.46***	-.45***	-.49***
Pretreatment Gain	-.02	-.07	-.14	-.03	.09	.14	.02	.01	.13
Anxiety Score - Pre	.24	.28*	.14	-.12	-.27	-.12	-.01	-.12	-.08
Anxiety Score - Change	-.12	-.13	-.16	.05	.14	.13	-.07	-.01	-.01
Loss at Week 5	.82***	.73***	.64***	-.58**	-.60***	-.48**	-.17	-.44*	-.41*

[a](two-tailed tests) * $p < .05$ ** $p < .01$ *** $p < .001$

lost relatively more fat at the first two assessment periods but this relationship had disappeared by 6-month follow-up. The same had occurred for the weight measures as reported above.

The raw individual fat and weight data upon which the analyses were based is presented in Appendix I.

DISCUSSION

The present investigation provides strong support for the use of self-help behavioral manuals in weight reduction and thereby supports Hypothesis 1. All behavioral groups had lost a mean of 11 pounds or more by 6-month follow-up while all alternate treatment groups had lost a mean of 9 pounds or less. The ranges were 11 to 14 pounds and 0 to 9 pounds respectively. The behavioral groups' losses compare favorably to those in 21 self-control behavioral studies listed by Jeffery et al. (1978). The losses were greater than 62 percent of those listed by them. They were also maintained for at least a one-half year period whereas many of Jeffery et al.'s (1978) were posttreatment losses. The manual's great superiority in producing weight loss resulted in heightened cost-effectiveness as well. It did not, however, produce significant fat loss. While the statistical significance of the weight losses is noteworthy, clinical significance can be questioned. The losses, however, are noteable when the subject population is considered. It met Glasgow and Rosen's (1978) demand for clinically relevant subjects in that subjects were generally chronically overweight people. They had been obese for considerable lengths of time, had failed to lose and keep weight off repeatedly, and were considered to be recalcitrant to treatment. The losses are also noteable in that they were maintained for at least 6 months in most cases. This was in contradiction of trends reported by subjects of 5 to 10-pound yearly gains.

Another important aspect of the behavioral program was the low 2 percent dropout rate during active treatment. Stunkard (1975) reported a 47 percent dropout rate within 1 year and a 70 percent rate

by 2 years in the commercially available TOPS program. It also compares favorably to 7 to 50 percent dropout rates reported in various behavioral studies (Kingsley & Wilson, 1977; Ashby & Wilson, 1977; Jeffery et al., 1978; Loro et al., 1979; Marston et al., 1977). This is noteworthy as one-half of the subjects used the behavioral manual with minimal or no therapist contact. The alternate manual also had a low 6 percent rate. This suggests that the $50 attendance deposit rather than the behavioral manual per se may have been decreasing attrition. Hagen et al. (1978) had earlier demonstrated the usefulness of attendance deposits.

Contrary to Hypothesis 2, behavioral groups having some degree of therapist contact did not lose significantly more weight than subjects who self-administered the manual. This was unexpected as several authors have claimed that behavioral manuals require at least minimal guidance by a therapist (Fernan, 1973; Bellack et al., 1974).

Degree of therapist contact had no significant effect when both manuals were included in the analyses. Therapist-administered treatment (high contact) was as effective in producing weight loss as self-administered treatment (no contact). By 6-month follow-up, however, therapist-administered groups had begun to regain. Minimal contact groups were continuing to lose (behavioral loss - 2 lbs.; alternate treatment loss - 6 lbs.) and self-administered groups were maintaining their losses. These differential changes over follow-up lend support to Carter et al.'s (1977) claim that therapists may harm their clients by seeing them too much. These are trends, however, and the groups' effectiveness did not differ significantly at 6-month follow-up. Cost-

effectiveness, however, was significantly higher for lesser degrees of contact. The continued losses in minimal contact groups suggests that minimal therapist support can help in teaching subjects self-reliance eventhough the behavioral manual could be used very effectively without therapist guidance. Within group comparisons had shown that subjects in the self-administered condition were the only behavioral subjects to lose significant amounts of weight during follow-up.

These results contradict Brownell et al. (1978) who questioned even minimal contact formats and Jeffery and Wing (1979) who advocated intense, three-times-a-week contact rather than lessened degrees of contact. Brownell et al. (1978) had cautioned against self-help "do-it-yourself" manuals. The results indicate that self-help manuals can be very effective even when used without therapist guidance. Caution, however, cannot be disregarded. The present program was not the usual "over-the-counter" program. It was offered under university auspices and thus may have been perceived as more effective than the usual programs. Only through further use and replication can the manual's effectiveness under minimal or no contact conditions be demonstrated and caution then be lessened. Such replications are warranted because of the potential for greatly decreased cost of weight reduction programs.

The findings concerning group versus individual treatment under therapist-administered conditions supports trends favoring group treatment in the sparse literature on this topic. They paralleled those of Kingsley and Wilson (1977). Eventhough treatments did not differ significantly at 6-month follow-up, both studies indicated small continued losses in behavioral group conditions and regains in behavioral individ-

ual conditions. This suggests that group treatment may be more effective than individual treatment in producing and increasing weight loss after active treatment ends. Later follow-up may show significant differences between conditions. Kingsley and Wilson's (1977) social pressure group continued significant losses as well. The present study's alternate manual group condition did not do so but it only encouraged and did not stress social pressure. The effectiveness of group treatment is also supported by low attrition rates. No subjects dropped out of group conditions but one using the behavioral manual and two using the alternate manual individually did. This may indicate that groups with seven members may be sufficiently small to develop group support which can become a potent variable in promoting attendance, weight loss, and maintenance of that loss. While group contact was not significantly more effective than individual contact at 6-month follow-up, it was more cost-effective, again indicating the value of lesser amounts of professional time investment.

The present investigation is one of the few completed to date to include both weight and fat measurements. This was strongly recommended by LeBow (1977 a). In the present study, fat loss was not related to either manual condition or degree of therapist contact. This did not appear to result from measurement errors as reliabilities for the four-site measures were high. They compared favorably to those of Loro et al. (1979). Mahoney et al. (1977) had found a similar lack of significant fat losses for the degree of contact variable as well as for weight loss. Their differences in fat loss, however, were approaching significance (minimal better than maximal contact) while those in the present study

were not when manuals were considered together. Alternate manual minimal contact subjects lost more fat than those having in-person contact. Such a discrepancy between weight and fat loss is possible because as LeBow (1977 a) reports, correlations between weight and measured fat are not high (.56 for men and .64 for women).

While fat loss was not related to manual condition nor to degree of contact, it was related to certain characteristics of the subjects. Subjects who were younger, weighed less initially, had lower percentages of fat initially, and had shorter histories of obesity lost greater amounts of fat as assessed by the relative fat change index. This would make it appear that treatment is not necessary to produce fat loss. This is untrue. Fat loss was significantly related to increased activity level, a behavior that was highly recommended in both treatment approaches used in the present study. Also, different degrees of therapist contact did not call for different amounts of activity. This likely accounts for the lack of fat loss differences between the two manuals and among the different kinds of therapist contact. The present findings concerning fat loss and activity do give some direction to the development of programs that can accomplish both weight and fat loss. Also since different sets of variables are related to weight and fat loss, a strong argument for the measurement of both in studies exists. LeBow's (1977 a) question, "Can lighter become thinner?" epitomizes a crucial issue in obesity treatment today.

The lack of identification of factors correlating with treatment effectiveness is characteristic of previous research (Mahoney et al., 1977). Activity increase reliably correlated with both weight and fat

loss across time. Loss at Week 5 of the program was an additional factor which correlated only with weight loss. Jeffery et al. (1979) had also found that early weight loss was related to later treatment success. These two correlations suggest that those doing well initially may also be those people who are able to comply with program activity increases. This lack of identification of other factors related to treatment success makes the search for such factors important. Only through identification of variables related to successful treatment can subjects be matched to the appropriate treatment program.

Prior to a discussion of possible reasons for the superiority of the behavioral manual in the present study, some of the difficulties with the present investigation must be noted. The groups differed significantly in age. As age was not related to later weight loss, however, the groups were considered to be non-biased by this variable. Age was related to fat loss. As no treatment effects for fat loss were observed, it was considered to be a non-specific, non-biasing factor operating on fat loss. Another difficulty could be therapist bias as the therapists were not blind to the purposes of the study. If biases existed, however, they would likely have favored increased degrees of contact as the therapists were trained clinicians. The absence of such an effect argues for increased effectiveness of lesser degrees of therapist contact.

The strong effectiveness of the behavioral manual in the present study must be qualified by the great variability in weight loss exhibited by subjects across treatment conditions. Behavioral group standard deviations were high (between 6 and 8 lbs. at 6-month follow-up) and

subjects varied between a 38-pound loss and a 13-pound gain. Such variability in effectiveness is typical of behavioral approaches and is a major problem (Abramson, 1977; Bellack, 1977; Glasgow & Rosen, 1978; Hall & Hall, 1974; Jeffery et al., 1979; Stunkard & Mahoney, 1976). It again reinforces the necessity for further research in program development and in the identification of variables related to treatment success so that consistent effects can be obtained (Glasgow & Rosen, 1977; Jeffery et al., 1979).

Another difficulty concerns the lack of continued significant weight loss during follow-up. Others report similar difficulties (Jeffery et al., 1979; Stalonas et al., 1978; Stunkard & Penick, 1978). Booster sessions have not been found to be effective (Ashby & Wilson, 1977). Loro et al. (1979) suggest self-reliance but the present study found that although minimal and no contact conditions produced continued losses, the amounts were not that high. Kingsley and Wilson (1977) and the present investigation advocated group approaches. Though trends existed towards continued losses, they were not significant. Brownell et al. (1978) and Pearce (1980) have produced some of the highest follow-up losses by including spouses in programs. Over 6 to 12 months, however, the 10 and 14 pound losses are not that high. The present study supported this approach as inclusion of a spouse in the program positively affected weight loss. The latter three approaches offer promise in promoting continued loss once a formal treatment phase ends and certainly require further investigation. Additionally, they offer practical avenues for decreasing program cost and thereby increasing cost-effectiveness.

The lack of continued weight loss during follow-up may well be remedied by the three approaches just discussed. Wooley, Wooley, and Dryenforth (1979) offer a note of caution. They claim that the observed deceleration in weight loss over time may not be due only to inadequacies in programs. Rather, they describe metabolic changes in response to dieting which may operate to slow weight loss and promote regain. They also claim that these changes become more pronounced with each dieting attempt and may account for the increased difficulty in losing weight experienced by people who have repeatedly tried to lose weight. Therapists should be aware of such compensatory mechanisms as should researchers.

The most outstanding treatment effect in the present investigation was the superior effectiveness of the behavioral manual. This manual has been used, though not as successfully, in previous studies (Hagen, 1974; Fernan, 1973; Hall et al., 1974; Hagen et al., 1976; Tobias & MacDonald, 1977). Possibly the activity component was the added effective component in the present study. It was the only measure of compliance related to both weight and fat loss one-half year after active treatment ended. This strongly argues for the inclusion of such a component in weight reduction programs as recommended by LeBow and Perry (1977), Harris and Hallbauer (1973), Gwinup (1975), Stalonas et al. (1979), and Dahlkoetter et al. (1979). It would appear as well that subjects must not only increase activity. The sooner that they can do this and also comply with other program requirements, the more likely that they will experience both initial and later success in weight loss. Another factor adding to the manual's effectiveness may

possibly have been the manual's stress on the subject's responsibility for making difficult behavioral changes in small but liveable ways that could be worked into one's lifestyle. This would support Loro et al.'s (1979) approach which said that well-reasoned, common-sense procedures could be very effective without being over elaborate or burdensome for either client or therapist. Subjects in the present study often reported surprise when they discovered that weight loss could be achieved without starvation and suffering. Self-control was developed in ways that did not require an aversive continual exercise of will power.

The cost-effectiveness findings regarding the behavioral manual and the various treatment formats has important implications for weight reduction programs. The higher cost-effectiveness of the behavioral manual and of lesser degrees or no therapist contact in the use of it indicates that a treatment is now potentially available which meets Wilson's (1978) criteria. It is easy to administer, has a relatively short treatment phase, and can be disseminated widely. Further, subjects forced to become self-reliant through minimal therapist support showed trends of continuing weight loss after active treatment ended. This would heighten cost-effectiveness with time passage. The potential for therapeutic efficacy is remarkable. With the behavioral manual, a 15-minute investment of therapist time during treatment resulted in a maintained 11-pound loss 6 months later. A 60-minute investment provided no effectiveness improvement and an increase to a 300-minute investment in the individual treatment format resulted in only one more additional lost pound. This certainly would not be a worthwhile return for the added time investment.

It was stated in the introductory section of this dissertation, that the behavioral approach is accepted as a viable treatment modality for obesity. This confidence was based on a growing body of controlled and increasingly sophisticated research. The present investigation supports this and provides further evidence that it may be applied effectively via self-help treatment manuals. The results indicated that the behavioral manual could be applied under varying degrees of therapeutic contact without significant changes in effectiveness but with accompanying increases in cost-effectiveness when lesser amounts of professional time are involved. These findings should make all therapists involved in the treatment of obesity seriously question not only the effectiveness of their programs but, perhaps more importantly, the efficiency of their programs as well. Alternatives to the standard, intensive individual contact with a professional therapist treatment format must be seriously considered.

LITERATURE REVIEW

Degree of Therapist Contact

The major purpose of the present research was the examination of the effect of varying degrees of therapist guidance on the effectiveness and the efficiency of a behavioral weight reduction program delivered via a self-help manual. According to Mahoney et al. (1977), the role of the therapist in weight reduction is a major research issue. Maximal therapist contact and control of contingencies in weight reduction appears to be effective (Abramson, 1977). Little permanent weight change results, however, once the therapist and his contingencies are withdrawn (Abramson, 1977). Hanson, Borden, Hall, and Hall (1976) claim that this occurs because patients become dependent on the therapist and/or other group members during regular contact. When treatment is terminated and support is lost, treatment techniques are no longer applied. Hall (1972) says that methods are needed which are effective when the therapist is absent. According to Abramson (1973, 1977), self-control approaches in which the patient rather than the experimenter controls the contingencies appear to be one of the best ways to achieve this. Loro, Fisher, and Levenkron (1979) support this in their study. Of three behavioral treatment groups, only a group which allowed the subjects to be as self-directive and as realistic in setting goals as possible lost weight throughout follow-up. Self-help manuals which are being investigated in the present research are a form of self-control is used with limited or no therapist guidance. However, therapist contact at least on a minimal basis appears to be necessary in their effective application (Glasgow

& Rosen, 1978).

The importance of therapist contact in treatment was demonstrated by Carter, Rice, and DeJulio (1977). These investigators used Hanson et al.'s (1976) argument that abrupt termination is disadvantageous to a patient. They examined the effects of fading out therapist contact over a 10-week treatment period. Forty-eight subjects were treated in groups of eight and did not use a treatment manual. At posttreatment, the group in which therapist contact was faded out during treatment and the group in which the therapist met weekly with the group lost significantly more weight than subjects who met weekly without any therapist contact. The fade group had lost the most. At a 6-month follow-up, however, only the fade-out group subjects had maintained and even slightly increased their weight losses. No-fade group subjects had regained most of their lost weight. Carter et al. (1977) concluded that the therapist has an important role to play in weight reduction. They suggested that a therapist may possibly hurt his clients by seeing them too much even though some therapist contact is necessary.

Hagen (1974) was one of the first to question whether therapists were necessary at all in weight reduction. He examined whether a program of demonstrated effectiveness using therapist contact could be transferred into a written manual form and be used with minimal or no therapist contact. He used a program outlined by Wollersheim (1970). In a classic well-controlled study, she had found that her learning-based treatment program produced significantly more weight loss over a 10-week period than either social-pressure or insight-oriented therapy.

Hagen (1974) adapted her program, which focuses on eating behavior, into a ten-lesson, self-help written manual. He formed three treatment groups and a no-treatment waiting list control group using 89 coeds between the ages of 17 and 22 years. One treatment condition was a manual only group. A lesson was mailed weekly to each subject. She returned her homework to the therapist by mail. It was corrected and returned to her with the next lesson. In a second manual plus contact condition, lesson exchange occurred at weekly, hour-long group meetings. These were patterned after the first 60 minutes of Wollersheim's (1970) focal therapy procedure and included weigh ins, use of charts and social pressures, and discussion of principles and techniques in weight reduction. The third treatment condition was a no manual, contact only group. Weekly 90-minute group sessions were held duplicating the preceding condition except that all communication was verbal and relaxation was added. At posttreatment, all treatment groups had lost significantly more weight than the control group. Losses ranged from 12 to 15 pounds in the treatment groups. The manual plus contact group had lost the greatest amount. A 4-week follow-up showed little further change. Since the manual only and manual plus contact groups did equally well, Hagen (1974) concluded that the group experience with the therapist produced no great advantage over the simple written manual. He, therefore, said that personal contact is not a necessity and that a much cheaper manual could be substituted without any loss in treatment effectiveness.

Fernan (1973) in an unpublished Master's thesis questioned this conclusion. He pointed out that Hagen's manual only group did indeed

have personal contact in the form of weekly mailings and marking and return of homework by the therapist. Using Glasgow and Rosen's (1978) criteria, such contact would be classed as minimal rather than no contact as Hagen called it. Fernan (1973) partially replicated Hagen's study. He used a manual only group in which all interpersonal contact between client and therapist was virtually eliminated. A second group which he called manual with contact, exactly replicated Hagen's manual only condition. Subjects received weekly lessons by mail, mailed in their homework assignments, and received comments in writing from the therapist. When necessary, the therapist also made telephone calls to ensure the return of homework. Using the same mildly overweight female college population as Hagen (1974), Fernan (1973) now found that the manual only condition with no therapist contact did worse than the no-treatment control condition. The manual with contact group did the same as the manual only group in Hagen's study. Fernan (1973) concluded that therapist contact is likely of critical importance even if it is not on a face-to-face basis.

Neither Hagen's (1974) nor Fernan's (1973) studies allow any conclusions to be drawn concerning the effectiveness of various degrees of therapist contact. Fernan's (1973) study indicated that minimal therapist contact was better than none. Any conclusion regarding the value of face-to-face versus therapist contact by mail could not be made, however, because of a group confound. Hagen's face-to-face contact was made in a group setting while the therapist contact by mail was on an individual basis. Hagen (1974) would seem unjustified in his conclusion that "the importance traditionally assigned to face-to-

face personal-contact aspect of treatment, at least for obesity, may have been overrated" (p. 233). Hagen's (1974) study also had other difficulties. He did not include a placebo or alternate treatment condition to control for expectancy effects. The effectiveness of his treatment is therefore difficult to ascertain. His follow-up was also short and his subjects were not typical of the usual obese clinical population. His study, though interesting, left some very real questions concerning optimal degrees of therapist contact and generalizability of his results to clinical populations.

Although they did not use a treatment manual, Bellack, Schwartz, and Rozensky (1974) executed a study which provided some answers. They were specifically investigating the amount of therapist contact necessary to maintain the use of self-control. Their subjects were treated individually, eliminating the group confound in Hagen's (1974) study. Subjects were treated for 8 weeks. They were provided with calorie charts, daily intake guides, and nine guidelines which indicated how, when, and where eating could occur. All subjects were required to self-monitor food intake daily. Under the high therapist contact condition, subjects mailed in monitoring records daily and met weekly with the therapist. In the mail contact condition, subjects did not meet with the therapist but did receive a weekly packet of envelopes for returning monitoring records and a short mimeographed note reminding them of various program aspects. The third, no-contact group received the same materials as the first two groups but were told that no external contact was necessary to lose weight. They had no therapist contact during 8 weeks of active treatment. At posttreatment,

both high contact and mail contact groups lost significantly more weight than the no-contact condition. All subjects in the two therapist contact groups had lost weight while not all had in the no-contact group. The low contact group's mean weight loss was more than that of the high contact group's even though they did not differ significantly. Bellack et al. (1974) concluded that some level of external control is necessary to facilitate the use of self-control procedures. Since Bellack et al. (1974) did not include follow-up, the durability of their findings is not known. Also they used university subjects, making generalizations to older and more obese clinical populations difficult.

Later Bellack (1976) investigated self-reinforcement and self-monitoroing in weight reduction and found that daily mail contact did not significantly affect weight loss. Over a 7-week treatment phase, two groups of mildly overweight university students mailed in self-monitoring records daily while two other groups did not. At post-treatment and a 7-week follow-up, daily mail-ins had no significant effect on weight losses. Subjects who self-reinforced as well as self-monitored, however, lost significantly more weight than those who only self-monitored. It must be noted that subjects in the daily mail-in conditions did not receive any communications from the therapist during the 7 weeks. They are thus a no-therapist contact condition. This is consistent with both Glasgow and Rosen (1978) and Carter et al. (1977). If as they say, a minimal amount of therapist contact is necessary, then the mail-in condition should not make a difference as it was a no-contact condition.

Rozensky and Bellack (1976) gave a self-help treatment manual to subjects in another study. They were examining individual differences in self-reinforcement style in self- and therapist-controlled weight reduction programs. This study investigated degree of therapist contact since the self-control condition involved minimal therapist contact and the therapist contact condition involved maximum therapist contact. The subjects were also an older, more overweight, non-university population. All were treated individually for 7 weeks. In the therapist-controlled condition, subjects used the manual, mailed records in daily, reported weigh ins weekly, and experienced a financial contingency for weight loss. In the self-control condition, subjects used the manual and mailed in monitoring records daily. In the minimal contact condition, subjects used the manual alone and were not contacted during the 7 weeks. At posttreatment, the self-control subjects had lost significantly more weight than both therapist-controlled and minimal contact subjects. The latter two groups did not differ significantly from each other. The superiority of the self-control group was maintained at a 7-week follow-up although all had gained back a small amount of weight. This study supports those already discussed which suggested that a minimal amount of therapist contact is better than none. It also lends support to Carter et al.'s (1977) claim that too much therapist contact may be detrimental to weight reduction attempts.

Bellack, Glanz, and Simon (1976) whose main concern was also self-reinforcement style, likewise found minimal contact to be more effective than no therapist contact in the use of a manual. Volunteer

subjects from an unspecified population were assigned to what they called a minimal contact group or to either a self-reward/self-punishment or a self-punishment/self-reward condition for a 6-week treatment period. All were treated individually via a 40-minute audio tape and accompanying manual. The minimal contact group was a no-contact group since subjects were seen by the therapist only at the end of the treatment phase and at a 5-week follow-up. The self-reinforcement groups actually received minimal therapist contact as they were seen at 3 weeks, 6 weeks, and a 5-week follow-up. Overall, self-reinforcement groups lost significantly more weight than the minimal ie. no-contact group. Although degree of therapist contact was confounded by self-reinforcement procedures in the two contact groups, the differences somewhat supported the contention that a minimal amount of therapist contact is necessary in the treatment of obesity. Since no alternate or no-treatment control groups were included, the effectiveness of the program could not be determined. The study cannot be faulted for these omissions, however, as it was not concerned with this issue. The focus was self-reinforcement style and differences were found on this variable. High self-reinforcement subjects in the two self-reinforcement groups lost significantly more weight during treatment and at 5-week and 5-month follow-ups than low reinforcement subjects.

Another study which indirectly assessed degree of therapist contact was done by Balch and Ross (1974). Thirty-four female subjects each used the condensed version of Slim Chance in a Fat World (Stuart & Davis, 1972) and were to attend nine weekly meetings. Balch and Ross (1974) compared weight loss for three groups attending various

proportions of the required meetings. These groups were comprised of those subjects who received full treatment by attending at least 75% of the weekly meetings, those subjects who received partial treatment by attending 2 to 6 sessions, and those who received no treatment through their choice not to participate in the program. Subjects who received full treatment and thus had the most therapist contact lost significantly more weight, mean of 10.63 pounds, than subjects in the other two groups, means of 2.73 and 1.18 pounds. At 6-week follow-up, 13 of 19 subjects who completed the total program showed maintenance or continuation of weight loss, averaging an additional 3.3 pounds. Balch and Ross (1974) paralleled their partial treatment group to Hagen's (1974) manual only group but found different results. Their group did no better than the control group whereas Hagen's group did as well as the contact groups. The groups in the Balch and Ross (1974) study, however, were self-selected. This may account for the differences and makes conclusions regarding the efficacy of manuals without therapist contact impossible.

Lindstrom, Balch, and Reese (1976) later examined therapist contact more directly. Using university students as subjects, they compared a group led by professionals, a group led by trained paraprofessionals, a group led by untrained paraprofessionals, a group treated individually over the telephone, and a no-treatment control group. All treated subjects received the same written behavioral manual as used in the preceding study over a 10-week period. Since no differences were found between in-person groups, they were combined in the analysis. In-person groups lost significantly more weight than the

control group at both posttreatment and 6-week follow-up. The telephone contact group also lost more than the control group at the two time comparisons, but these differences were only approaching significance. There were no significant differences between in-person and telephone contact groups. When percent of obesity lost was used as a dependent variable, both in-person and telephone contact groups lost significantly more weight than the control group. Lindstrom et al. (1976) concluded that live therapist contact may not be a total necessity because in-person groups had only a very small edge over telephone contact groups. They suggested that bibliotherapy and self-control orientation programs may be just as if not more effective than in-person programs. Although this statement is consistent with other research, the study is not a well-controlled examination of the degree of contact variable. Telephone subjects were treated individually while in-person therapist groups were treated in a group creating a group treatment confound. It is important to note that the two studies by Balch and his associates are the first of those already discussed to include an activity component as well as an eating component in their behavioral programs.

Mahoney et al. (1977) completed a study which examined degree of therapist contact. Like Lindstrom et al. (1976), they found that high versus low therapist contact made no difference in weight loss. The group-individual confound in the previous study was absent as treatment was in a group format. Number of meetings was varied to control degree of therapist contact. The program lasted for 6 months followed by a 13-week phase-out of contact. A treatment manual with a problem-solving

orientation was employed. Maximum contact subjects met weekly with the therapist for 26 weeks. Minimal contact subjects met with the therapist every 3 weeks for a total of 10 sessions. A no-treatment control group was included. One-year follow-up results were reported. Combined treatment groups lost an average of 8 pounds while the control group gained an average of 1 1/2 pounds. Maximal and minimal contact subjects lost the same average amount of weight but variability was high among subjects. Mahoney et al. (1977) also measured estimated body fat. Very few studies have done so. They found that relative fat change was higher for the minimal contact group, a difference approaching but not achieving significance. The minimal contact group lost 14 percent fat while the maximal contact group lost 4 percent. Thus the minimal contact group lost an equal amount of weight but more fat than the maximal contact group.

Hanson, Borden, Hall, and Hall (1976) also found high and low therapist contact to be equally effective in producing weight change. They used a programmed weight reduction manual for a 10-week period and treated moderately overweight community subjects in a group format. Subjects were assigned to one of the following conditions: conventional self-management, programmed text with high therapist contact, programed text with low therapist contact, attention placebo, and no-treatment control. The conventional self-management subjects met weekly with therapist and group. They did not have a manual but were verbally given all information contained in it. Under high contact plus manual, subjects met weekly with the therapist and group while in the low contact condition, they met together three times and received the remain-

der of the manual and returned records by mail. The attention placebo group met weekly and learned deep muscle relaxation. At posttreatment, the behavioral groups were significantly superior to placebo and no-treatment controls. The manual plus low contact group was significantly superior to both attention-placebo and manual plus high contact group at a 10-week follow-up but no significant differences among the four treatment groups were found during the one-year follow-up. The manual plus low contact group, however, had continued to show additional weight loss while the other groups were either maintaining or beginning to regain. Hanson et al. (1976) concluded that low therapist contact when used with written manuals was as effective as much higher degrees of contact and that those subjects who applied techniques with lower therapist support fared better during follow-up.

Hall (1972) had earlier investigated type rather than degree of therapist involvement. Using 10 subjects and an individual organism design, subjects used written manuals and were exposed to self-control procedures followed by experimenter-controlled reinforcement or the reverse for a 10-week period. Although not specifically mentioned, a reading of the procedure section indicated that the self-control condition may have involved more attention than the experimenter-controlled condition. Subjects lost more weight under experimenter rather than self-control conditions. Hall (1972) suggested that the failure of the self-control program to produce weight change was possibly due to its short term, to older subjects, or to variations in presented techniques. Two-year follow-up data (Hall, 1973) showed no differential directions of change and found no differences between those who had

taken part in further supervised programs after treatment and those who had not.

Jeffery (1974) also investigated self- and experimenter-controlled differences. Subjects in two groups where they controlled their own financial payoffs for weight loss lost more weight than subjects in two groups where the therapist controlled reinforcement. At 6-month follow-up, self-control subjects had maintained losses while experimenter-controlled subjects had regained at least 50 percent of their lost weight. Jeffery (1974) concluded that self-control subjects likely did better because they relied on themselves rather than on others. Such reasoning is similar to that expressed by both Abramson (1977) and Hanson et al. (1976).

A number of the above studies suggested that minimal amounts of therapist contact when combined with manual use was just as effective in producing continued weight loss as high levels of therapist contact and control. The minimal contact could be made in infrequent face-to-face meetings, or by telephone, or by mail. Several authors have even suggested that high levels may be detrimental. In a case study, Polly, Turner, and Sherman (1976) further demonstrated that weight loss could be achieved with little therapist contact. They used a multi-component manual procedure with a young, bright, university coed. A 26-pound weight loss was achieved over a 9-week period through the use of seven therapist sessions and homework assignments. Time spent weekly with the subject was said to average only 5 minutes per session.

Marston et al. (1977) likewise showed that very little therapist contact could produce losses. They reported on 210 community subjects

who responded to a newspaper story and enrolled in a 13-week correspondence course for weight reduction. The self-control course emphasized both eating and activity change. All contact was by mail. Each week subjects received a lesson packet, homework form, and diary form by mail and then returned the latter two. Therapists answered written questions and commented on forms by return mail. The therapists were not trained professionals although they were supervised by a senior psychologist. Even though 50 percent of the subjects dropped out by the twelfth session, data from remaining subjects was interesting. For those who had completed all 13 lessons and had at least 15 pounds to lose, a mean weight loss of 13.72 pounds was reported. Marston et al. (1977) compared this rate of loss to a 1-pound per week rate which they said was the established rate for live contact weight reduction programs. On this basis, they concluded that therapist contact was not necessary to produce weight loss using a manual. It must be noted that the subjects did have therapist contact of a minimal nature. Further, such a definite statement is unjustified since the study did not include a personal contact group or a no-treatment control group. The high dropout rate also created a biased group, and for those subjects who completed treatment, 6-month follow-up showed a mean regain of 2.10 pounds. An interesting difference was noted regarding amount of treatment. A mean loss of 5.15 pounds was obtained by 60 subjects who returned less than 9 lessons to the therapist. This was considerably less than the 13.72 mean loss of subjects who had completed all 13 lessons.

Tobias and MacDonald (1977) found similar results in a more

controlled study. One-hundred female undergraduates were subjects in a 10-week treatment program. After an initial group meeting, contact was by mail on an individual basis. In a manual group, subjects received Hagen's (1974) subject manual in 10 weekly lessons. They also received communications to which they were required to respond and had to return various records on a weekly basis. In a second condition, no manual was provided but a behavioral contract was signed in which a tangible reward could be earned or lost. Brief reminders concerning treatment rationale and the surrendered reward were sent weekly to the subjects. There were three other groups. These were a self-determination or willpower group, an effort control group where treatment was delayed and subjects tried to lose weight on their own, and a no-treatment control group. Attrition was high with approximately one-third of the subjects dropping out. Excluding dropouts, analyses showed that only the manual group and the contract group had significant pretreatment to posttreatment and pretreatment to 4-week follow-up losses. Both, however, had begun regaining at follow-up. Tobias and MacDonald (1977) concluded that the manual and the behavioral contracting procedures were robust since both produced weight loss in the absence of therapist-client personal interaction. Nevertheless, the subjects had therapist guidance of a minimal nature by mail. The importance of at least some type of therapist was again demonstrated.

Contrary to most of the above studies, Brownell, Heckerman, and Westlake (1978) found that minimal therapist contact with a manual procedure produced less of a loss than a therapist-administered con-

dition. The three treatment gorups which were included were a standard weekly contact condition for 10 weeks followed by six monthly weigh ins, a minimal contact condition which met only six times during the same period, and a waiting list control condition. Therapist-administered subjects lost significantly more weight than either minimal contact or no-treatment subjects (10.25, 4.30, and a gain of 1.8 pounds respectively). A 3-month follow-up showed the therapist-administered group maintained a 10-pound loss while the minimal contact group regained. At a 6-month follow-up, the therapist-administered group was still doing better though no longer significantly so (7.42 versus 2.20 pounds lost). It too, was beginning to regain weight. Brownell et al. (1978) concluded that minimal contact did not produce even temporary weight loss. They challenged the use of "do-it-yourself" treatment manuals for obesity after considering the hazards of unsuccessful dieting.

Further contradictory findings concerning the degree of therapist contact variable were provided by Jeffery and Wing (1979). They investigated frequency of contact in a 6-week program which did not use a written manual. Subjects experiencing contact three times a week lost significantly more weight than subjects attending one weekly group meeting. High contact subjects had a weekly group meeting followed by two more in-person meetings in one group, or two telephone calls in another group. Posttreatment mean losses were 7.73 pounds for personal contact group (3 times weekly), 10.05 pounds for phone contact group (1 in-person, 2 phone calls), and 5.17 pounds for the no-contact group (1 in-person). Jeffery and Wing (1979) concluded that high

degrees of therapist guidance were necessary in early stages of therapy. There are some difficulties with this conclusion. Since follow-up data were not reported, the later effects of intense dependence are not known. If subjects cease applying techniques once therapist support is withdrawn as Hanson et al. (1976) claim, then Jeffery and Wing's (1979) subjects might be expected to regain rapidly during follow-up. Also, the so called "no-contact" group in this study is the standard high contact condition used to assess degree of contact questions in other studies. A question arises as to why it did poorly here while it has generally done well in other studies. Jeffery and Wing's (1979) data do not warrant the conclusions which they drew.

The above studies indicated that the role of the therapist is an important issue in obesity research. Most showed that at least a minimal amount of therapist contact was necessary in weight reduction programs. Brownell et al. (1978) and Jeffery and Wing (1979) suggested that losses were maximized when contact was even more intense. Evidence is not totally clear, however. At this time, the consensus appears to be that the use of self-help manuals requires some form of therapist contact which can be in-person, by mail, or by telephone and can be made by lay or professional therapists as Stuart (1977) notes. The present research investigated the degree of professional therapist contact necessary in the use of a self-help behavioral manual. Particular attention was paid to the group in which the manual was totally self-administered. Such a condition has been relatively ineffective to date. Subjects were treated individually to avoid the group confound present in several of the studies which were reviewed.

Group Versus Individual Treatment

In several studies discussed in the preceding section such as Hagen (1974) and Lindstrom et al. (1976), subjects in some groups were treated individually while others were treated in a group. Such differences made interpretation of therapist effects difficult because group effects could not be separated from therapist effects. In a study of therapist effects, all groups should be treated on either an individual basis or else on a group basis. Only then can effects of variations in degree of therapist contact be seen. Treatment on either an individual or group basis, however, is not only a confound to be eliminated in treatment studies. It is an important issue in itself as both individual and group approaches have been thought to be potent treatment variables in the behavioral approach to weight reduction.

Although they conducted treatment on a group basis, Ferster, Nurnberger, and Levitt were advocating the use of individual approaches as early as 1962. They claimed that functional analyses of individuals were necessary to optimize weight loss though they provided no supportive empirical comparative data. Although Stuart (1977) now advocates a group approach to obesity treatment, his 1967 study effectively used an individual approach with 8 subjects who maintained significant losses at a 1-year follow-up. Other authors such as Mahoney (1974) and Mahoney and Mahoney (1976), have also suggested that individual approaches are necessary to optimize weight loss but little positive or negative systematic research evidence exists.

Horan, Baker, Hoffman, and Shute (1975) evaluated group and

individual counselling under conditions of positive or negative coverants in an 8-week treatment program. The use of positive coverants produced significantly more weight loss than negative coverants, but no significant differences were found between group and individual applications. The group treatment tended to produce somewhat better results, however. Only 45 percent of individually treated subjects lost 1 pound per week while 65 percent of group treated subjects did. Group treatment using positive coverants produced greatest weight losses. No follow-up was included.

Further suggestions that group treatment is superior were made by Ashby (1977) and Hoel (1976). Although Ashby (1977) did not systematically vary group and individual format, all subjects did very well under group treatment. His variable of interest, booster sessions in maintenance, did not produce any differences. He claimed that results greatly supported the superiority of group behavioral self-management programs for obesity. Without an individually treated group, such a conclusion is unwarranted. Hoel (1976) compared individual and group treatment in her study. Individual treatment, group treatment with individual contingencies for reward, and group treatment with group contingencies for reward were compared. All were equally effective in producing weight loss at posttreatment. During the first half of the program, however, subjects in the group situation with individual contingencies lost more weight, more rapidly, and more regularly than subjects in individual treatment. No follow-up was included making long-term effectiveness impossible to ascertain.

Kingsley and Wilson (1977) have executed the only systematic

study which investigated long-term efficacy of individual and group counselling in weight loss. Seventy-eight female subjects were assigned to one of three conditions. In one, subjects received individual behavioral counselling, in a second they received group behavioral counselling based on the Stuart and Davis (1972) program, and in a third they were in a social pressure group situation. Kingsley and Wilson (1977) hypothesized that individual counselling would produce the best weight losses but this did not occur. At posttreatment, the individual and group behavioral conditions had lost more weight than the social pressure group but did not differ significantly themselves. The mean losses in pounds were 12.69 for the individual behavioral condition, 11.50 for the group behavioral condition, and 6.69 for the social pressure group condition. At a 12-month follow-up, individually treated subjects had regained considerable weight while the two group treatments were maintaining losses successfully. Mean losses in pounds at 12-month follow-up were 4.39 for the individual behavioral condition, 12.85 for the group behavioral condition, and 8.98 for the social pressure group condition. Kingsley and Wilson (1977) suggested that the group situation might be more powerful in sustaining commitment and motivation to follow treatment recommendations and strategies because of group cohesiveness and resultant group pressure. They saw this as a crucial ingredient in producing maintenance and continued loss and claimed that once a technique is learned, motivation determines whether subjects will continue to follow the program or not.

Of interest in Kingsley and Wilson's (1977) study, is the

relatively good long-term performance of the social pressure group. According to them, this contradicts the poor performance of Wollersheim's (1970) virtually identical "social pressure" group. The results were really very similar, however, when further follow-up reported by Wollersheim (1977) was considered. Her social pressure group had lost a mean of 5.40 pounds at posttreatment. Follow-up four months later showed a mean loss of 7.22 pounds. Correspondingly, Kingsley and Wilson's (1977) social pressure group had lost 6.69 pounds at posttreatment. This increased to 9.81 pounds at 4-month follow-up. Thus, the social pressure group increased their losses with time while the individual behavioral contact group regained. The group format appeared to be more effective than an individual format. Social pressure alone produced continued loss. The behavioral approach appeared to increase further the effectiveness of the group format.

The few studies discussed above do not allow definite conclusions regarding the comparative effectiveness of group and individal approaches in obesity treatment. Only one examined the issue with any kind of experimental rigor. Overall the findings tended to support that group treatment is more effective, especially after several months of follow-up. The present research study investigated this issue through the use of four treatment groups, two using a behavioral self-help manual and two using an alternate treatment self-help manual. Under each manual condition, one group used the manual in a group format and one in an individual format. All manuals were therapist-administered. Thus two groups using a manual on a group basis were compared to two groups using a manual on an individual basis in order

to assess group and individual treatment efficacy.

Self-Help Behavioral Manuals

In the introduction to this dissertation, self-help manuals were said to be a cheaper alternative to expensive individual or group treatment of obesity. Glasgow and Rosen (1978) reviewed the status of self-help behavior therapy manuals and concluded that manuals could be effective agents for producing weight loss if used with at least a minimal amount of therapist contact. The majority of weight reduction manuals used to date are multicomponent programs including such techniques as self-monitoring, nutritional information, stimulus control, and self-reward (Glasgow & Rosen, 1978).

Stuart and Davis (1972) published one of the first manuals using this approach. Their manual, Slim Chance in a Fat World, is available in long and condensed forms and is of demonstrated effectiveness. Balch and his associates have used this manual repeatedly in various studies which were discussed earlier (Balch & Ross, 1974; Balch & Balch, 1976; Lindstrom et al., 1976). In these studies, the manual was effective with at least a minimal degree of therapist contact. The manual emphasizes the importance of energy balance in producing and in reducing obesity. It is important because it stresses that activity changes are necessary in addition to eating changes.

Hagen (1974) was one of the first to both use and evaluate a written manual. His manual was an adaptation of Wollersheim's (1970) therapist manual which was of demonstrated effectiveness. It was a self-help manual suitable for the laity and dealt solely with eating behavior change. It's utility with some degree of therapist contact

has been shown in a number of studies (Hagen, 1974; Fernan, 1973; Hall et al., 1974; Hagen et al., 1976; Tobias & MacDonald, 1977).

Bellack and his associates have also developed a subject manual which has been used effectively in a number of studies (Bellack, 1976; Bellack et al., 1976; Bellack et al., 1974: Rozensky & Bellack, 1976). Other manuals which have been developed and used in several studies include those of Mahoney and Jeffrey (1974), Hall, Hall, Hanson, and Borden (1974), and Brownell, Heckerman, and Westlake (1975). These have been examined in such studies as Mahoney (1974), Hanson et al. (1976), and Brownell et al. (1978). Again, these manuals were also effective under conditions of minimal or full therapist contact.

For the present research, an adaptation of Hagen's (1974) manual was employed. It appeared to be a useful research and treatment tool as its utility had been shown in several replications. Modifications were made to include activity change in addition to eating behavior change. LeBow and Perry (1977) stressed the necessity of including an activity component in any weight reduction program. Harris and Hallbauer (1973) had demonstrated the importance of activity in behavioral programs. They compared an eating change behavioral group, an eating and activity change behavioral group, and an attention-placebo group. All lost weight during 12 weeks of treatment (6.9, 9.1, and 6.8 pounds respectively) but only behavioral groups maintained losses at 7-month follow-up (8.8, 13.1, and a gain of 0.2 pounds respectively). At follow-up, those in the eating plus activity modification group achieved significantly greater losses than the eating modification group only. Gwinup (1975), too, showed the importance of activity.

Eleven subjects increased walking but did not alter eating over a year period. Weight loss and more importantly, fat loss, occurred once walking was for 30 or more minutes each day. Weight loss increased proportionately to walking time increase. Dahlkoetter, Callahan, and Linton (1979) demonstrated that a combination treatment of eating and activity change produced higher losses at a 6-month follow-up than treatment employing only eating change or only activity change. Stalonas, Johnson, and Christ (1979) also found exercise to be important in producing maintenance of weight loss at one-year follow-up. Addition of an activity component to Hagen's (1974) manual, therefore, appeared reasonable. Increased activity could aid in creating a negative energy balance without a drastic cutback in intake as occurs in dieting only programs.

Self-help behavioral manuals can be used with varying degrees of therapist supervision. Glasgow and Rosen (1978) emphasized the importance of distinguishing among degrees of therapist guidance in evaluation research. They outlined three basic degrees. Self-administered referred to a no therapist contact condition where the written manual was the sole basis for treatment. Clients self-administered the manual and no procedural advise was given by the therapist although data collection could occur. In a minimal contact condition, clients depended primarily on the written program but had a small amount of therapist contact. This could have been in the form of phone calls, mail correspondence, or a small number of in-person meetings. In a therapist-administered or maximal contact situation, regular contact with the therapist occurred. Meetings were generally

at least on a weekly basis and were aimed at clarification and elaboration of manual information.

In addition to distinguishing among degrees of therapist contact, Glasgow and Rosen (1978) also stressed that other points were necessary in the assessment of the effectiveness of self-help manuals. They stated that other comparisons should be included. These comparisons could be with therapist-directed treatment, placebo conditions, and no-treatment control conditions. Wilson (1978) also stressed that other comparisons were necessary. He particularly emphasized the necessity of nonspecific control groups in order to check on expectancy efforts and thereby demonstrate causal relationships between therapeutic programs and consequent weight loss. He claimed that using a no-treatment control group alone, was no longer acceptable. Although alternate treatments are highly recommended, few studies have included such conditions. Tobias and MacDonald (1977) come close to providing such a condition. Although they did not use a manual, they included an alternate treatment in which reminders were sent to subjects concerning the rationale of their specific treatment. The present study developed a self-help alternate treatment manual which was applied under both self-administered and therapist-administered conditions. The manual was an adaptation of Wollersheim's (1970) nonspecific therapy condition therapist manual. It combined an insight orientation with deep-muscle relaxation.

Glasgow and Rosen (1978) also pointed out other considerations which were necessary to make in the evaluation of self-help manuals. These included the use of clinically relevant subjects, the use of

treatments which could be employed clinically, the inclusion of sufficiently long follow-up assessment periods (at least 6 months in duration), and the inclusion of cost-effectiveness indicies so that relative efficiency of various degrees of therapist guidance could be assessed. Wilson (1978) likewise stressed that treatment research must use treatments that approximate clinical situations as closely as possible in order to make an assessment of treatment effectiveness. These considerations were noted and the present research study, therefore, used overweight persons of a wide age range from the community, a treatment program that has been used clinically, a 6-month follow-up period, and a cost-effectiveness evaluation in addition to the usual effectiveness evaluation. Finally, multiple measures of treatment outcome were employed. Lebow (1977a) and Bellack and Rozensky (1975) have stressed the need to employ multiple measures of body change since no perfect and easily used measure of adiposity had yet been developed. Thus both weight and fat change were measured as recommended by LeBow (1977a), Mahoney et al. (1977), and Wilson (1978). Mahoney (1975) and Franks and Wilson (1975) have also stressed the need to assess the degree to which subjects actually use the techniques presented in a program when evaluating effectiveness. Consequently, measures of compliance with manual instructions were made from measures of behavior change and energy change as suggested by Mahoney (1975) and Franks and Wilson (1975). LeBow (1977b) has emphasized that data concerning behavior change and energy change must be obtained in addition to body change measures so that interrelationships between them could be ascertained.

Cost-Effectiveness

The present investigation of behavioral self-help manuals arose from an effort to decrease the cost of weight reduction programs while maintaining or even increasing effectiveness through the use of manuals. Cost-effectiveness comparisons were, therefore, an essential component of the study. These comparisons are a method of ascertaining which treatment produces the greatest amount of therapeutic benefit for the least amount of expensive professional time involvement. Wilson (1978) and Glasgow and Rosen (1978) strongly advocated the use of such comparisons. The latter stated that such evaluations could permit reductions in professional time involvement for each client, thereby allowing more clients to be treated. Yates (1978) was also a strong advocate of such analyses, claiming that it was just as important to measure and decrease the cost of obesity treatment as it was to measure and increase its effectiveness. Thus cost-effectiveness comparisons could justify programs using small amounts of therapist contact even though they might not be as effective as therapist-administered programs. This could be so if reasonable weight losses were generated with much lessened investments of professional time.

Others have also stressed the importance of using cost-effectiveness indicies in obesity treatment. Jeffrey (1974, 1975, 1976) stressed this need in his discussion of treatment outcome issues in obesity research. He stated that inordinate amounts of time and money should not be spent to achieve only very small losses. He also said that relative permanence of effects and the total amount of time necessary

to produce these effects must be assured. He advanced a simple formula to be used in determining cost-effectiveness of various programs (Jeffrey, 1974). The formula was as follows:

$$\text{CE Index} = \frac{\text{mean treatment time per patient}}{\text{mean weight reduction index}}$$

Thus a researcher only needs to record time spent per session and total time with each patient in order to make such comparisons. Jeffrey's (1974) index which has also been used by Yates (1978) was employed in the present investigation. The ratio was inverted, however, because the weight reduction index could assume both negative and positive values. This created difficulties in the cost-effectiveness index distribution when a negative weight reduction index was used as a denominator in the ratio. These difficulties were avoided by an inversion of the ratio which then put the negative weight reduction index in the numerator.

Although cost-effectiveness indexing is highly recommended by several authors, few investigators have undertaken such a procedure. Marston et al. (1977) did a simple computation and came up with a $4.42 cost per pound lost in their correspondence course for weight reduction. They divided the $55 per person cost of the course by the average 12.46 pound weight loss per person. They said that this cost compared favorably with the average $54.95 cost per pound lost reported by Yates (1976) at the Stanford Clinic.

The other study which used this indexing was reported by Yates (1978). He compared the cost-effectiveness of two programs, each of 5 months duration. In behavioral Program X which cost $295 including deposit, 74 subjects met weekly with professional therapists in groups

of 8 to 12 persons. There was a 2 percent dropout rate by the end of the program. In eclectic Program Y, a deposit was not required. Subjects paid a small fee upon program entry and less than $10 for each meeting thereafter. They could begin and end treatment at any time. Treatment was administered by formerly obese nonprofessionals to groups of 40 people. Fifty percent of the 74 subjects had terminated after only 6 weeks of treatment. Only 10 percent stayed in treatment for the full 5 months. Weight loss was calculated in both programs at time of termination regardless of length of treatment. Posttreatment analyses of weight loss showed no superiority of Program X over Program Y. Weight reduction quotients were .31 to .29 respectively. Cost-effectiveness analyses, however, showed significant difference between programs. Yates (1978) utilized Jeffrey's (1974) formula, using cost to patient rather than mean treatment time per patient as the numerator in the formula. Cost of Program X was $295 per subject. Mean cost of Program Y was $35.85 per subject. Analysis showed Program Y to be significantly more cost-effective than Program X. Behavioral Program X cost $44.60/percent reduction in obesity while Porgram Y cost $3.00/percent reduction in obesity.

With only three studies reported, difficulties in making comparisons between studies are already evident due to differences in computing the index. Marston et al. (1977) and Yates (1976) used cost in dollars divided by pounds lost while Yates (1978) used cost in dollars divided by weight reduction index. The latter takes initial degree of obesity into account. Since the present study used treatment time per subject to measure cost, it is also somewhat different from

the indexes used in the three studies mentioned above.

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APPENDICES

APPENDIX A

EATING AND ACTIVITY

ASSESSMENT QUESTIONNAIRE

EATING AND ACTIVITY ASSESSMENT QUESTIONNAIRE

Name: _____ Sex: M F Age: _____

Birthdate: _____

Address: _____ Home Phone: _____

_____ Office Phone: _____

WEIGHT HISTORY

1. Your present weight _____ height _____

2. How would you describe your present weight (circle one)?

very overweight slightly overweight about average

3. At what weight have you felt your best or do you think you would feel your best?

_____

4. How much weight would you like to lose? _____

5. How dissatisfied are you with the way you look at this weight?

Completely satisfied Moderately satisfied Neutral Moderately dissatisfied Very dissatisfied

6. Do other people react to your weight problem? Yes ____ No ____
If yes, how do they react? _____

_____

7. Why do you want to lose weight at this time? _____

_____

8. What are the attitudes of the following people about your attempt(s) to lose weight?

	Negative (e.g., disapprove, resentful)	Indifferent (e.g., don't care, don't help)	Positive (e.g., encourage)
Husband			
Wife			
Children			
Parents			
Employer			
Friends			

9. Do the attitudes or behaviour of your spouse or children affect your weight loss or gain? Yes ____ No ____ If yes, please describe: _____

_____

10. 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 Birth	Maximum Weight	# Pounds Overweight	Methods Used to Lose Weight	Significant Events Related to Weight Change
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				

11. How do you feel your weight affects your daily activities? (circle one)

No effect Some effect Often interferes Extreme effect

12. How physically active are you? (circle one)

Very active Active Average Inactive Very inactive

13. What do you do for physical activity and how often do you do it?

Frequency (daily, weekly, monthly)	Activity (swimming, jogging, dancing, etc.)

14. 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				

15. Which method did you use for the longest period of time?

_____

16. In your attempts to lose weight, have you ever had a physical or emotional reaction of such severity that it impaired your family and/or work relationships or functioning?

Yes ____ No ____ If yes, please describe the symptoms and how

long they lasted. _____

_____

_____

_____

17. What usually goes wrong with your weight loss programs?

_____

_____

_____

MEDICAL HISTORY

18. What are your present medical problems? _____

_____

19. What medications or drugs are you taking? _____

_____

20. Are you allergic to medications, drugs or foods? _____

_____

21. Please list any hospitalization or operations. Indicate your age for each hospital admission.

Age	Reason for hospitalization
_____	_____
_____	_____
_____	_____

22. Please list, by age, any serious illnesses you have had which have not required hospitalization or operations.

Age	Reason for hospitalization
_____	_____
_____	_____

23. Please describe any medical problems you have which are complicated by your weight. _____

_____

_____

24. When did you last have a complete physical exam? _____

_____

25. Who is your current doctor? _____

26. Please list any psychiatric contact, individual counselling, or marital counselling that you have had or are now having.

Age	Reason for contact and type of therapy

SOCIAL HISTORY

27. Please describe your present occupation _____

_____

28. How long have you worked for your present employer? _____

_____

29. 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 _____

30. Please answer the following questions for each marriage:

Date of marriage _____

Date of termination _____

Reason (death, divorce, etc.) _____

Number of children _____

31. Yearly income: (circle one)

0 - 5,000 5,000 - 10,000 10,000 - 15,000

15,000 - 20,000 above 20,000

32. Please describe your spouse's occupation in detail.

_____

_____

33. Spouse's age ____ Weight ____ Height ____

34. How would you describe your spouse's weight (circle one)

very overweight slightly overweight about average slightly underweight very underweight

35. Please list your children's age, sex, height, weight, and circle whether they are overweight, underweight, or average. Include any children from previous marriages whether they are living with you or not.

Age	Sex	Weight	Height	Overweight		Average	Underweight	
___	___	_____	_____	very	slightly	average	slightly	very
___	___	_____	_____	very	slightly	average	slightly	very
___	___	_____	_____	very	slightly	average	slightly	very

36. Who lives in your house with you? _____

_____

37. Is your father living? Yes ____ No ____ Father's age now or age and cause of death _____

_____

38. Is your mother living? Yes ____ No ____ Mother's age now or age and cause of death _____

_____

39. Describe your father's occupation _____

_____

40. Describe your mother's occupation _____

_____

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

very overweight	slightly overweight	about average	slightly underweight	very underweight

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

very overweight	slightly overweight	about average	slightly underweight	very underweight

43. Please describe your family attitudes toward food and eating while you were growing up _____

_____

_____

44. Who raised you as a child? _____

45. Please list your brothers' and sisters' ages, sex, present weight, height, and circle whether they are overweight, underweight or average.

Age	Sex	Weight	Height	Overweight	Average	Underweight
___	___	_____	_____	very slightly	average	slightly very
___	___	_____	_____	very slightly	average	slightly very
___	___	_____	_____	very slightly	average	slightly very
___	___	_____	_____	very slightly	average	slightly very

46. Please write any other information you feel is relevant to your weight problem below. This would include interactions with your family and friends that might sabotage a weight loss program.

_____

_____

_____

APPENDIX B

TABLE OF IDEAL WEIGHTS

TABLE OF IDEAL WEIGHTS*

MEN		WOMEN	
Height	Ideal Weight (Pounds)	Height	Ideal Weight (Pounds)
5'2"	124	4'10"	100
5'3"	127	4'11"	104
5'4"	130	5'0"	107
5'5"	133	5'1"	110
5'6"	136	5'2"	113
5'7"	140	5'3"	116
5'8"	145	5'4"	119
5'9"	149	5'5"	123
5'10"	153	5'6"	127
5'11"	157	5'7"	131
6'0"	162	5'8"	135
6'1"	166	5'9"	139
6'2"	171	5'10"	143
6'3"	176	5'11"	147
6'4"	180	6'0"	151

* Midpoint of medium frame weight range, Metropolitan Life Tables.

APPENDIX C

PHYSICIAN CONSENT FORM

PHYSICIAN CONSENT FORM

I am aware that my patient, _____, is participating in a program for obesity at the University of Manitoba. According to my knowledge, there is no medical reason that would prevent _____ from participating in this program.

Physician's signature _____

Date _____

APPENDIX D

CONSENT FOR USE OF DATA FORM

CONSENT FOR USE OF DATA

Ms. Terry D. Pezzot-Pearce has my permission to use data about me, _____, gathered while I participated in a weight control program conducted at the University of Manitoba, Winnipeg, Manitoba. This information may be used for presentations at professional/ scientific meetings and in professional publications. However, no person in my family, nor our family name, nor other identifying information would be included in any presentations made by Ms. Pezzot-Pearce.

_____ _____

Signature of Participant Date

APPENDIX E

ATTENDANCE CONTRACTS

ATTENDANCE CONTRACT

I, _____, agree to place a $50.00 deposit with _____. The entire $50.00 deposit will be returned to me at the 6-month follow-up assessment if I have attended nine of the ten treatment sessions, and the 3- and 6-month follow-up assessments. If I have failed to do this, the entire deposit will be forwarded to the Heart Fund.

_____

Signature of Participant

_____

Signature of Therapist

Date _____

ATTENDANCE CONTRACT

I, _____, agree to place a $50.00 deposit with _____. The entire $50.00 deposit will be returned to me at the 6-month follow-up assessment if I have mailed in records weekly, and if I have attended the 10-week assessment and the 3- and 6-month follow-up assessments. If I have failed to do this, the entire deposit will be forwarded to the Heart Fund.

_____

Signature of Participant

_____

Signature of Therapist

Date _____

ATTENDANCE CONTRACT

I, _____, agree to place a $50.00 deposit with _____. The entire $50.00 deposit will be returned to me at the 6-month follow-up assessment if I have attended the 10-week assessment and the 3- and 6-month follow-up assessments. If I have failed to do this, the entire deposit will be forwarded to the Heart Fund.

_____

Signature of Participant

_____

Signature of Therapist

Date _____

APPENDIX F

BEHAVIORAL MANUAL

WEIGHT REDUCTION MANUAL

Prepared by

Terry D. Pezzot-Pearce

ACKNOWLEDGEMENTS

Portions of this manual are 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 Dissertation Proposal, University of Manitoba, November 1977.

3. Janet P. Wollersheim, Behavioural Treatment Manuals, in Catelog of Selected Documents in Psychology, 1975.

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

Terry Pezzot-Pearce,
51 - 1781 Pembina Highway,
Winnipeg, Manitoba
R3T 2G6

or call me at 269-5535 after 5:00 on weekdays or on weekends.

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 repeatedly 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. If you do, weight loss can be assured. If you do not apply them, you will not lose weight.

This weight reduction manual is divided into 10 weekly lessons and can be used by you on your own at home or can be used with some help from a behavioural therapist. In either case, however, the results will depend on you and your involvement and adherence to the program.

The basic aim of our program is behaviour change and not just weight change. By this, we mean that we want to see liveable 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 as we advocate so that the changes become part of your everyday-lifestyle, then you will be able to keep the weight off once you have lost it. Because we are interested 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 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. During the 10-week treatment program, you will be weighed weekly in order that you may see how you are doing weight-wise. Further, you will be called in at 3 and 6 months after the program ends so that we may see how you are progressing. These check-ups are important and therefore have become an attendance requirement in order for your $50.00 deposit to be returned to you.

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 lifestyles.

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.

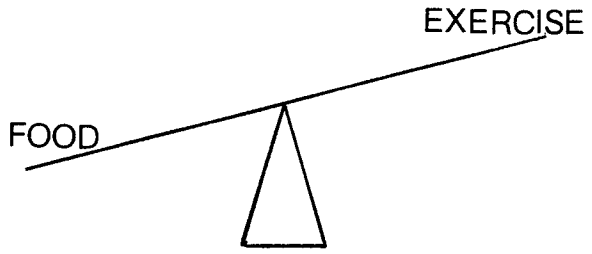
ENERGY BALANCE

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 inter-relate. 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.

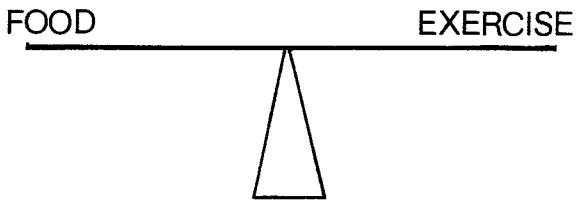
Basically three things can happen in your energy balance. First, as just described above, you can have a positive energy balance where you take in more calories than you expend or use up. This can come from either eating too much food or from reducing your usual activity. In either case the excess calories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

Weight Gain - Positive Energy Balance



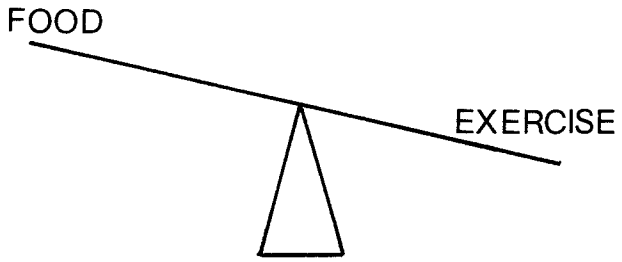
Second, you can have an energy balance where the calories you take in equal the calories you expend and where you in fact neither lose nor gain any weight. Those people who can maintain their weight at a constant level are doing nothing more than eating in such a manner that gives them enough energy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

Weight Maintenance - Energy Balance



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 into a negative energy balance state, we will be asking you to reduce your calorie intake (ie. 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.

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 x 7 gives you the number of calories you should take in daily. For someone weighing 180 pounds, 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. We strongly recommend that you do not reduce your intake below 1000 calories as this might cause dizziness, fatigue, and other physical symptoms. If you find that you are having trouble losing weight at the 1000 calorie level, then we suggest 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 sheets to last for the 10 weeks of the

program.

FOOD RECORDS

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 a snack. 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 (eg. frying). Fill in this information for each meal before you have the meal and total the calories for the meal. You will then know how many calories you are eating and will know whether you should reduce the amount for that meal. As you eat each meal or snack add up the calories you have already had in the day under TOTAL CALORIES THIS 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 the filled-in sheet is on the next page. If you are ever in doubt about the calorie value of a food, it is better of 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 200 calories for breakfast, 300 for lunch, 450 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 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.

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

Food Record Form

My goal today is 1050 Day Wednesday Date September 6/78

Meal B L D S #today 1

	Type	Qty	Cal	Prep
Food 1	grapefruit	1med	45	fresh
Food 2	egg	1	75	poached
Food 3	wheat toast	1	68	toasted
Food 4	coffee (no cream			(dry)
Food 5	or sugar)			
Food 6				
Food 7				
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

Meal B L D S #today 2

	Type	Qty	Cal	Prep
Food 1	bologna	1 oz	95	
Food 2	cheese	1 oz	92	
Food 3	butter	1tsp	33	
Food 4	wheat bread	1	68	
Food 5	tea + 1	lump		
Food 6		sugar	23	
Food 7				
Food 8				

Total Cal for Meal 311

Time Begin Eating 12:10

Feeling: great

Remarks: chatty and enjoyable

TOTAL CALORIES THUS FAR TODAY 499

Meal B L D S #today 3

	Type	Qty	Cal	Prep
Food 1	apple	1med	80	fresh
Food 2	coffee (no cream or			
Food 3			sugar)	
Food 4				
Food 5				
Food 6				
Food 7				
Food 8				

Total Cal for Meal 80

Time Begin Eating 4:30

Feeling: famished

Remarks: felt like I could eat a horse before had the apple

TOTAL CALORIES THUS FAR TODAY 579

Meal B L D S #today 4

	Type	Qty	Cal	Prep
Food 1	hamburger	4oz	248	broiled
Food 2	potato	5oz	92	baked
Food 3	green beans	½cu	13	canned
Food 4	lettuce	few	neg.	fresh
Food 5	T.I.dressing		50	(2tsp)
Food 6	brownie	1½in.	58	baked
Food 7	coffee	1cu	-	black
Food 8				

Total Cal for Meal 461

Time Begin Eating 5:45

Feeling: relaxed

Remarks: nice meal as kids at friends for a birthday party

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

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 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.

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 food with all of his senses.

One who eats a lot and often indiscriminently, just stuffing food into his 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 odor. 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. Slow down! That is one of the secrets to full enjoyment in eating. You will find that following procedures will help you learn to eat more slowly: (1) Take small mouthfuls (2) Chew the food thoroughly before swallowing (3) Lay down your silverware after each bite and only pick it up after chewing and swallowing. These are three behaviours which we would like you to try this week and see how they work for you. At first doing them will 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 so important that you follow our prescriptions so that you can try them and find out which ones work for you, 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 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 to see what you get 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. 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 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 wiegh 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.

PROGRESS RECORD

Name ______________________ Starting Weight __________ lbs.

Date	Weight	Loss/Gain (L or G)	Amount Change (for week)	Amount Change (total)

REVIEW QUESTIONS

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

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.

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.

S	M	T	W	T	F	S

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 liveable 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 any 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 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 (eg. 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 (eg. 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 fountain does not have diet pop, order and drink only half of it. Waste the 15¢ - 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 (eg. 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 often 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 (eg. 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.

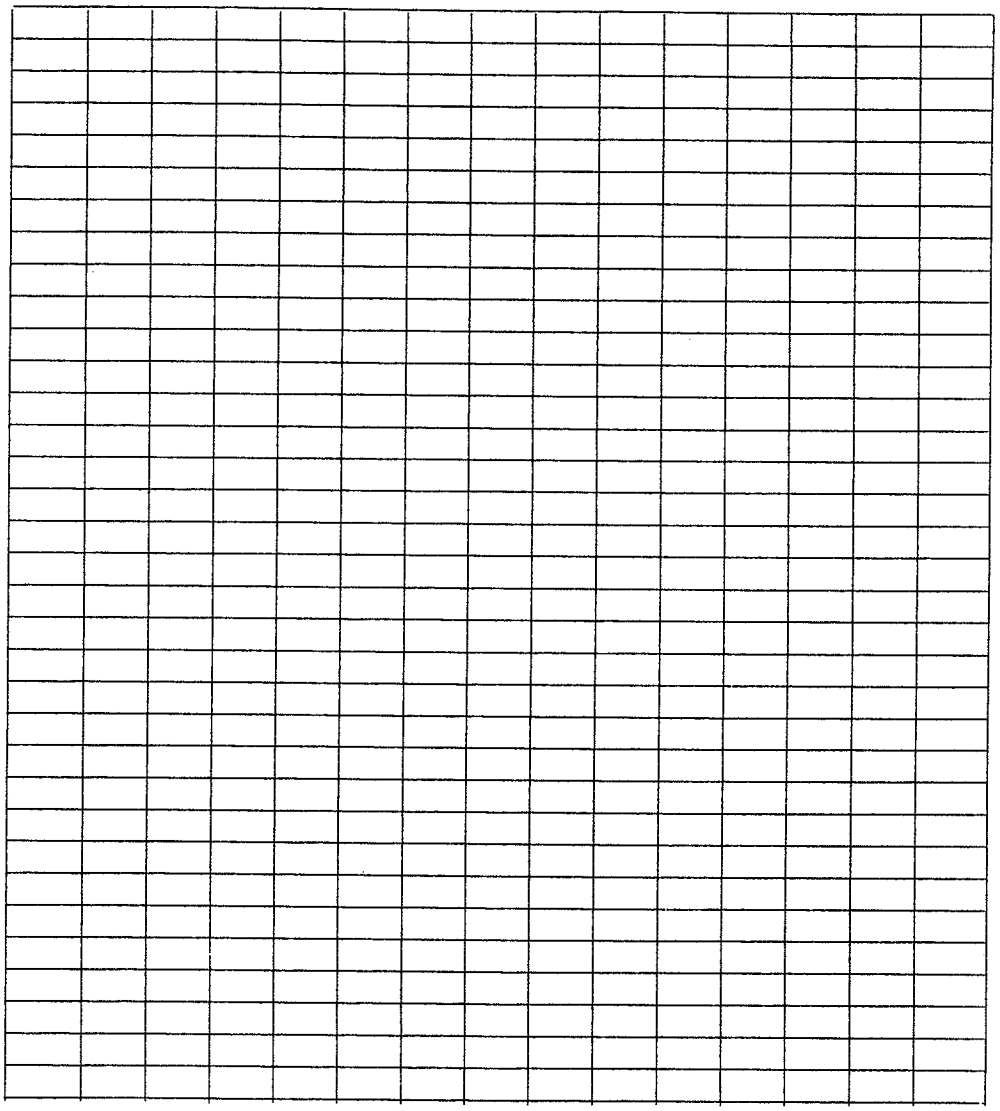
In all then, control your hunger and let it work for you. Do not let yourself get excessively hungry since this will make it very difficult for you to control your eating when you do get into a tempting situation. One way to help control hunger is quite simple - have your meals on a regular basis. In 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 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 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

WEIGHT CHART

FOR



Weight in Pounds

First Interview

Pre-Program

Date of Weigh In

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

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 to 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

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.

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 _____

_____.

S	M	T	W	T	F	S

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

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 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 and do not wait until the end of the week to write them down. 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.

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 today on his or her problem situation.

S	M	T	W	T	F	S

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 problem situation is that the friend is working on. Do not criticize how your friend is following the program or nag him either, as this may harm his weight reduction attempts.

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 irresistably 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 Dixie-Dee Icecream 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 you may exert your own willpower in order to 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 in 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 are 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.

Even though you may already be doing some of these things already, we want you to practice doing all six of them this week. You will be rating how frequently you were able to do them each day this week. Your helper will also have to rate how frequently he 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

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

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.

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 the 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.

S	M	T	W	T	F	S

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

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.

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.

S	M	T	W	T	F	S

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 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 the boys - 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 more 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 and 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 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 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 sutstitute 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 or 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 for two hours a day or whatever else horrible thing you can dream up. Instead, you are going to use shaping to slowly increase your activity level. You will start out slowly and slowly work up 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 out-weighed 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. Calesthenics usually is not much fun and only last 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 would normally do. A sample activity record 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 right-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

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 30 mins.)	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*
Badminton	5.8
Baseball	4.7
Basketball	
Moderate Play	7
Fast Play	8.5
Biking	
Leisure (5 m.p.h.)	5
Fast (13 m.p.h.)	10.8
Canoeing	
Slow (2.5 m.p.h.)	3
Faster (4 m.p.h.)	7
Dancing	
Moderate	4
Moving Fast	5.7
Square	7.7
Football	8.4
Golf	
Foursome	4.1
Twosome	5.5
Iceskating	10 (plus)
Jogging	(see Running)
Ping-pong	3.9
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
Tennis	
Recreational	7
Fast	9.8
Skiing	
Cross-Country	
Leisurely Pace	9
Moderate Pace (5 m.p.h.)	11.8
Fast Pace (8 m.p.h.)	17
Down Hill	8-12 (depending on vigor)
Water	7.8
Snowshoeing (2.5 m.p.h.)	9
Soccer	9
Squash	10.5

Swimming (for fun)	5-6	
Walking		
Stroll (2 m.p.h.) level plane .	3.5	
Fair Clip (3 m.p.h. plus) level	5	
Fair Clip uphill on 5% grade (3 m.p.h.)	7.5	(increase with steepness)
Hiking with heavy pack on level plane (3 m.p.h.)	6.8	
Hiking uphill	9.8	
Walking on snow (reasonably hard at 3 m.p.h. plus) . .	10	

* 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.

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 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 poeple 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. Following are three simple things which you are to do with your food this week. They are aimed essentially at keeping food out of sight because 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. The three behaviours which you are to do this week each day 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.

With these three 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 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

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

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.

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.

S	M	T	W	T	F	S

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

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.

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.

S	M	T	W	T	F	S

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 our 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 more 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 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 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 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 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 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 women who are trying to watch their weight. And downstairs or out in the garden, the man of the house is no better off. He uses an electric drill and saw 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. 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 a 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 high 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 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-soluable 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 (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.

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 you 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? (only give calories but no nutrients)

5. Are you eating too many highly processed foods? (often sugar added and also lose nutrients as more processed)

6. Are you eating too few fruits and vegetables? (missing many valuable nutrients)

7. Are you eating enough different foods? (may miss out on many important nutrients if you are not, also eating more because 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 their eating behaviour. 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

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

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 a week, add up the total number of points you earned during the week.

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

S	M	T	W	T	F	S

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

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.

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

S	M	T	W	T	F	S

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 UACs 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 the 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 undesirably physical, psychological, and social consequences. Physical problems which are often noted in the obese include respiratory difficulties, cardiovascular dysfunctions, diabetes, kidney disease, toxemia or 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 himself agree with such evaluations. 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.

This week you are 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 very 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."

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

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

"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 over excess weight, demeaning inferences concerning professional incompetence or carelessness can all be effective. These statements about one's self certainly 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 advertizes 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 <u>read</u> 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 also 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 <u>inappropriately</u>. 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 fat 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", and "How can my husband want to crawl in 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. Here are some concrete suggestions:

1. Prepare the exact amount of food that you need so that you can avoid leftovers (they will only tempt you to eat).

2. Prepare low calorie foods (when you have a choice between foods, always try to pick the one with fewer calories).

3. Prepare family favourites (but not your own favourites).

4. Cook with lids (you will not see the food and thus will be less likely to pick at it).

5. Sample cooking dishes only as you need to (anything extra must be counted on your meal record form).

Practice these behaviours for the coming week.

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, 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 you 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

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

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.

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.

S	M	T	W	T	F	S

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

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.

1. My friend used his/her UAC list 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 dishes on as he/she needed to.

S	M	T	W	T	F	S

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 liveable changes in your eating and activity habits. These changes should be part of your new lifestyle 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, or doing the ironing. 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 lo-cal 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 lifestyle. 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 not 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. The concrete suggestions for this week include:

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.

Practice these behaviours for the coming week.

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 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.

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

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

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.

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 only 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 once; no second helpings.

S	M	T	W	T	F	S

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

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.

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 only 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 once: no second helpings.

S	M	T	W	T	F	S

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 many of the techniques which we have already introduced (especially the ones that you have found to be very effective in stopping yourself from over-eating). 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 now 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 "197" becomes the stimulus for writing "7" even though the year is "8". Thus chaining may be defined as a series of responses in which one's 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.

1. 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 lengtheining 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 has 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 allow yourself only 20¢ a day for snacks, thus forcing yourself to save 3 days for an ice cream cone or 5 - 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.

2. 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 if 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. Always remember that you are in command and can stop the eating process at any point.

In regards 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 or 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 the 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 mouthfulls, chewing the food thoroughly before swallowing, and laying down your silverware after each bite and only picking it up again 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

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

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.

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.

S	M	T	W	T	F	S

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

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.

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.

S	M	T	W	T	F	S

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: 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 (eg. 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 over-eating 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 applys 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 - 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. The two suggestions for this week which you are to try are:

1. Have someone else scrape the dishes and store the leftovers if possible (in non-see-through containers of course).

2. Scrape plates and serving dishes directly into the garbage can as soon as possible in one rapid process. Once the

leftovers are all mixed up on the garbage can, they will be less likely to tempt you to eat them.

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 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

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

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.

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 left-overs that were being thrown away directly into the garbage immediately after the meal.

S	M	F	W	T	F	S

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

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.

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 into the garbage immediately after the meal was finished.

S	M	F	W	T	F	S

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 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 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 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 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 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 your own 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 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. It is, therefore, up to you to make the program as liveable 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 300 - 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.

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 lifestyle.

6. We will be contacting you at the end of 3 months to ask you to come in for a check-up so that we can see how you have been doing. We will also contact you at 6 months to check your progress again. Please let us know if you will be moving at any time during this period so that we will be able to contact you.

My address is:

Terry Pezzot-Pearce
51 - 1781 Pembina Highway
Winnipeg, Manitoba

Phone: 269 - 5535

If you have been following this program by yourself at home, we will be calling you to come in for a check-up so that we can see how you have done. We will call you so that you can come in at the end of the 10 weeks. When you come in for this check-up, please bring in all of your records and your manual with you. You should be bringing in completed food record forms, completed activity record forms, behaviour ratings made by you and your helper, and your questions and answers for each lesson. Also, make sure that you have read Lesson 10 by the time you come in.

INDEX TO TOPICS

Lesson 8:

Chaining - lengthening the chain, eliminating parts of the eating chain
Eating behaviour

Lesson 9:

Making hunger a stimulus for satisfaction
Planning - both eating and activity
Food clean-up

Lesson 10:

Continuing to take weight off
Keeping weight off once you are at your goal weight
Specific pointers to follow for the next several months

Food Record Form

Day _____ Date _____

Meal B L D S #today _____

	Type	Qty	Cal	Prep
Food 1				
Food 2				
Food 3				
Food 4				
Food 5				
Food 6				
Food 7				
Food 8				

Total Cal for Meal _____

Time Begin Eating _____

Feeling: _____

Remarks: _____

_____

TOTAL CALORIES

THUS FAR TODAY _____

Meal B L D S #today _____

	Type	Qty	Cal	Prep
Food 1				
Food 2				
Food 3				
Food 4				
Food 5				
Food 6				
Food 7				
Food 8				

Total Cal for Meal _____

Time Begin Eating _____

Feeling: _____

Remarks: _____

_____

TOTAL CALORIES

THUS FAR TODAY _____

Meal B L D S #today

	Type	Qty	Cal	Prep
Food 1				
Food 2				
Food 3				
Food 4				
Food 5				
Food 6				
Food 7				
Food 8				

Total Cal for Meal _____

Time Begin Eating _____

Feeling: _____

Remarks: _____

_____

TOTAL CALORIES

THUS FAR TODAY _____

Meal B L D S #today _____

	Type	Qty	Cal	Prep
Food 1				
Food 2				
Food 3				
Food 4				
Food 5				
Food 6				
Food 7				
Food 8				

Total Cal for Meal _____

Time Begin Eating _____

Feeling: _____

Remarks: _____

_____

TOTAL CALORIES

THUS FAR TODAY _____

ACTIVITY RECORD

Day/Date

Activity	Minutes	Calories Used

Total Calories Used for Week _____

Goal for Week:

Remarks:

APPENDIX G

ALTERNATE TREATMENT MANUAL

WEIGHT REDUCTION MANUAL

Prepared by

Terry D. Pezzot-Pearce

ACKNOWLEDGEMENTS

Portions of this manual are 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 Dissertation Proposal, University of Manitoba, November, 1977.

3. Janet P. Wollersheim, Behavioural Treatment Manuals, In Catelog of Selected Documents in Psychology, 1975.

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

Terry Pezzot-Pearce,
51 - 1781 Pembina Highway,
Winnipeg, Manitoba R3T 2G6

or call me at 269-5535 after 5:00 on weekdays or on weekends.

INTRODUCTION

This manual is designed to help you to lose weight and to keep it off. It is based on principles that have been effective in initiating weight loss in the past. The treatment will teach you principles and methods which you can apply in your own environment in order to help yourself lose weight. It will be solely up to you to learn and more importantly apply and try the various techniques suggested in the manual. If you do, you will lose weight. If you do not apply them, you will not lose weight.

This weight reduction manual is divided into 10 weekly lessons and can be used by you on your own at home or can be used with some help from the therapist. In either case, however, the results will depend on you and your involvement and adherence to the program.

The basic aim of our program is to help you to understand the reasons for your being overweight. Once you come to understand these, losing weight will be easier and keeping weight off will 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 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 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. During the 10-week treatment program, you will be weighed weekly in order that you may see how you are doing weight-wise. Further, you will be called in at 3 and 6 months after the program ends so that we may see how you are progressing. These check-ups are important and, therefore, have become an attendance requirement in order for your $50.00 deposit to be returned to you.

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 for you to lose weight.

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 will 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 <u>not</u> 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 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 <u>energy balance</u> 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 enough 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 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 over-eating 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 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 evaluate 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 (eg. social level), there may be a totally different meaning at another level (eg. 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 acquaintences. Games have a payoff. By playing games a person strokes herself 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 very 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 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 reamining 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 trys 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.

PROGRESS RECORD

Name ______________________ Starting Weight ___________ lbs.

Date	Weight	Loss/Gain (L or G)	Amount Change (for week)	Amount Change (total)

REVIEW QUESTIONS

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 may 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.

1. I accepted responsibility for my own weight loss today.

S	M	T	W	T	F	S

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? _____

_____

_____

LESSON 2

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 is just too busy with other things. This is a game that the player frequently plays with himself but may at times involve others in the game.

Thesis:

> Here the player dwells upon all of the things that he has to do or all the pressures that are upon him or all of the difficulties he 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 the person just never does get around to losing weight or watching his calorie intake. College girls 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 disgusted with the boy situation. 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 his life situation and tends to blame himself for his difficulties, making him feel guilty and anxious. Then he tends to alleviate his guilt by viewing himself as a person burdened by many stresses and strains. Hence he feels that he should not be blamed for not trying to cope with the difficulties and strains of trying to lose weight as he already has enough to cope with.

Here is how the interchange may be going on 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 he were to objectively view his difficulties and realize that many of them could be alleviated if he took more responsibility for them in a more adult way. By playing "Harried" the player wards off this depression by, in effect, saying to himself: "Why anybody that has all his 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 week.

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 peoples 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 knew 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 laying 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 proceudre 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.

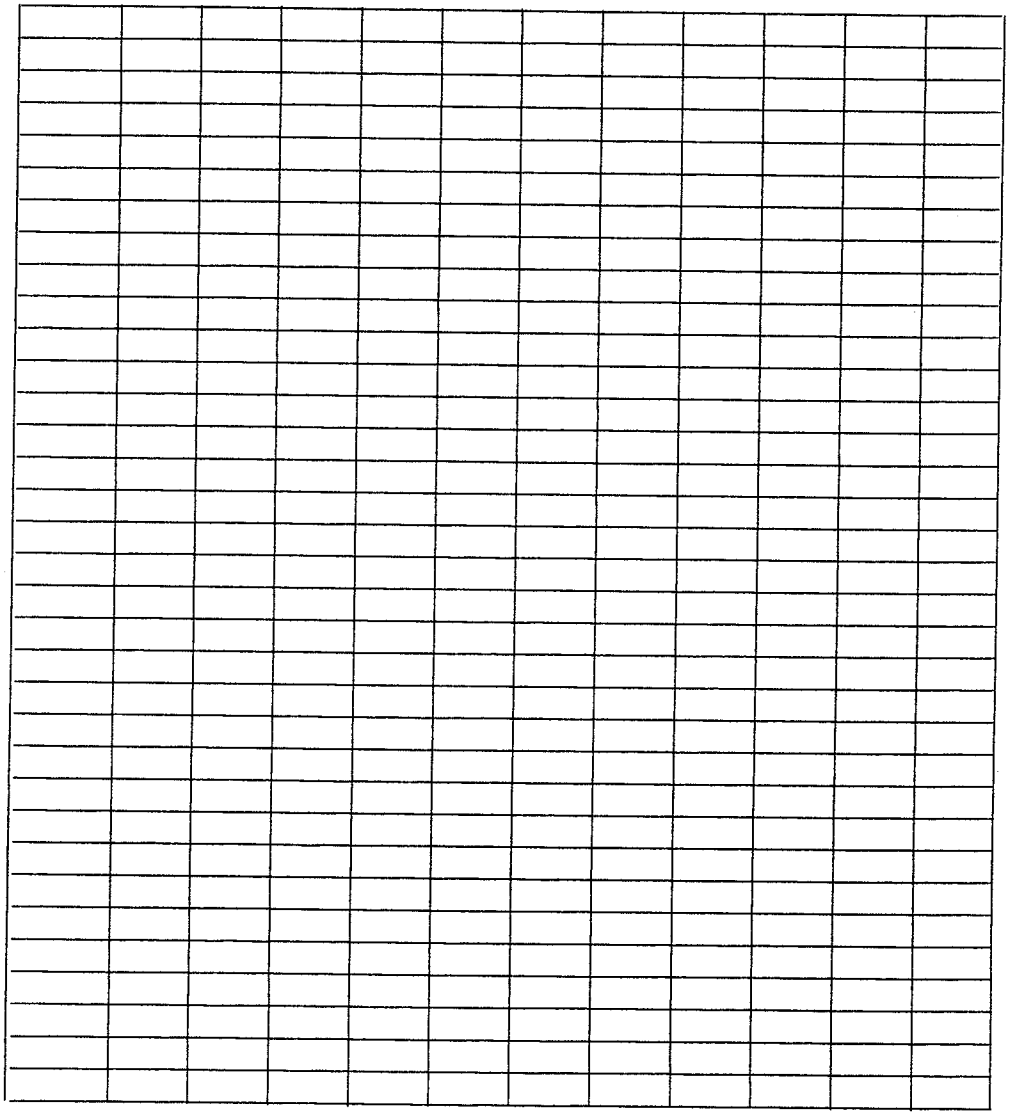
Once you have relaxed your arms, then begin with your feet. Curl your toes under so that you can feel tension in your right foot. Hold for a slow count to 10 and then release the tension and relax. Wait for a bit and then repeat the procedure with your right foot again. When this foot is again relaxed, 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

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? _____

Problems? Call 269-5535.

BEHAVIOUR RATINGS

Each day award yourself a certain number of points (the numbers are indicated at the bottom of the page) depending upon how 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.

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.

S	M	T	W	T	F	S

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 3

You are now two weeks into our program. How are you doing? It is 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 claims that 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 to 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

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

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.

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.

S	M	T	W	T	F	S

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.

3. I was able to become very relaxed when practising muscle relaxation today.

I had the most problem with which behaviour: _____

_____

This may be because _____

_____

BEHAVIOUR RATINGS

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.

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.

S	M	T	W	T	F	S

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. 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

When you go to create a negative energy balance, you may do this by dieting and by increasing your activity. Most people forget about this second way. It is very important. Many people do not realize this because they think that they should not exercise because: 1) they think that physical activity has little effect on energy output and 2) 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 one 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. One hour of swimming is approximately 670 calories in energy expenditure. This means that five hours of swimming will add up to one pound. On a regular basis this can contribute significantly to energy output and weight loss.

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. Thus, doing a moderate amount of activity which does not exhaust you is an excellent way to lose more weight.

A final point must be mentioned in regards to the importance of activity. 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 it is best to lose fat tissue and not lean tissue, activity becomes important in weight loss programs.

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 just can't cut out food."
Persecutor (Adult):	"You relaly 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 viscious 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 result 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 hand very limp and loose. Just reduce an 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 around your ears - let them relax. Let your forehead relax. Let all 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 to do: quit playing the "Food alcoholic" game (ignore others' 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.

REVIEW QUESTIONS

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

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.

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.

S	M	T	W	T	F	S

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

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.

1. My friend ignored others' snide remarks about his/her weight and 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.

S	M	T	W	T	F	S

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 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 these 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. In this game is the over-weight 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 perseverence 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.

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 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 of high 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 count of fat we eat when losing 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-soluable 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 BRM 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. Following are 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? (only calories, no nutrients)

4. Are you eating too many empty calorie foods?

5. Are you eating too many highly processed foods? (sugar added, lose nutrients)

6. Are you eating too few fruits and vegetables?

7. Are you eating enough different foods?

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, practice relaxation during the hardest part of your day, answer the review questions, fill in the behaviour ratings, have your weekly weigh in and record and graph your weight.

REVIEW QUESTIONS

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 over-eating. How come? _____

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

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.

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 practised my 20 minutes of relaxation during the part of the day when it is hardest to stop eating.

S	M	T	W	T	F	S

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

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.

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 practised 20 minutes of relaxation during the part of the day when it is hardest to stop eating.

S	M	T	W	T	F	S

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

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 to fat."

Psychological Level:

Wooden Leg (Child): "If people would only understand."

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 their 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 herself agree with such evaluations. 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 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 eider down 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.

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, 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

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

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.

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.

S	M	T	W	T	F	S

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

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.

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 relaxation training.

S	M	T	W	T	F	S

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, 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).

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 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, answer the review questions, fill in your behaviour ratings, have your weekly weigh in and record and graph your weight.

REVIEW QUESTIONS

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

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.

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.

S	M	T	W	T	F	S

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

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.

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 practice sitting up in a less comfortable chair.
4. My friend imagined his/her ideal relaxation situation in his/her relaxation practice.

S	M	T	W	T	F	S

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

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 satisfictions 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 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 battering 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 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 in 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 perseverence and sticking to your guns and refusing temptation, you can lose weight. Losses should not be big (not 5 pounds) but they should be smaller (about 1 pound per week) and they should be steady.

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.

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, answer the review questions, fill in your behaviour ratings, have your weekly weigh in and record and graph your weight.

REVIEW QUESTIONS

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

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.

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.

S	M	T	W	T	F	S

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 = points

I had the most problems with which behaviour: _____

_____

This may be because _____

_____

BEHAVIOUR RATINGS

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.

1. My friend told him/herself that being fat is not alright.

2. My friend worked hard at losing weight.

3. My friend did his/her usual relaxation exercises.

4. My friend relaxed once when he/she was feeling very hungry.

S	M	T	W	T	F	S

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

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 cannot use 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. If you do this, you may be throwing the baby out of the bath water.

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).

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, have your weekly weigh in and record and graph your weight.

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, have your weekly weigh in and record and graph your weight.

REVIEW QUESTIONS

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. 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

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.

1. I worked hard at losing weight.

2. I relaxed when I was feeling very tempted to eat.

S	M	T	W	T	F	S

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

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.

1. My friend worked hard at losing weight.

2. My friend relaxed when he/she was feeling very tempted to eat.

S	M	T	W	T	F	S

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 for your help.

LESSON 10

In this lesson you will not be asked to do anyting 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 with 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."

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 them.

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. 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.

7. We will be contacting you at the end of 3 months to ask you to come in for a check-up so that we can see how you have been doing. We will also contact you at 6 months to check your progress again. Please let me know if you will be moving at any time during this period so that we will be able to contact you.

My address is:

Terry Pezzot-Pearce
51 - 1781 Pembina Highway
Winnipeg, Manitoba R3T 2G6

Phone: 269-5535

If you have been following this program by yourself at home, we will be calling you to come in for a check-up so that we can see how you have done. We will call you so that you can come in at the end of the 10 weeks. When you come in for this check-up, please bring in all of your records and your manual (you do get to keep it however). You should be bringing in completed behaviour ratings made by you and your helper, and your questions and answers for each lesson. Also, make sure that you have read Lesson 10 by the time you come in.

If you have been mailing in your records each week, we will also be calling you to come in for a check-up so that we can see how you have done. When you come in for this check-up, make sure that you have read Lesson 10.

INDEX TO TOPICS

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Game 9 - "There's nothing you can do to help me"
Relaxation training

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Continuing

APPENDIX H

SUPPLEMENTARY DATA

SUPPLEMENTARY DATA

Posttreatment Analyses

Table H1 presents a summary of percentages of subjects losing various amounts of weight in each group. At posttreatment, 11 percent of the behavioral subjects had gained weight while 16 percent of the alternate treatment subjects had done so. These figures had increased to 12 percent and 22 percent respectively by 6-month follow-up.

Manual Comparisons

The behavioral manual was significantly more effective than the alternate manual in producing weight loss but not fat loss. The stepdown *F* statistics for the significant manual effect at each assessment period are presented in Table H2. Comparison of univariate and stepdown *F* statistics showed that the effect was exerted only on the weight change variables. It was not, however, exerted on both pounds lost and weight reduction index. Rather either could have been employed and still would have produced the difference because of a high correlation between the two variables. The coefficient was -.83.

Degree of Contact Comparisons

Table H3 presents the stepdown *F* statistics for the significant manual effect. The interpretation of the effects is the same as that in the preceding section. Effects were exerted primarily on weight but not on fat change data.

Group Versus Individual Treatment Comparisons

The stepdown *F* statistics for the significant manual effect are presented in Table H4. These indicated that the effect was exerted on the weight loss variables. The effect, however, was not exerted on

both pounds lost and weight reduction index. Rather either could have been employed and would have produced a significant effect because of a high correlation between the two variables. The effect on fat change data neared significant levels by 6-month follow-up.

Table H1

Percentage of Subjects Losing or Gaining Weight at Three Time Periods by Manual and Contact Condition

Posttreatment	Weight Loss in Pounds				
	Over 30	30-20	20-10	10-0	Gain
Behavioral Manual (n=53)	2	13	42	32	11
TAB-Grp (n=14)	0	7	57	36	0
TAB-Ind (n=11)	0	36	45	19	0
MCB (n=14)	0	7	50	29	14
SAB (n=14)	7	7	14	43	29
Alternate Manual (n=50)	0	0	14	70	16
TAA-Grp (n=14)	0	0	36	64	0
TAA-Ind (n=12)	0	0	8	92	0
MCA (n=12)	0	0	8	67	25
SAA (n=12)	0	0	0	58	42
3-Month Follow-up					
Behavioral Manual (n=50)	6	24	30	22	18
TAB-Grp (n=14)	0	29	35	7	29
TAB-Ind (n=11)	9	28	27	27	9
MCB (n=13)	0	24	38	23	15
SAB (n=12)	17	17	17	33	16
Alternate Manual (n=49)	0	0	14	59	27
TAA-Grp (n=14)	0	0	29	50	21
TAA-Ind (n=12)	0	0	8	75	17
MCA (n=11)	0	0	9	64	27
SAA (n=12)	0	0	8	50	42

(continued on next page)

Table H1 (continued)

Percentage of Subjects Losing or Gaining Weight

6-Month Follow-up	Weight Loss in Pounds				
	Over 30	30-20	20-10	10-0	Gain
Behavioral Manual (n=50)	8	24	18	38	12
TAB-Grp (n=14)	14	22	14	43	7
TAB-Ind (n=11)	0	19	36	36	9
MCB (n=13)	0	38	16	38	8
SAB (n=12)	17	17	8	33	25
Alternate Manual (n=49)	0	0	22	56	22
TAA-Grp (n=14)	0	0	28	64	8
TAA-Ind (n=12)	0	0	17	58	25
MCA (n=11)	0	0	45	45	10
SAA (n=12)	0	0	0	58	42

Table H2

Stepdown F Statistics for 2 X 4 MANOVA Significant Manual Effects

Posttreatment F-Ratio for Multivariate Test of Equality

F (3, 93) = 6.98, $p < .001$

Stepdown F Statistics

Variable	MS	Univariate F	p less than	Stepdown F	p less than
Pounds Lost	1081.09	20.37	.001	20.37	.001
WRI	5920.92	13.39	.001	.03	.871
RELFATCH	303.53	.67	.416	.79	.378

3-Month Follow-up F-Ratio for Multivariate Test of Equality

F (3, 89) = 7.53, $p < .001$

Pounds Lost	1888.59	18.56	.001	18.56	.001
WRI	14920.87	20.83	.001	2.17	.144
RELFATCH	2350.56	3.57	.001	1.51	.222

6-Month Follow-up F-Ratio for Multivariate Test of Equality

F (3, 89) = 4.52, $p < .01$

Pounds Lost	1418.27	13.62	.001	13.62	.001
WRI	7484.40	9.09	.003	.20	.659
RELFATCH	1074.44	2.32	.132	.03	.868

Table H3

Stepdown F Statistics for 2 X 3 MANOVA Significant Manual Effects

Posttreatment F-Ratio for Multivariate Test of Equality

F (3, 67) = 7.12, $p < .001$

Stepdown F Statistics

Variable	MS	Univariate F	p less than	Stepdown F	p less than
Pounds Lost	935.29	15.71	.001	15.71	.001
WRI	5250.63	10.43	.002	.08	.777
RELFATCH	.25	.00	.979	4.88	.030

3-Month Follow-up F-Ratio for Multivariate Test of Equality

F (3, 63) = 9.65, $p < .001$

Stepdown F Statistics

Pounds Lost	1802.93	16.79	.001	16.79	.001
WRI	14100.23	20.39	.001	2.87	.100
RELFATCH	534.93	.98	.327	6.95	.011

6-Month Follow-up F-Ratio for Multivariate Test of Equality

F (3, 63) = 3.21, $p < .05$

Stepdown F Statistics

Pounds Lost	1036.47	9.44	.003	9.44	.003
WRI	4953.48	5.64	.021	.41	.526
RELFATCH	423.34	.81	.370	.03	.871

Table H4

Stepdown *F* Statistics for 2 X 2 MANOVA Significant Manual Effects

Pretreatment *F*-Ratio for Multivariate Test of Equality

$F\ (3, 45) = 6.36,\ p < .001$

Stepdown *F* Statistics

Variable	MS	Univariate *F*	*p* less than	Stepdown *F*	*p* less than
Pounds Lost	622.36	18.30	.001	18.30	.001
WRI	3907.11	13.89	.006	.37	.545
RELFATCH	1559.41	3.58	.064	.76	.389

3-Month Follow-up *F*-Ratio for Multivariate Test of Equality

$F\ (3, 45) = 3.91,\ p < .01$

Stepdown *F* Statistics

Pounds Lost	807.47	9.22	.004	9.22	.004
WRI	5647.40	9.44	.004	.59	.446
RELFATCH	4531.61	6.86	.012	1.84	.182

6-Month Follow-up *F*-Ratio for Multivariate Test of Equality

$F\ (3, 45) = 4.61,\ p < .01$

Stepdown *F* Statistics

Pounds Lost	857.78	10.38	.002	10.38	.002
WRI	5654.87	10.20	.003	.44	.512
RELFATCH	2723.80	8.96	.004	2.82	.100

APPENDIX I

RAW WEIGHT AND ESTIMATED PER CENT FAT FOR EACH SUBJECT

Subject	Height (ft.-in.)	Weight in Pounds				Percent Fat			
		Assessment Interval				Assessment Interval			
		Pre	Post	3-mo.	6-mo.	Pre	Post	3-mo.	6-mo.
Behavioral Manual									
TAB-Grp									
1. (F)	5- 4	236.50	221.50	227.00	229.00	44.1	42.5	41.0	41.4
2. (M)	6- 2 1/2	239.00	210.50	214.50	216.00	27.1	22.7	18.3	18.6
3. (F)	5- 5 1/4	185.00	177.00	174.00	178.75	42.0	39.3	37.9	39.6
4. (F)	5- 1 1/2	156.25	150.75	156.75	155.50	38.3	37.7	36.7	36.0
5. (F)	5-10 1/2	177.25	158.50	152.75	149.00	37.6	33.0	26.5	26.9
6. (F)	5- 6 3/4	157.75	154.50	162.50	158.25	39.1	37.8	36.8	36.5
7. (F)	5- 3 1/4	274.50	257.50	252.25	244.25	46.0	44.5	43.6	42.4
8. (M)	5- 8 1/2	234.25	215.75	220.50	223.00	30.9	27.4	26.0	27.7
9. (M)	5- 10	173.25	162.50	161.75	170.00	18.4	12.0	11.5	11.5
10. (F)	5- 1 3/4	156.00	139.75	138.50	134.00	38.9	34.3	30.8	30.2
11. (F)	5- 4 3/4	228.00	213.50	205.00	195.75	42.0	39.5	38.9	37.1
12. (F)	5- 6 3/4	167.50	163.75	175.00	160.75	42.8	38.9	37.7	35.0
13. (F)	4-10 3/4	184.50	175.75	185.00	181.00	40.4	38.7	40.8	40.6
14. (F)	5- 4	179.50	167.25	163.00	166.00	42.4	40.4	34.4	33.2
TAB-Ind									
15. (F)	5- 4	153.25	132.00	142.00	141.50	36.6	30.8	29.6	28.4
16. (M)	5- 7 1/2	187.00	165.25	164.50	171.50	25.8	20.8	19.2	18.9
17. (F)	5- 2	235.00	214.50	205.75	210.50	47.9	45.8	44.1	42.8
18. (F)	5- 3	185.25	168.00	162.00	165.75	45.3	42.9	40.8	41.2
19. (M)	5-11	214.50	202.50	209.50	211.00	26.2	24.0	23.1	21.2
20. (F)	5- 2 1/2	159.25	147.50	150.00	154.00	40.4	36.9	35.5	34.1
21. (F)	5- 4	160.00	149.25	145.75	140.50	39.9	36.9	36.1	35.3
22. (F)	5- 3	212.50	212.00	223.00	223.50	41.6	40.1	42.8	41.7
23. (F)	5- 5	229.50	207.00	197.25	203.00	42.5	41.2	37.6	36.7
24. (F)	5- 4	150.75	138.00	139.50	142.25	39.2	35.2	31.8	32.0
25. (F)	5- 6	157.00	151.00	148.00	148.50	35.1	32.7	29.4	29.2

Subject	Height (ft.-in.)	Weight in Pounds				Percent Fat			
		Pre	Post	3-mo.	6-mo.	Pre	Post	3-mo.	6-mo.
MCB									
26. (F)	5- 2 1/2	166.25	150.00	142.75	143.50	37.6	33.9	28.4	28.4
27. (M)	5-10	203.25	183.00	174.75	174.50	31.4	26.3	24.0	21.4
28. (M)	5- 5	173.25	154.00	155.50	161.25	26.8	19.2	17.1	18.9
29. (F)	5- 3 1/4	223.50	236.50	234.50	236.25	44.4	42.6	41.5	38.9
30. (F)	5- 1/2	162.25	163.50	162.50	162.25	38.8	37.8	36.6	35.6
31. (F)	5- 6 1/2	159.50	150.25	153.00	154.00	37.1	33.1	32.5	31.2
32. (F)	5- 4 1/2	186.25	182.00	179.25	166.00	39.2	38.3	36.5	35.7
33. (M)	5-10	208.00	194.25	195.50	188.00	23.2	19.4	20.1	20.0
34. (F)	5- 3	223.50	210.50	218.50	218.00	48.6	46.5	45.7	45.7
35. (F)	5- 1	187.00	181.00	176.50	182.50	43.8	42.0	40.5	40.6
36. (F)	5- 1/2	202.50	192.75	192.50	195.50	45.1	43.2	43.4	41.7
37. (F)	5- 3	144.50	133.25	131.50	132.75	34.1	30.1	29.6	28.0
38. (F)	5- 3/4	147.00	132.50	126.00	124.75	42.4	36.5	35.0	34.4
39. (F)	5- 6	190.50	178.50	-	-	39.1	35.2	-	-
SAB									
40. (M)	5-10	256.25	221.50	217.00	218.50	31.4	24.7	22.7	20.6
41. (F)	5- 4	173.75	147.75	138.75	140.00	43.3	36.9	35.0	33.2
42. (F)	5- 4	179.75	180.00	184.00	184.50	42.8	41.9	41.4	40.5
43. (F)	5- 7	251.00	249.25	243.25	242.00	43.5	43.1	42.0	39.8
44. (F)	5- 0	186.50	174.50	176.00	169.00	38.9	36.1	36.2	34.6
45. (M)	6- 4	280.00	288.50	289.50	291.00	37.2	37.7	34.3	34.9
46. (F)	5- 5	135.00	138.00	130.00	142.50	32.2	32.3	-	29.3
47. (F)	5- 4 1/4	161.00	160.00	-	-	36.3	34.5	-	-
48. (F)	5- 3	141.00	135.25	120.00	135.00	33.1	31.4	27.3	27.3
49. (F)	5- 6 1/2	162.50	156.50	150.50	140.00	31.6	31.4	28.9	28.5
50. (F)	5- 2	139.50	133.25	-	-	30.6	27.6	-	-
51. (F)	5- 7	203.50	186.00	180.00	181.00	46.8	43.6	41.9	41.2
52. (F)	5- 2 3/4	152.25	153.00	150.50	150.00	37.8	35.7	34.8	33.8
53. (F)	5- 2 3/4	141.50	132.00	135.25	134.25	34.4	31.6	30.7	30.5

Subject	Height (ft.-in.)	Weight in Pounds				Percent Fat			
		Pre	Post	3-mo.	6-mo.	Pre	Post	3-mo.	6-mo.
Alternate Manual									
TAA-Grp									
54. (F)	5- 7 1/4	178.75	168.00	167.50	161.75	36.8	33.4	30.8	28.4
55. (M)	6- 1	273.25	256.00	255.00	260.00	36.0	32.7	31.6	31.5
56. (F)	5- 3	195.50	195.25	191.25	189.00	40.4	40.4	40.4	39.7
57. (F)	5- 3/4	163.25	160.50	165.00	162.25	40.1	39.6	38.6	38.4
58. (F)	5- 9	193.00	187.50	184.00	189.25	43.0	41.8	38.3	39.4
59. (F)	5- 6 1/4	144.75	135.50	152.50	155.50	35.7	34.1	34.3	32.5
60. (F)	5- 6 1/2	222.00	215.25	213.00	208.50	42.8	42.1	40.7	38.6
61. (F)	5- 4	191.50	186.00	184.75	185.00	42.3	41.3	39.7	38.1
62. (M)	6- 2	245.00	231.25	230.25	235.25	31.6	28.7	26.5	26.3
63. (F)	5- 4 1/4	148.50	139.25	146.00	146.50	37.9	34.3	33.5	34.2
64. (F)	5- 2 1/4	150.00	139.25	136.00	140.00	38.0	36.6	35.2	35.2
65. (F)	5- 3	142.75	141.50	147.25	141.00	36.2	35.8	36.2	35.1
66. (F)	5- 3	155.50	142.75	150.50	147.50	37.6	34.9	35.8	34.3
67. (F)	5- 4	176.50	171.75	171.50	174.75	36.6	34.1	32.9	32.5
TAA-Ind									
68. (F)	5- 1 1/2	175.50	172.00	175.00	180.50	44.8	41.9	42.9	43.9
69. (M)	5-10	246.25	243.00	240.50	245.25	33.8	31.8	31.4	31.1
70. (F)	5- 5 1/2	158.50	152.00	154.75	153.00	42.6	36.5	35.9	35.7
71. (F)	5- 1 3/4	216.00	211.50	211.50	212.00	44.4	44.0	43.0	43.4
72. (F)	5- 4 3/4	175.50	166.00	164.00	160.00	44.1	43.6	40.9	40.2
73. (F)	5- 5	191.00	188.25	184.75	188.00	44.7	44.1	42.3	-
74. (F)	5- 2	146.75	139.00	149.50	141.00	38.3	33.9	33.4	32.8
75. (F)	5- 6	218.75	218.50	231.00	224.00	45.2	45.3	47.7	46.5
76. (F)	5- 3	169.50	156.00	163.25	159.50	44.0	42.0	41.8	40.6
77. (F)	5- 1	173.50	168.00	174.00	174.00	43.4	42.5	42.6	40.4
78. (F)	5- 5	154.00	153.75	152.00	154.00	39.1	38.0	36.0	34.1
79. (F)	5- 3 1/2	161.50	158.25	158.00	160.00	40.4	37.3	37.6	36.5

Subject	Height (ft.-in.)	Weight in Pounds				Percent Fat			
		Pre	Post	3-mo.	6-mo.	Pre	Post	3-mo.	6-mo.
MCA									
80. (M)	6- 3	282.50	277.50	264.00	265.25	32.1	31.3	29.3	27.3
81. (F)	5- 9 1/2	208.75	201.00	202.25	201.75	39.8	38.9	37.8	36.1
82. (F)	5- 3	148.50	142.50	142.00	130.00	38.8	36.0	33.4	29.8
83. (F)	5- 6 3/4	216.00	215.75	219.50	222.50	46.7	46.0	45.3	46.4
84. (M)	5- 8 1/4	243.25	240.00	238.00	240.00	28.6	27.8	27.4	26.5
84. (F)	5- 5	150.00	146.75	151.75	140.00	32.2	29.5	29.1	-
86. (F)	5- 2	162.75	165.25	159.25	155.00	39.5	38.1	36.9	35.1
87. (F)	5- 5 1/2	147.25	138.50	138.00	138.00	33.1	25.6	25.0	25.0
88. (F)	5- 5	141.75	129.25	133.00	124.50	31.2	24.0	23.0	21.7
89. (F)	5- 6 1/2	171.25	181.25	-	-	32.2	30.8	-	-
90. (F)	5- 3 1/2	186.00	186.00	182.00	173.50	42.8	41.0	39.1	38.4
91. (F)	5- 1/2	159.00	162.00	163.50	157.00	39.7	38.9	38.7	36.6
SAA									
92. (F)	5- 5	164.50	160.50	159.00	158.50	36.0	33.0	30.4	31.2
93. (M)	5-10	195.50	191.00	195.50	186.50	27.7	23.3	23.6	21.7
94. (F)	5- 2	212.00	217.00	237.00	230.00	43.8	-	45.6	44.8
95. (F)	5- 3 1/2	139.00	143.25	143.25	141.75	29.3	27.0	26.5	24.3
96. (M)	5-11	258.00	260.75	256.00	256.50	37.0	36.1	35.7	35.0
97. (F)	5- 6	180.00	171.00	173.50	173.25	35.9	26.5	26.7	26.2
98. (F)	5- 2 1/2	132.00	125.00	130.00	133.00	36.8	33.8	32.0	32.5
99. (F)	5- 3 1/2	173.00	165.50	161.50	167.75	40.1	36.2	34.7	35.8
100. (F)	5- 5 3/4	179.00	180.00	180.00	178.00	40.3	39.2	39.1	37.3
101. (F)	5- 6	172.00	166.50	164.25	163.50	40.6	38.0	36.8	34.9
102. (F)	5- 3	158.00	159.50	159.25	160.50	39.8	37.3	36.7	35.2
103. (F)	5- 3/4	168.25	167.50	177.75	180.00	38.9	38.1	39.2	-

Subject	Height (ft.-in.)	Weight in Pounds		
		Pre	Post	After Treatment
Delayed Treatment Control				
104. (F)	5- 2 1/2	152.25	154.00	158.50
105. (F)	5- 3 1/2	179.25	175.00	164.25
106. (F)	5- 7	211.25	219.50	195.00
107. (M)	6- 1/2	241.50	239.75	221.75
108. (F)	5- 4	160.00	162.00	157.50
109. (F)	5- 4	165.25	168.00	161.25
110. (F)	5- 6	211.25	212.75	-
111. (F)	5- 2	211.25	232.50	214.50
112. (F)	5- 5 1/2	166.25	155.50	154.00
113. (F)	5- 4	178.50	173.75	169.25
114. (F)	5- 4	151.25	151.50	141.00
115. (F)	5- 2	151.25	159.75	141.50
116. (M)	6- 0	209.00	215.00	211.00
117. (F)	5- 2 3/4	189.00	200.50	-