FUNCTIONAL ASSESSMENT AND BEHAVIORAL INTERVENTIONS FOR WEIGHT LOSS IN OVERWEIGHT INDIVIDUALS

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FUNCTIONAL ASSESSMENT AND BEHAVIORAL INTERVENTIONS FOR WEIGHT LOSS IN OVERWEIGHT INDIVIDUALS

A Project

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Abstract

of

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by

Theresa Marie Stratton

Functional assessment is a part of behavior analysis used to determine the function of a behavior problem; however, the researcher did not find the use of functional assessments when using behavior management with overweight individuals. Four women (mean age in years = 27) and one male (23 years old) were eligible to participate. Participants had a mean weight of 210.7 pounds and an average BMI of 36. The WALI, DIET, and the WRT were administered to the participants as the functional assessment. Participants met with the researcher to learn and apply behavior management techniques. The study was an assessment and a descriptive study, lasting for 24 weeks. Average weight loss for all participants was 19.90 pounds over a 24 week period (range 5.8 – 33 pounds). Results of this study have implications for the use of individualized behavior management combined with functional assessment for the treatment of overweight persons.

___________________________, Committee Chair
Becky Penrod, Ph.D., BCBA

______________________________
Date

v
DEDICATION

This project is dedicated to my parents for their endless support and encouragement. Without them, I would not have made it this far. This is also dedicated to my children, whom I hope will share the same love for education and growth as I do.
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Chapter 1

INTRODUCTION

Obesity in adults is on the rise in both the United States and worldwide (World Health Organization 2003). Obesity is defined as a body mass index (BMI) ≥30 kg\(^2\) of weight in kg and height in m\(^2\). It is reported that “obesity rates the United States are among the highest in the world as of 2007” (National Center for Health Statistics, 2007). In addition, the National Center for Health Statistics reports that 71.4% of adults in the United States are overweight (2007). Obesity is known to cause a number of physical ailments including, but not limited to Type 2 diabetes, coronary heart disease, high cholesterol, asthma, and high blood pressure (Ashley, & Kannel, 1974; Fujioka, 2002). Fontaine, Redden, Wang, Westfall, and Allison (2003) estimate that Caucasian women aged 20 to 30 years with BMIs greater than 45 lose 8 years of life compared to women of the same age with BMIs of 24 or less and that Caucasian men aged 20 years with BMI’s greater than 45 lose 13 years of life compared to men of the same age with BMI’s of 24 or less. Several studies show that even modest amounts of weight loss can be beneficial to overweight or obese individuals (Wing, 1993). Furthermore, the Framingham Heart Study (Ashley, & Kannel, 1974) found that modest weight loss can have a positive impact on cholesterol, blood pressure, and glucose levels.

A variety of treatment options for obesity have been implemented, and one option which has had high success rates is applied behavior analysis (Berkel, Poston, Reeves, & Foreyt, 2005; Epstein, 1990). Behavioral principles were first used in the treatment of
overweight individuals in the 1960s (Ferster, Nurnberger, & Levitt, 1962; Stuart, 1967). The behavior management approach states that behaviors related to weight regulation are learned; hence, those learned behaviors can be relearned or changed. Furthermore, behavior analysts presume that in order to regulate weight successfully or lose weight, antecedents (i.e., environmental cues) and consequences (i.e., reinforcement or punishment) in an individual’s environment must be modified.

Early studies using behavior management for weight loss typically lasted for 7 to 10 weeks and resulted in an average weight loss of 5.64 kg (12.43 lb) (Abrams, & Follick, 1983; Black, & Scherba, 1983; Brownell, Heckermanm, & Westlake, 1979; Carroll, & Yates, 1981). The treatment components typically consisted of at least two, but not all of, the following procedures: self-monitoring, changing the form of eating behavior during meals, problem solving techniques, changing the stimuli associated with eating (i.e., antecedent manipulation), nutrition education, physical activity, or self-reinforcement (Bennet, 1986; Black, & Scherba, 1983; Wing, 1993).

A procedure that many early and current studies use is self-monitoring (Abrams, & Follick, 1983). Self-monitoring is a self-management technique that consists of a person observing his or her behavior systematically and records the occurrence or non-occurrence of a certain behavior (Cooper, Heron, & Heward, 2007). In regards to applying this technique to weight loss efforts, it may consist of recording daily food intake and physical activity. Individuals are typically asked to record such things as the number of calories consumed each day (Berkel, et al., 2005); situational factors surrounding eating episodes; thoughts, feelings, and behaviors that occur before (i.e.,
antecedents), during, and following eating episodes; and physical activity (i.e., consequences) (Foreyt, & Goodrick, 1993). Self-monitoring is a data collection procedure that provides information to the person attempting to lose weight as well as to the researcher about typical antecedents and consequences of eating. Additionally, other behaviors such as exercise can be measured (Kalodner, & DeLucia, 1990). Self-monitoring is considered to be the foundation of behavioral treatment in weight loss (Brownell, & Wadden, 1991; Wadden, & Sarwer, 1999). Perri et al.’s (1989) finding that individuals who monitored their daily caloric intake and physical activity lost more weight than those who did not use self-monitoring demonstrated the significance of self-monitoring for weight loss intervention.

In earlier studies, researchers sometimes focused on changing the form of eating behaviors (Craighead, Brownell, & Horan, 1981; Jones, Owens, & Bennett, 1986). Behavioral techniques encourage overweight individuals to modify their eating behaviors by developing a controlled eating style. In behavioral terminology, this is known as self-management. Self management is defined as “the personal application of behavior change tactics that produces a desired change in behavior” (Cooper, Heron, & Heward, 2007). Examples of changing the form of eating behavior during meals are eating more slowly, eating regularly scheduled meals, or putting a utensil down between bites. One goal of this technique is to help overweight individuals eat less by allowing them to use the feeling of fullness as a cue to discontinue eating.

A technique that was used inconsistently in early studies was teaching problem solving skills to those individuals who were part of a behavior analytic weight loss
program (Black, & Scherba, 1983). Problem solving typically consists of identifying the problem, listing alternative options, evaluating those alternative options, choosing an alternative to try, putting a plan into action, evaluating progress, and using a different alternative if the first is not successful (Black, & Scherba, 1983). Black and Scherba (1983) conducted a study in which 14 overweight participants (12 females and 2 males) participated in one of two programs. The first program consisted of seven weekly sessions, lasting two and a half hours each. Each session covered a different component, such as stimulus control or relaxation training. In addition, participants in the first program completed behavioral contracts specifying how they would implement that week’s skills. Participants received part of their deposit back each week ($5) if they were successful in abiding by their behavioral contract.

In the second group, participants received the same weekly sessions as the first group with the same monetary contingency. However, instead of contracting to implement specific behavioral techniques learned that week, this group of participants contracted to complete and implement at least one seven-step problem solving form for a current or anticipated weight loss problem. Examples of problem-solving include identification of specific problems, brainstorming to generate possible solutions, choosing solutions and applying them to real-life situations and evaluating the effectiveness of the proposed solution (Kalodner, & DeLucia, 1990). The problem solving form consisted of 1. Identifying the problem, 2. Listing alternatives/options, 3. Evaluating the alternatives listed, 4. Choosing one or more alternatives to try, 5. putting a plan into action, 6. Evaluating progress, and 7. If unsuccessful, begin again. Participants
attended follow-up sessions 3, 6, and 12 months after treatment. The results of this study indicated that those participants who contracted to problem solve lost about two times more weight and continued to lose weight, while those who did not contract to problem solve lost less weight and maintained that weight loss over time, rather than continuing to lose weight.

Another behavior analysis technique used often in earlier studies was antecedent manipulation (Abrams, & Follick, 1983; Carroll, & Yates, 1981). This technique was first outlined by Ferster, Nurnberger, and Levitt (1962). Antecedent manipulation is the act of changing the antecedent stimuli associated with eating to reduce the possibility of engaging in unhealthy eating behaviors (e.g., overeating). Specifically, it is removing or changing stimuli that were previously present when the behavior of overeating or poor food choices were made. Changing the stimuli associated with eating could be using smaller plates or placing food items out of sight.

Antecedent manipulation works in two ways to decrease inappropriate eating. First, the individual changes his/her environment so that the number of cues correlated with eating is reduced; and secondly, the individual is encouraged to reduce the effect of cues by not engaging in inappropriate eating when presented with those cues (Bellack, 1975). Carroll and Yates (1981) conducted a study in which 24 overweight adult females were randomly assigned to one of two treatment groups. Each group met one time per week for 10 weeks for 90 minutes. Each group received identical treatment (i.e., social pressure, self-monitoring, contingency management, response training, substitution, nutrition, and exercise) with the exception of antecedent manipulation training. The
group that received the antecedent manipulation training was told the rationale underlying antecedent manipulation and was encouraged to reorganize their environment for improved control of eating. Examples of antecedent manipulation include storing food in opaque containers, eating only in specific areas, and purchasing only those foods which aid in reduction or maintenance of current weight. Both groups lost similar amounts of weight during treatment, however the antecedent manipulation group lost significantly more weight than the other group in the period following termination of therapy.

Another technique that was inconsistently incorporated into early studies is nutrition education (Abrams, & Follick, 1983). Johnson and Johnson (1985) define the process of nutrition education as, “the teaching of validated, correct nutrition knowledge in ways that promote the development and maintenance of positive attitudes toward, and actual behavior habits of, eating nutritious food (within budgetary and cultural constraints) that contribute to the maintenance of personal health, well-being, and productivity” (pp. S1 – S2). Nutrition education involves teaching individuals the importance of specific food groups, adequate number of calories for weight loss, and adequate amounts of vitamins and minerals. Topics frequently included in nutritional education are basic food groups, recommended dietary allowance (RDA) of vitamins and minerals, guidelines for evaluating nutritional labels, fad diets, and low-cost nutritional foods (Sumner, Schiller, Marr, & Thompson, 1986). Nutrition education can also include teaching individuals how to read and interpret nutritional labels correctly. Although not specifically behavioral in nature, nutrition education teaches individuals the skills needed
to interpret nutritional labels and to make informed decisions about the nutritional content of foods (Johnson, & Johnson, 1985).

It should be noted that there is a difference between giving individuals nutrition information and providing nutrition education; even though information regarding the nutritional composition of foods is available, research shows that providing information without education does not facilitate better eating habits (Johnson, & Johnson, 1985). That is, simply giving information (e.g., handouts, directing to sources, etc.) is not as effective as educating a person in regards to nutrition (e.g., lectures, discussions, hands-on activities). Making information available does not mean that individuals will use that information to make good decisions about which foods to consume.

Another component often emphasized in the early behavior intervention research for weight loss is physical activity (Abrams, & Follick 1983; Dahlkoetter, Callahan, & Linton, 1979). Individuals are typically asked to engage in physical activity that results in a calorie expenditure of approximately 1,000 calories per week through a combination of lifestyle exercise (e.g., taking the stairs instead of the elevator) and programmed exercise (e.g., scheduling a specific time to exercise) (Berkel, et al., 2005). There are several studies that have compared diet only, exercise only, and a combination of diet and exercise in the treatment of overweight individuals (Dahlkoetter, Callahan, & Linton, 1979; Harris, & Hallbauer, 1973; Stalonas, Johnson, & Christ, 1978; Wing, Epstein, & Paternostro-Bayles, 1988). In the majority of these studies, the combination of diet and exercise produced the best long-term results. Dahlkoetter, Callahan, and Linton (1979) for example, conducted an eight-week study with 44 overweight females. There were
four different treatment groups: exercise, which focused on energy expenditure methods for reducing weight and improving physical fitness; eating habits, which focused on procedures for controlling food intake patterns; combined exercise and eating habits; and delay of treatment. Participants in the first three groups received training on the behavioral approach to weight loss during the first session. Individual treatment groups received separate instructions and assignments based on eating habits or exercise or a combination of both techniques. Dahlkoetter, Callahan, and Linton found that the group who received combination therapy lost almost two times the weight as the other two groups.

The final technique often found in early research was contingency management (Abrams, & Follick, 1983; Jeffery, Bjornson-Benson, Rosenthal, Kurth, & Dunn, 1984). Contingency management involves using rewards (e.g., watching a favorite television show) for desired behaviors (e.g., staying within a recommended calorie range) leading to weight loss. An example of contingency management in a behavioral weight loss program would be an individual setting a goal to exercise three times per week. The individual would then choose a reward (e.g., buying new shoes) that he or she would earn if the goal was met. Intervention techniques based on consequences often focus on contingency contracting procedures where obese individuals contract with others or themselves in order to obtain certain rewards contingent on their behaviors or weight loss (Jeffery et al., 1984; Jeffery, Thompson, & Wing, 1978). Stalonas, Johnson, and Christ (1978) conducted a study in which 44 obese participants participated in a 10-week behavior management program for weight loss. The participants were divided among
four treatment groups: exercise and contingency components; addition of exercise only; addition of contingency component; and behavior management program alone (i.e., no exercise component or contingency component). Those individuals who received the contingency component used self-reinforcement for successfully using the strategies of the program. The participants were instructed to make a list of activities that could serve as rewards that they could choose to receive either daily or weekly. Although all participants in this study lost significant amounts of weight, only those who received the exercise, contingency components, or a combination of the two maintained their weight loss over the period of one year. In addition, research in the area of contingency management and weight loss shows that reinforcement for completing homework assignments (e.g., exercising three times per week) is more effective than reinforcement for weight loss (Ferguson, 1975).

These early treatment programs typically resulted in weight losses of approximately 5.64 kg (12.4 lbs.) over a 10-week period (Bennett, 1986, Wing, & Jeffery, 1979). Since these early studies, behavior management programs have gradually lengthened to approximately 20 – 24 weeks of treatment and with this change weight losses have gradually increased (Wadden, 1993; Wing, 1998). On average, individuals who participated in behavioral programs in the 1990s lost approximately 9 kg (19.8 lb) over a 20 – 24 week period (Wadden, 1993; Wing, 1998). The relatively successful outcomes of early studies using behavior management interventions and the continuing increase in the number of obese people have led to more researchers expanding the types of behavior principles that are being employed.
Current behavioral treatments for weight loss have added relapse prevention training and a greater emphasis on nutrition education and exercise in addition to the previous techniques of contingency management, self-monitoring, problem solving, and antecedent manipulation (Avenell, et al., 2004; Berkel, et al., 2005; Jeffery, et al., 2000; Poston, & Foreyt, 2000; Sarwer, & Wadden, 1999). Of significance, results from many recent studies show that self-monitoring continues to be associated with improved treatment outcomes while individuals report that it is one of the most helpful tools in obesity management (Baker, & Kirschenbaum, 1993; Boutelle, & Kirschenbaum, 1998; Kayman, Bruvold, & Stern, 1990).

As noted, relapse prevention is a technique that has recently been incorporated into behavioral weight loss treatment packages. A relapse as it pertains to weight loss is a setback in weight loss, maintenance, and/or dieting habits (Perri, Nezu, McKelvey, Shermer, Renjilian, & Viegner, 2001). Relapse prevention is similar to problem solving in that it gives individuals the tools to rebound from a lapse or prevent a lapse (a temporary decline in desired behaviors) or a relapse (a decline to baseline in regard to desired behaviors). Perri, et al. (2001), for example, utilized a procedure called relapse prevention training (RPT), which teaches individuals specific methods to help them plan for events that may trigger a relapse. RPT is based on the assumption that participants can learn skills that will help them to overcome setbacks and maintain the behavioral changes required for weight loss or maintenance of weight loss. Additionally, Perri, et al. used a problem-solving model in order to assist individuals with weight loss efforts and maintenance. Participants received RPT biweekly for one year following a 20-week
behavior management program for weight loss. Topics covered during the biweekly sessions included: identifying high-risk personal situations for slips and lapses; practicing coping with actual high-risk situations; using problem-solving techniques; training in cognitive-coping strategies; and planning for long-term prevention and a balanced lifestyle. The lesson plans were adapted from Marlatt and Gordon’s (1985) work on relapse prevention. When Perri, et al. compared RPT with problem-solving therapy, they found that those individuals who completed the problem-solving therapy showed greater overall weight loss, meaning that they lost the most weight, and maintained that weight loss over the RPT alone group and a group receiving only generic behavior therapy for weight loss.

Coping strategies can be considered as a form of problem solving. Drapkin, Wing, and Shiffman (1995) taught participants coping skills by presenting them with hypothetical high-risk situations and teaching them effective ways of coping with those situations. Coping skills were taught in addition to behavior management techniques and having the participants eat low or very low calorie diets. Drapkin, Wing, and Shiffman (1995) found that those participants who selected a situation as most risky were more likely to have a lapse in that situation. Related to this, results showed that those participants who were able to generate the most coping responses for their self-identified high-risk situations were able to lose weight and avoid lapsing in those high risk situations.

Current research is also placing much emphasis on nutrition education. Typically, individuals in current behavior management programs for weight loss are not given a
specific diet to follow; rather, they are educated in nutrition in order to obtain the necessary knowledge to make informed decisions about food selection so as to acquire a new lifestyle skill (Sarwer, & Wadden, 1999). Specifically, individuals are requested to select foods that they enjoy in reduced portion sizes and to omit or reduce consumption of fats and sugars (Sarwer, & Wadden, 1999).

In addition to relapse prevention, nutrition education, and problem solving, exercise continues to be an important factor in weight loss efforts and is almost always included in behavioral treatments for weight loss (Berkel, et al., 2005; Foreyt, & Goodrick, 1993; Jakicic, Wing, & Winters-Hart, 2002; Jeffery, et al., 1993; Sarwer, & Wadden, 1999, Wing, 1993). Jakicic, Wing, and Winters-Hart (2002) conducted a study in which participants were prescribed an 18-month behavioral weight loss program and varying levels of physical activity. They found that an increase in physical activity was correlated with weight loss, reduction in caloric intake, and improvements in eating behaviors associated with weight loss. The authors of this study recommended targeting both increased physical activity as well as reduced caloric intake for the most improved long-term weight loss.

In conducting the literature review, this researcher found that many behavior analytic studies for weight loss did not include individualized treatment for the participants, although reasons for being overweight were not the same for all individuals. Rather, all participants received a pre-established treatment package. In addition, study results have shown variable weight loss with a range of 4.1 kilograms (kg) (9 pounds (lbs.) (Jeffery, et al., 1993) to 21.5 kg (47.4 lb.) (Wadden, Foster, & Letizia, 1992).
Current researchers are aiming to improve weight loss (i.e., loss of more weight and less variability in results) in addition to maintenance of that weight loss.

In order to reduce variability in responses to weight loss treatment (i.e., success with weight loss and changing behaviors related to obesity), Lee and Miltenberger (1997) suggest conducting an assessment of eating behaviors and physical activities in order to individualize treatment and provide the greatest benefit to binge eaters, representative of obese individuals desiring to lose weight. Straw and Terre (1983) hypothesized that individualized treatments for overweight individuals would produce more consistent results than standard behavioral interventions, since all components of the treatment would be directly applicable to the individual. Straw and Terre (1983) compared three treatment groups; one group received standard behavior treatment as a group, the second group was individually administered standard behavior treatment, and the third group was individually administered individualized behavioral treatment. The standardized treatment administered to a group was used as a control group since, at the time, this was the typical way to administer treatment. All three groups received treatment for 10 weeks. All three groups lost statistically significant amounts of weight and no significant differences were found among the groups. However, the participants who received individually administered individualized treatment and individually administered standard behavior treatment continued to lose weight after treatment ended, while the participants who received standard behavior therapy in a group gained weight after treatment ended. It should be noted, in addition, that the treatment phase for all
participants was much shorter than the average of 20 – 24 weeks of behavioral treatments for weight loss (Perri, et al., 2001; Foreyt, 1987).

According to Lee and Miltenberger (1997) the most effective way to individualize treatment is to conduct a functional assessment of behaviors that may lead to obesity. A functional assessment is the analysis of antecedents and consequences that occur before and after a specific behavior in order to determine the function of a particular behavior (Lee and Miltenberger, 1997). “Function” in this context refers to the reasons why an overweight individual overeats, chooses to eat unhealthy foods, and/or chooses not to exercise. A functional assessment, thus, allows the researcher to identify common antecedents and consequences to behaviors that result in obesity. In addition to a functional assessment, Brownell and Wadden (1991) suggest that assessments should be completed in the following areas to determine an individual’s specific treatment requirements: medical; psychosocial; behavioral; and biological. The medical assessment is suggested for those individuals who are overweight by 40% or more, since these persons are more likely to be taking medication or have a history of illness. The psychosocial assessment is conducted to understand the individual’s relationships with others, satisfaction with work, current life stressors, sources of enjoyment, and future goals. In addition, Brownell (2004) suggests that a psychosocial assessment should also be conducted on the individual’s dieting readiness. Functional assessments (i.e., behavioral assessments) should also be conducted on physical activity (i.e., what leads a person to exercise or not exercise) and food intake (i.e., determining the function(s) of
overeating or eating unhealthy foods). Finally, Brownell and Wadden (1991) suggest that an individual’s biological predisposition to obesity be assessed.

Functional assessment of an individual’s eating is another way to individualize treatment. The assessment is conducted by asking an individual a series of questions related to the problem behavior to determine common antecedents and consequences that could be possibly maintaining the specific behavior. Loro and Orleans (1981) presented their preliminary findings and guidelines for behavior management and treatment with obese binge eaters, by using a model similar to functional assessment. While their focus was on binge eaters, their procedure might be generalized to overweight persons. Loro and Orleans suggested treatment approaches for antecedent and consequence control such as teaching individuals anxiety management and realistic goal setting. This directly relates to a functional assessment, in which the antecedents and consequences of behaviors are analyzed. The authors concluded that binge-eating was amenable to functional assessments and a multi-faceted behavioral approach.

Assessment of physical activity may contribute to the reduction of obesity in the same manner as functional assessments conducted on eating behaviors in overweight individuals. When a functional assessment of physical activity is completed, questions such as why the person does or does not exercise and immediate consequences of exercise can be answered. This can help the individual increase their frequency and duration of exercise by evaluating common antecedents and consequences to exercise. Questionnaire assessments, such as the Baecke (Baecke, Burema, & Frijters, 1982) and the Lipid Research Clinics Questionnaire (Haskell et al., 1980) estimate energy
expenditure and typically focus on recalling levels of activity over specific time periods (Allison, 1995). Questionnaires are usually used when studying large groups of individuals. In addition to questionnaires, diaries are also frequently used to assess the amount of physical activity engaged in during the day. Since diaries take so much time to complete, they are typically not useful in larger studies (Montoye, & Taylor, 1984), however, in small-scale studies; detailed diaries recording physical activity have been a useful component in many weight loss studies by increasing the amount of exercise and weight loss (Jeffery et al., 2000; Linscheid, Tarnowski, & Richmond, 1988).

An additional area that is frequently assessed in order to individualize behavior treatments for overweight individuals is food intake. There are many different ways to measure food intake, including 24 hour recall, 4 or 7-day recall, and food records. Twenty-four hour recalls are typically administered by an interviewer and individuals are asked to recall all foods eaten in the last 24 hours (Allison, 1995). Twenty-four hour recall methods have been used in many large scale studies, including the National Health and Nutrition Examination Surveys (Abraham et al., 1979; Tillotson et al., 1981). The main advantage of this technique is that it can be completed relatively quickly and easily. However, it does rely on memory, which is not always accurate (Allison, 1995). This method is most suitable for large groups of people. Four or 7 day recalls are administered in a manner identical to 24 hour recalls, however individuals are asked to remember a 4-day or 7-day period. The same advantages and disadvantages apply. Food records require an individual to record what he/she has eaten immediately following the ingestion of food. These records provide a detailed history of food intake and do not rely on memory
if filled out correctly. Food records can be time-consuming, thus, it is important to ensure that the individual is truly motivated to lose weight and understands the rationale behind the recording of foods eaten (Willett, 1990).

Along with recording food consumption, individuals may be requested to record situation-specific variables as well (e.g., time, place, mood, etc.). This can also be done in a food diary and can be recorded concurrently with food intake. In addition, questionnaires can be used to assess eating styles (Allison, 1995). One such questionnaire is the Dieter’s Inventory of Eating Temptations (Schlundt, & Zimering, 1998). This questionnaire is a measure of weight control knowledge consisting of 30 potentially difficult scenarios and a description of a hypothetical solution. In one example the participant reads: “You’re having dinner with your family and your favorite meal has been prepared. You finish the first helping and someone says, ‘Why don’t you have some more?’ What percent of the time would you turn down a second helping?” (see Appendix D). The individual completing the questionnaire is instructed to state the percentage of time he/she would respond as indicated in the solution on an 11-point scale from 0 to 100.

Finally, the individual who wishes to lose weight should ensure that he/she has the motivational readiness to do so. Without motivation to lose weight there is no incentive to continue weight loss efforts. Several models incorporating the concept of motivational readiness have been developed (Baranowski, 1990; Miller, & Rollnick, 1991, Prochaska et al., 1992; Shaffer, 1992). A questionnaire designed to assess the readiness of a dieter that has been used in weight loss programs in the past is the
Motivation Scale (MS) of the Master Questionnaire (Straw, et al., 1984). The Master Questionnaire consists of 56 true/false items and is designed to measure five dimensions of change related to obesity treatment. Within this questionnaire is a 12-item Motivation Scale (MS) which measures the “ability to maintain motivation for weight loss and self-efficacy expectations” (Straw, et al., 1984, p.7). Other questionnaires are the Weight Loss Readiness Test (Brownell, 2004) and the Processes of Change Questionnaire for Weight Control (Prochaska, & DiClemente, 1985).

Once sufficient assessments in the above areas have been conducted, researchers can use the results of these assessments to tailor individualized treatment programs for obese and overweight individuals. Although there are studies in which functional assessments of eating behaviors have been conducted (e.g., Loro, & Orleans, 1981), a thorough literature review by the researcher did not produce any studies in which functional assessment was conducted to individualize and guide treatment.

Therefore, the current study attempts to fill this void by conducting an initial functional assessment and providing treatment based on this functional assessment. The functional assessment will include the areas of physical activity; food intake; eating behaviors; and motivational readiness. Functional assessment will also be used to determine the functions of healthy and unhealthy lifestyle choices in overweight individuals. Based on the results of the functional assessment, the researcher will incorporate interventions that include individualized, successful practices from literature. These practices include self-monitoring, contingency management, nutrition education,
exercise, antecedent manipulation, and problem solving to assist in increasing healthy lifestyle choices and weight loss.
Chapter 2

METHOD

Participants

Overweight men and women were recruited to participate in the study through an e-mail at their place of employment announcing a behavioral weight loss program. Interested individuals contacted the researcher who then conducted a screening interview to determine eligibility to participate in the study. Individuals were required to have a body mass index (BMI) of at least 27 and to be in good health. They had to commit to remain in the study for six months, to meet with the researcher one time per week, and to complete self-monitoring records. Out of an initial fourteen, a total of four women (mean age in years = 27) and one male (23 years old) who were all employees at an agency that provides behavioral services to children with autism were eligible to participate. Of the eight people who were not eligible to participate, seven did not meet the BMI cutoff and one was going to be out of the country for one month. In addition, of the eight people who were not eligible to participate, all were female, five were Caucasian, two were Hispanic, and one was Japanese-American.

Participants agreed to specific adherence criteria, including weekly meetings and completion of self-monitoring records. One of the five participants was dropped from the study in week 15 when the third session was missed. This participant (Participant 2) lost a total of 10.8 pounds (7% of initial weight) before being dropped from the study. The researcher informed participants that they would no longer be able to participate in the
study if they missed more than two weekly meetings or if they failed to turn in more than two of their self-monitoring records. See Table 1 for a summary of participant characteristics.

Of the four females and one male who began treatment, three females and the male completed it. The participants had a mean weight of 210.7 pounds (range 153.8-262.8) and had an average BMI of 36 (range 27.2-48.1) before treatment began. All four female participants identified themselves as Caucasian and the male participant identified himself as Hispanic. All female participants either held their Bachelor’s degrees or were working towards obtaining their Bachelor’s degrees. The female participants stated that, on average, they were first overweight by 10 pounds or more by age 12 (range 9-14 years) and weight loss had been attempted an average of 2.5 times (range 1-4 times). At the time that participants began the study, the females rated their daily lifestyle activity (on a scale of 1 -10 with 1 = sedentary and 10 = very active) at an average of 4.25 (range 3-5). Participants were given a choice as to whether they preferred individual vs. group treatment, in order to tailor the program to their wants and needs. The four females elected to participate in a group format and the male elected to participate in the individual setting. The treatment of the participants was in accordance with the “Ethical Principles of Psychologists and Code of Conduct” (American Psychological Association, 1992).
Table 1

*Characteristics of Study Participants*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD (±)</th>
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<tbody>
<tr>
<td>Age (M ± SD)</td>
<td>26.4</td>
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<tr>
<td>Height (M ± SD)</td>
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<td>1.3”</td>
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<tr>
<td>Weight (lb) (M ± SD)</td>
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<td>42.2</td>
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<tr>
<td>Body Mass Index (M ± SD)</td>
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Table 2

*Characteristics of Study Participants (cont.)*

<table>
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<th>Variable</th>
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<td>High School Degree and Beyond (%)</td>
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<tr>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>Hispanic</td>
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</tr>
</tbody>
</table>

*Apparatus and Testing Materials*

*Scale.* A digital Conair (Weight Watchers model WW43C) scale was used to weigh the participants. This scale had multiple-load cell technology that used precision electronic strain gauges for extremely accurate weight measurements. This scale can be found at online at [http://www.conair-store.com](http://www.conair-store.com).

*Questionnaires.* The Weight and Lifestyle Inventory (WALI) by Wadden and Foster (2001) is designed to obtain information regarding a participant’s weight and
weight loss histories, eating and exercise habits, and relationships with family and friends (see Appendix A). All items on the WALI have acceptable test-retest reliability, \( r = .77 \), for the number of previous diets attempted and \( r = .87 \), for reports of lifetime weight loss (Wadden et al., 1992).

The Dieter’s Inventory of Eating Temptations (DIET) (Schlundt and Zimering, 1988) measures participants’ reactions to specific situations that could help or hinder their weight loss efforts (see Appendix B). The questionnaire consists of 30 situation-specific scenarios that include possible solutions. The participant rates the percentage of time that he or she would respond in a manner similar to the suggested solution by circling a number between 0 and 100 on an 11-point Likert scale. The items on the questionnaire are grouped into six categories with five items in each category. The categories are as follows: a. resisting temptation, b. positive social eating, c. food choice, d. exercise, e. overeating, and f. negative emotional eating. Items 3, 15, 16, 20, and 26 belonged in the resisting temptation category. Items 1, 18, 21, 22, and 27 belonged in the positive social eating category. Items 4, 5, 7, 8, and 23 belonged in the food choice category. Items 2, 11, 13, 17, and 19 belonged in the exercise category. Items 6, 9, 10, 12, and 14 belonged in the overeating category. Items 24, 25, 26, 28, 29, and 30 belonged in the negative emotional eating category. Schlundt and Zimering (1988) reported test-retest correlations for overeating, resisting temptation, food choice, positive social, negative emotional, exercise and total score of .915, .908, .809, .814, .920, and .956 respectively. When testing the validity, Schlundt and Zimering found that the DIET scales correlated
moderately with ratings of how much difficulty the participants had adhering to a weight loss plan.

The Weight Loss Readiness Test (WLRT) by Brownell (2004) was developed to help participants determine their readiness for beginning a weight loss program. The test has 23 questions that are divided into six categories: a. goals and attitudes, b. hunger and eating cues, c. control over eating, d. binge eating and purging, e. emotional eating, and f. exercise patterns and attitudes. This test was administered through the author’s website: www.thelifestylecompany.com and was automatically scored for the participants. If the participant scored low in a particular area, he/she was instructed to think about the barriers that might be preventing him or her from scoring higher and to determine possible ways to overcome those barriers. If participants felt that the barriers could not be overcome at that time, the researcher would have recommended that they begin a weight loss program at a time when the barriers were not present. No participants in this study felt that the obstacles were large enough to prevent them from successfully completing this behavioral weight loss program.

The researcher developed a Self-Monitoring Form (SMF) for the participants to complete each week (see Appendix C). The SMF required the participants to record seven aspects of weight-related behaviors. These were exactly what a participant ate during the day, the time he/she ate each food item, the place the participant was when consuming food, what activities the participant was engaged in while eating, feelings during each eating episode, number of calories eaten per each food item and for the day, physical activity that the participant engaged in, and points earned for specific goals set.
Participants had the opportunity to earn points for engaging in specific behaviors (e.g., five points for recording food intake, 10 points for exercise, etc.) The points allocation was printed on the front of each week’s self-monitoring form.

The food guide pyramid (United States Department of Agriculture, 2007) was used to guide the participants in selecting the appropriate number of servings from each food group. In addition, the researcher utilized the food guide pyramid to provide nutrition education to the participants.

Procedure

Design. This study was an assessment and an AB design. The duration was 22 weeks.

Assessment. Prior to beginning the study, participants reviewed and signed a consent form, which explained important components of the study. Participants completed the WALI and the DIET before the first week’s meeting. They also began making a list of individualized preferred items (e.g., items or activities to be earned later in the study). In addition, during the first week of treatment, participants completed the WLRT. The researcher used results from these assessments to individualize treatment for each participant.

Weekly Meetings. The weekly meetings were held on the same day at the same time each week at the participant’s place of work. Each meeting lasted approximately one hour. The researcher used many materials as a reference for the format and content of each of the weekly meetings. The researcher followed a weekly format modified from the L.E.A.R.N. program (Brownell, 2004) in addition to other references regarding nutrition,
motivation, and weight loss. Each weekly meeting consisted of a weigh-in of each participant, lecture, discussion, and homework assignments, in that order. See Appendix D for the weekly agendas and topics discussed during each week’s lecture portion. Discussion consisted of participants asking any questions related to the lecture, discussing any potential problems or concerns, and sharing stories from the previous week regarding successes and downfalls. Homework assignments were given and goals were set at the end of each meeting and participants were asked if there were any questions about the assignments or goals. In addition, the researcher discussed the points available and how to earn them as well as ensuring that participants had their rewards chosen before leaving the meeting. The range of points for each reward was determined by taking the number of points possible each day and dividing that number by seven (for each day of the week). This number was used as the range number for each different reward. For example, if a total of 180 points was available for the week, the researcher divided 180 by seven. This resulted in 25 for the range number. Next the researcher calculated the maximum points minus the points available on a daily basis (i.e., 25) to get a range of 155 – 180 for the top rated reinforcer. The second rated reinforcer would fall into the range of 130 – 154 (155 – 25 = 130), etc.

Participants weighed-in at the weekly meetings on the same day (Mondays for the group of females and Fridays for the male’s individual sessions) and same time (6:00 p.m.) each week. Participants were weighed in a secluded area at their place of employment. The researcher recorded each participant’s weight immediately after each
weigh-in on a log sheet. Each weekly meeting began with a weigh-in and an opportunity for participants to ask any questions or share any experiences from the previous week.

*Week 1.* At the first week’s meeting participants completed the Weight Loss Readiness Test (Brownell, 2004) on Brownell’s website (www.thelifestylecompany.com) which automatically scored the participant’s responses and provided them with feedback regarding their readiness to participate in a weight loss program. Participants had access to computers at the place where meetings were held.

After the participants completed the above questionnaires, the researcher gave a general overview of nutrition, the importance of recording food intake on the self-monitoring forms, and the importance of physical activity. In addition, the researcher gave participants the Self-Monitoring Forms (SMF) for week one and the researcher fully explained how to complete them. Next, the researcher discussed the importance of setting goals and how the goals would be set for the purposes of this study (i.e., some goals were pre-determined by the researcher based on questionnaire answers and some goals were set by the participants themselves).

The first week’s goals consisted of making a list of the benefits and sacrifices of beginning a behavioral weight loss program, and consistently filling out the Self-Monitoring Form. The researcher recommended that participants buy a pedometer to assist in keeping track of their daily physical activity. Participants earned 5 points for each day that they fully completed the Self-Monitoring Form, for a total of 35 points for the week. The goal of consistently recording foods on the SMF was chosen because it is supported by research (Baker & Kirschenbaum, 1993) and is included in each week
because of its potential benefits. Participants chose five reinforcers, excluding food, which they were motivated to earn at the end of the week (e.g., a new book, watching a favorite television show, etc) and ranked them in order of most preferred to least. If participants earned the maximum number of points, they received their top-rated item. If they earned 30 points, they received their second rated item, etc.

*Week 2.* Week two consisted of reviewing each participant’s SMF, discussing sensible meals, discussing the benefits of exercise, and the logistics of exercise (e.g., how much exercise it takes to burn a pound of fat). When reviewing the SMF with each participant, the researcher focused on the number of meals eaten each day, the types of foods the participant typically ate, identifying times when the participant was most likely to be hungry, and where they were most likely to eat. Next, the participants analyzed their eating patterns with the researcher and attempted to correct the troublesome ones. For example, one participant did not eat all day due to being busy and ate larger amounts of food in the evenings. The researcher suggested that this participant plan out meals in advance and pack meals the night before to avoid being hungry throughout the day.

At the end of the meeting, goals for the next week were identified. The group goals for this week consisted of consistently filling out the SMF (5 points per day), eating sensible meals and snacks (5 points per meal and all snacks – maximum of 20 per day), and listing attitudes towards physical activity and ideas regarding ways to increase physical activity (5 points total for the week). The final goal was individualized in that participants were likely to have different answers based on their attitudes towards physical activity.
If participants received at least 155 points, they received their top item for that week. If they received between 130 and 154, they received their second rated item, between 105 and 129 they received their third rated item, between 80 and 104 they received their fourth rated item, between 55 and 79 they received their fifth rated item and if they received 54 points or fewer, nothing was received.

Week 3. At this meeting each participant identified maladaptive patterns and high-risk situations based on their SMF’s. Times of the day, feelings, activity, and types of food eaten were the focus for determining maladaptive patterns and high-risk situations. The researcher assisted the participants in identifying antecedents to eating and asked them to write down their top four “triggers.”

Again, the researcher discussed the importance of physical activity, explained the benefits and provided the participants with research-based facts regarding the benefits of exercise. The researcher discussed nutrition in regards to physical and psychological benefits. In addition, the researcher reviewed the food guide pyramid. However, the participants were told not to focus on eating the exact number of servings in the pyramid, only to focus on eating foods from each tier to ensure a balanced diet.

The group goals for this week were to begin walking consistently and increase the time or number of steps taken each day (10 points per day), record food intake on the SMF (5 points per day), eat at least one serving from each of the food groups (5 points per day) and stay within recommended calorie range each day (10 points per day).

Individual goals were embedded in the group goals, since the baseline of number of steps taken/minutes of physical activity varied for each participant as well as the recommended
number of calories. The exercise goal was determined based on research showing that exercise is beneficial for weight loss and maintenance (Jakicic, Wing, & Winters-Hart, 2002). Since exercise habits can take time to establish, the researcher incorporated this goal in the early stages of the weight loss program.

The points allocation was as follows: 180 – 210 = first rated reinforcer, 150 – 179 = second rated reinforcer, 120 – 149 = third rated reinforcer, 90 – 119 = fourth rated reinforcer, and 60 – 89 = fifth rated reinforcer. If participants received 59 points or less there was no reinforcer.

*Week 4.* The researcher discussed the importance of focusing on aspects of weight loss other than the scale. The researcher explained to the participants that other positive changes can occur, regardless of what the scale says. For example, body image may begin to be more positive or energy levels may have increased. The researcher reviewed the SMF’s with each participant and continued to assist participants in identifying common antecedents to overeating or unhealthy eating patterns. The researcher made participants aware of current research which shows that even modest amounts of weight loss (i.e., 5 – 10%) can have significant health benefits. Based on this information, participants set weight loss goals for the end of this study. Weight loss goals were one to two pounds per week or 5 – 10% of their current body weight. During this week the researcher also focused on some of the benefits of participants making changes on their own versus making changes with a friend or a group of people. For those participants who decided that they might do better with a group, the researcher helped them devise plans to involve others in a way that might help them be successful at losing weight.
The researcher also discussed barriers to becoming physically active during this week’s meeting. In addition, the principle of shaping, small successive steps towards reaching a goal, and how shaping could help the participants reach their physical activity goals was discussed. For example, if one typically walks 2,000 steps each day, one could increase the number of steps taken each day until reaching a goal of 10,000 steps per day.

In addition to the individualized goals set for each participant this week, increasing physical activity (10 points per day), daily self-monitoring (5 points per day), staying within the recommended calorie range (10 points per day), and eating foods from the five food groups were set as goals (5 points per day). The participants and researcher set these goals based on this week’s discussion as well as from answers provided on the WALI and SMF (higher points values were assigned to goals that were more difficult for the participants to meet). The points allocation for this week was as follows: 180 – 210 = first rated reinforcer, 150 – 179 = second rated reinforcer, 120 – 149 = third rated reinforcer, 90 – 119 = fourth rated reinforcer, and 60 – 89 = fifth rated reinforcer. If participants received 59 points or fewer there was no reinforcer.

Week 5. This meeting marked the one month mark for the participants. During week five, the researcher discussed how antecedents and consequences can affect success toward weight loss. The researcher discussed antecedents and consequences that were directly related to each participant’s SMF. In addition, the researcher discussed antecedent manipulation procedures, such as only eating and not engaging in other behaviors while eating, eating slowly, following an eating schedule, eating in the same place every day, and leaving some food on the plate.
The researcher focused the nutrition education for this week on the definition of a calorie and how many calories are in a pound. In addition, the five food groups (i.e., dairy, protein, vegetables, fruit, and grains) were discussed and participants were informed of how many servings from each food group they should consume, based on the recommended number of calories. The recommended number of calories was found by going to the website http://www.thelifestylecompany.com/wloss/dcr.asp, which determines calorie levels based on current weight, age, height and intensity of physical activity.

The researcher reviewed each participant’s SMF to determine what types of situations or activities participants typically engaged in while eating. The researcher focused on helping the participants set realistic, achievable goals in order to set them up for success, and participants were asked to set four realistic goals during the meeting. In addition, the researcher encouraged participants to gradually increase their physical activity each day, either by increasing the number of steps they take or increasing the number of minutes that they engage in physical activity. Goals for week five included: staying within the recommended calorie range (10 points per day), daily self-monitoring (5 points per day), meeting or exceeding individual exercise goals (10 points per day), doing nothing else while eating (5 points per day), eating on a planned schedule (5 points per day), eating in one place (5 points per day), and consistently leaving some food on the plate (5 points per day). Point allocation for this week was as follows: 270 – 315 = first rated reinforcer, 225 – 265 = second rated reinforcer, 180 – 220 = third rated reinforcer,
135-175 = fourth rated reinforcer, and 90 – 130 = fifth rated reinforcer. If the participant received 85 points or less no reinforcer was received.

**Week 6.** At this meeting the researcher discussed the importance of eating slowly. Based on a participant’s responses to the WALI, the researcher was able to determine if rate of eating might contribute to each participant’s weight. The researcher discussed techniques to slow their eating, such as putting their forks down between bites and pausing during mealtime. Nutrition education consisted of correctly identifying portion sizes (e.g., a portion of meat should look like a deck of cards, etc.) and the role of fat in the diet, including good fats (such as olive oil) and bad fats (such as lard) and how to decrease unwanted fat from the diet (e.g., cooking with olive oil instead of lard). The participants were taught to determine what a portion size should look like by comparing it to common items (such as a deck of cards, or a CD), rather than weighing the food items, so that participants could eat correct portion sizes not only at home, but also when away from home.

Physical activity discussions included reviewing the difference between lifestyle activities, such as gardening, and programmed activities, such as walking on the treadmill for 20 minutes, and ways to increase lifestyle activities. Finally, the researcher discussed negative self-talk and how this can impede success. For example, a person who tells him or herself that he or she will always be fat might have a harder time losing weight than a person who tells him or herself that he/she can be at a healthy weight.

Goals for this week included: meeting or exceeding individual exercise goals (10 points), putting one’s fork down between bites (5 points per day), leaving some food on
one’s plate (5 points per day), carefully measuring food portions (5 points per day),
eliminating negative self-talk (5 points per day), self-monitoring (5 points) and staying
within the recommended calorie range each day (10 points). Point allocation for this
week was as follows: 270 – 315 = first rated reinforcer, 225 – 265 = second rated
reinforcer, 180 – 220 = third rated reinforcer, 135- 175 = fourth rated reinforcer, and 90 –
130 = fifth rated reinforcer. If the participant received 85 points or less no reinforcer was
received.

Week 7. The researcher reviewed previously discussed techniques and evaluated
their efficacy as it pertained to weight loss and healthy lifestyle habits for each
participant. This was done by asking each participant whether specific techniques were
used and evaluating if they were helping the participant in his or her weight loss efforts.
The researcher provided tips for grocery shopping and discussed common antecedents to
buying unhealthy foods, such as shopping when hungry and not shopping from a list. The
researcher discussed nutrients (minerals, vitamins and water) and dairy products this
week for the nutrition education component. The researcher explained to the participants
how consuming adequate amounts of nutrients can speed up metabolism, thus increasing
weight loss. The researcher informed the participants that milk, yogurt, and cheese are
good sources of protein, carbohydrate, vitamin A, vitamin D, and calcium.

The researcher also discussed physical activity with each participant and helped
the participants troubleshoot ways to increase physical activity. Goals for this week
included meeting or exceeding exercise goals (10 points), shopping from a list (5 points
per instance), parking a shopping cart at the end of shopping aisles (5 points per
instance), eating the recommended number of servings from the dairy group based on recommended caloric intake (5 points per day), daily self-monitoring (5 points), and staying within the recommended calorie range (10 points per day). Point allocation for this week was as follows: 240 – 280 = first rated reinforcer, 200 – 235 = second rated reinforcer, 160 – 195 = third rated reinforcer, 120 – 155 = fourth rated reinforcer, and 80 – 150 = fifth rated reinforcer. If the participant received 75 points or less no reinforcer was received.

Week 8. The researcher discussed family relationships and how they can help or hinder successful weight loss efforts. Responses to the WALI were used to determine if each participant felt that family or friends were supportive of their weight loss efforts. Participants were given a list of topics to discuss with their family members such as actions the family should avoid (e.g., do not hide food from the person losing weight) and actions that the family should do to help support the participants (e.g., keep a positive attitude).

The researcher discussed physical activity and research indicating that physical activity can increase health benefits and help persons lose weight at a faster rate when combined with a reduction in caloric intake. The researcher also discussed the difference between programmed activity (e.g., jogging on the treadmill) vs. lifestyle activity (e.g., taking the stairs instead of the elevator) and the benefits of each. The researcher also discussed the benefits and drawbacks of taking vitamin supplements, how to correctly read food labels and the importance of protein for this week’s nutrition education.
Goals for this week included: meeting or exceeding exercise goals (10 points), selecting a programmed activity to begin (e.g., jogging) (5 points), reading food labels (5 points per day), eating the recommended number of servings from the protein group based on recommended caloric intake (5 points), daily self-monitoring (5 points), and staying within the recommended calorie range (10 points). Point allocation for this week was as follows: 215 – 250 = first rated reinforcer, 180 – 210 = second rated reinforcer, 145 – 175 = third rated reinforcer, 110- 140 = fourth rated reinforcer, and 75 – 105 = fifth rated reinforcer. If the participant received 70 points or less no reinforcer was received.

*Week 9.* This meeting marked two months for participants. The researcher reviewed each participant’s SMF and compared the current SMF to the initial SMF to find differences in eating habits and types of food eaten. The researcher discussed cholesterol, carbohydrates and vegetables and their role in weight loss or weight gain for the nutrition education component. Goals for this week included: meeting or exceeding exercise goals (10 points), leaving the table after eating (5 points per day), avoiding negative thoughts and replacing them with positive thoughts (5 points per day), eating the recommended number of servings of vegetables based on recommended caloric intake (5 points), daily self-monitoring (5 points), and staying within the recommended calorie range (10 points). Point allocation for this week was as follows: 215 – 250 = first rated reinforcer, 180 – 210 = second rated reinforcer, 145 – 175 = third rated reinforcer, 110- 140 = fourth rated reinforcer, and 75 – 105 = fifth rated reinforcer. If the participant received 70 points or less no reinforcer was received.
**Week 10.** The meeting’s agenda included stress and how this can affect eating behaviors. The researcher reviewed responses on the WALI for each participant to determine his/her level of stress. For those participants who indicated high levels of stress, this particular week was emphasized for its importance. The researcher also asked participants questions regarding their current rates of physical activity and participants were encouraged to continue increasing their exercise until they reached 10,000 steps each day or 30 to 60 minutes of exercise five days per week. The researcher discussed what to do if participants felt pressure from others to eat, such as realizing that some people are not aware that offering food to an individual can be a problem; in this type of situation, the participant is encouraged to explain his/her situation to others. Nutrition education consisted of facts about dietary fiber and fruits.

The researcher discussed high fiber foods (e.g., dried beans, broccoli, wheat bran, etc.) and their importance (e.g., protects against certain diseases, helps to control appetite, etc.). The researcher also discussed fruit and the importance of including fruit into daily caloric intake. The researcher provided tips on how to include fruit into snacks, breakfast, lunch, and dinner. In addition, the researcher discussed additional antecedent manipulation techniques, such as storing foods out of sight and keeping healthy snacks readily available.

Goals for week 10 included meeting or exceeding exercise goals (10 points), using physical activity to reduce levels of stress (i.e., rather than exercising to earn points) (5 points per day), resisting pressures to eat from others (5 points per instance), hiding high calorie foods from sight (5 points per week), eating the recommended
number of servings of fruit and fiber each day based on recommended caloric intake (5 points), daily self-monitoring (5 points), and staying within the recommended calorie range (10 points). Point allocation for this week was as follows: 215 – 250 = first rated reinforcer, 180 – 210 = second rated reinforcer, 145 – 175 = third rated reinforcer, 110-140 = fourth rated reinforcer, and 75 – 105 = fifth rated reinforcer. If the participant received 70 points or less no reinforcer was received.

*Week 11.* The researcher discussed increasing physical activity and gave the participants the tools and motivation to do so. The researcher reviewed each participant’s responses on the WALI in regards to exercise and their exercise logs. The researcher helped the participants identify common antecedents and consequences for engaging or not engaging in physical activity and helped the participants devise plans to increase physical activity based on that information. In addition, the researcher taught the participants to distinguish cravings from actual hunger and what to do in each situation to stay maintain the weight loss program. This distinction was made by reviewing each participant’s SMF to determine if eating occurred when not only hungry, but also when cravings were present.

The researcher discussed the inclusion of grains in the diet and the importance of eating breakfast on a consistent basis for the nutrition education component. The researcher also gave participants recommendations regarding how to eat healthy foods at restaurants (e.g., order from the appetizer or salad section of the menu, limit salad dressing, etc.). In addition, the researcher discussed information about alcohol, its caloric content and the effects that it can have on weight gain.
Goals for this week included: meeting or exceeding exercise goals (10 points), identifying antecedents and consequences to inactivity (5 points per day), eating breakfast on a daily basis (5 points), eating healthy away from home (5 points per instance), drinking alcohol in moderation (if the participants did not drink at all, they earned 5 points for the week) (5 points per week), eating the recommended number of servings from the grains group based on recommended caloric intake (5 points), daily self-monitoring (5 points), and staying within the recommended calorie range (10 points). Point allocation for this week was as follows: 215 – 250 = first rated reinforcer, 180 – 210 = second rated reinforcer, 145 – 175 = third rated reinforcer, 110- 140 = fourth rated reinforcer, and 75 – 105 = fifth rated reinforcer. If the participant received 70 points or less no reinforcer was received.

*Week 12.* This was the final weekly meeting before moving to biweekly meetings. During this meeting, the researcher reviewed each participant’s progress and the skills gained over the past 12 weeks. This was done by comparing the participant’s SMF’s from week 1 to week 12 in addition to open discussions about changes that each participant had made since beginning this program. The researcher chose to compare the SMF for week 1 to the SMF for week 12 to show the amount of change that each participant had made. For the nutrition education component the researcher presented information about fast food restaurants and tips for eating healthier at fast food restaurants, if one must go there. In addition, the researcher discussed ways to prevent lapses and relapses.
The researcher asked each participant to research a topic of their choosing regarding weight loss (e.g., relationship of exercise to weight loss, motivation and weight loss, etc.) and present in at one of the future bi-weekly meetings. The purpose of this was to give the participants the tools to stay up-to-date with current weight loss techniques and ideas.

Goals for week 12 included: meeting or exceeding exercise goals (10 points), distinguishing between lapses and relapses (5 points), eating the recommended servings from all five food groups based on recommended caloric intake (5 points), daily self-monitoring (5 points), and staying within the recommended calorie range (10 points). Point allocation for this week was as follows: 215 – 250 = first rated reinforcer, 180 – 210 = second rated reinforcer, 145 – 175 = third rated reinforcer, 110- 140 = fourth rated reinforcer, and 75 – 105 = fifth rated reinforcer. If the participant received 70 points or less no reinforcer was received.

After Week 12, a fading procedure started whereby the participants began biweekly meetings with the researcher. Weeks 14, 16, and 18 were dedicated to discussing problem-solving techniques. The meetings consisted of mostly discussion, although there was some lecture involved as well. The participants discussed situations that made following the weight loss program difficult. Then, the researcher and other participants helped each individual participant come up with solutions to use the next time the individual found him/herself in that situation. The researcher discussed participant responses to the DIET questionnaire and helped participants find alternative ways to respond in problem situations. The DIET questionnaire gives scenarios of
individuals making good choices (in relation to weight loss) in specific situations and participants circle the percentage of time that he/she would make the same or similar choice. Participants also discussed real-life examples and shared with each other their techniques for coping in difficult situations. Participant presentations were presented during Weeks 16, 18, 20 and 24. The researcher told the participants that they were responsible for continuing to set goals and assign point values to those goals until the end of the weight loss program.

After the three biweekly meetings, the participants were not to meet with the researcher for four weeks, thus there were no meetings during Weeks 21 – 23. Weeks 20 and 24 also consisted of similar discussions to those in Week 16 (i.e., problem solving techniques), as well as presentations by the participants. Presentations consisted of the importance of water in losing weight, and different types of exercises and their benefits for weight loss.
Overall Assessment Results.

Participants were assessed using the WRT, WALI, DIET, and weekly SMF’s. Assessment results are first summarized for all four participants as a group, then individually. Results from the WRT indicated that all participants were ready to begin a weight loss program. Participants reported a range of 17 – 23 obstacles to losing weight out of 24 choices that were provided on the WALI. Results from the WALI, which are shown in Table 3, illustrate the top five obstacles to losing weight for each participant, according to individual responses on the WALI. As Table 3 shows, all four participants reported that eating too much food and overeating at dinner were one of the top five obstacles to losing weight. Other obstacles that were reported inconsistently across participants were overeating at lunch, snacking after dinner, snacking between meals, eating because of the taste of good foods or cravings, continuing to eat because of not feeling full, and eating when depressed, upset, happy, or stressed.

Table 4 shows the scores for the participants who completed the study for each of the six different categories of the DIET as well as norms for the DIET subscales for both normal weight and overweight individuals. The norms were derived from the original DIET scales (Schlundt & Zimering, 1998). When compared to norms for overweight persons who have completed the DIET questionnaire, these results indicate that the group of participants scored lower than average on several categories of the DIET (i.e., resisting
temptation, food choice, exercise, positive social, and negative emotional eating). A lower score indicates that participants would choose to engage in a healthy choice, given a specific scenario regarding food consumption a low percentage of the time. In contrast, the group scored higher than average on the overeating scale when compared to norms for overweight persons (i.e., participants’ scores indicate that they would choose the solution to the problem situation related to overeating more often than typical overweight persons would choose that same solution). Overall, when scores from all of the subscales were combined, participants scored lower than the norms for overweight persons (i.e., participants chose the healthy solution 46.5% of the time compared to 52% of the time for the normative data, with the exception of the overeating category).

On average, participants received enough points to obtain their top two reinforcing items or activities. However, participants reported during weekly discussions that they often did not follow through with administering the reinforcers to themselves. In addition, participants did not consistently keep track of the number of points that they had earned each day.
Table 3

*Top 5 Obstacles to Weight Loss from the WALI*

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<thead>
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<tr>
<td>TMF</td>
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**Individual Participant Assessment Results.**

Each participant’s individual results for the WALI, DIET, and SMF are reviewed in the following sections. Motivational results from the WRT are not included because participants indicated sufficient motivation to begin a weight loss program.
Table 4

Scores for the DIET Subscales

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<tr>
<th></th>
<th>RT</th>
<th>PS</th>
<th>FC</th>
<th>EX</th>
<th>OE</th>
<th>NE</th>
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<td>62</td>
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<td>SD</td>
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<td>18</td>
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</table>

RT  Resisting temptation
PS  Positive Social
FC  Food Choice
EX  Exercise
OE  Overeat
NE  Negative emotional eating
Total Average of all items
Participant 1

The WALI scores for Participant 1 indicated that eating too much food, snacking after dinner, eating when depressed or upset, and eating when happy were the greatest contributors to being overweight. In addition, overeating at lunch and dinner; snacking between meals; eating because of cravings; continuing to eat after a meal because of not feeling full; eating because of the taste of good foods; eating when anxious or stressed; eating when alone; and eating with friends and family were contributed a large or moderate amount according to the participant’s self-reported responses. Overeating at breakfast, eating because of feeling physically hungry, eating in response to the sight or smell of food, eating because one can’t stop once one has begun, eating while cooking or preparing food, eating when tired, eating when bored, eating when angry, eating when socializing or celebrating, and eating at business functions contributed a small amount or not at all to being overweight. Before treatment began, this participant reported that exercise was slightly enjoyed. This participant reported that daily lifestyle activity was a 4 on a scale of 1 – 10 (1 = very sedentary 10 = very active). Responses on the WALI also show that this participant is single, and lives with three roommates, and felt that other people would support efforts to lose weight; however, this participant chose not talk to other people about weight issues. Participant 1 reported feeling very dissatisfied with his/her current weight and shape, moderately dissatisfied with overall appearance prior to treatment, and reported that he/she had poor self-esteem. This participant reported an average level of stress, motivation to lose weight was an 10 on a scale of 1 to 10 (1 = not motivated, 10 =
greatest motivation you have ever have), and confidence that he/she would be able to significantly change eating and exercise habits was a 8 on a scale of 1 to 10 (1 = not at all confident 10 = extremely confident).

DIET scores for Participant 1 indicate that when in a situation in which there are temptations, this person reported resisting the temptation an average of 66% of the time. In positive social situations, this participant reported making a healthy choice an average of 72% of the time. This participant reported choosing to eat healthy foods an average of 26% of opportunities. Exercise or lifestyle activity was reported to be engaged in an average of 40% of possible opportunities. This participant reported choosing not to overeat an average of 62% of opportunities and reported engaging in negative emotional eating an average of 56% of the time. Overall, this participant reported making healthy choices an average of 46.5% of the time.

For this participant, the SMF indicated that eating episodes usually occurred when hungry, tired or stressed. The self-reported total of all foods eaten in a day typically fell in the range of 1180 to 1985 calories.

*Participant 2*

WALI scores for Participant 2 indicated that eating too much food was the greatest contributor to being overweight. In addition, overeating at dinner; snacking between meals; snacking after dinner; eating because of the taste of good foods; eating in response to the sight or smell of foods; eating when bored; and eating when socializing/celebrating contributed a moderate to large amount to being overweight. Overeating at breakfast and lunch, eating when physically hungry, eating because of
cravings, continuing to eat because of not feeling full after an average meal, inability to stop eating, eating while cooking or preparing food, eating when anxious, tired, stressed, angry, depressed, happy, alone, with family and friends, and eating at business functions contributed a small amount or not at all to being overweight. Before treatment began, this participant reported that exercise was slightly enjoyed and daily lifestyle activity was a 5 on a scale of 1 – 10. Responses on the WALI showed that this participant is single and lives with one roommate. He/she believes that other people would support efforts to lose weight. This participant reported that he/she would talk to at least two other people about weight issues. Participant 2 reported feeling moderately dissatisfied with his/her current weight, shape and overall appearance in addition to having average self-esteem prior to treatment. He/she was reported that life has been more stressful than usual for him/her. Motivation to lose weight was an 8 on a scale of 1 to 10 (1 = not motivated, 10 = greatest motivation you have ever had). Confidence that the participant will be able to significantly change eating and exercise habits was a 7 on a scale of 1 to 10 (1 = not at all confident 10 = extremely confident).

DIET scores for Participant 2 indicated that when in a situation in which there are temptations, this person reported resisting the temptation to eat an average of 52% of the time. In positive social situations, this participant reported that he/she would make a healthy choice an average of 18% of the time. This participant reported that he/she chose to eat healthy foods an average of 48% of opportunities. Exercise or lifestyle activity was reportedly engaged in an average of 44% of the time. This participant reported that he/she chose not to overeat an average of 34% of opportunities and reported that he/she engaged
in negative emotional eating an average of 18% of the time. Overall, this participant reported that he/she made healthy choices an average of 44.7% of the time.

According to the SMF for this participant, eating episodes usually occurred when hungry, tired, in social situations and automatically (i.e., eating without thinking about eating). Meals typically fell in the range of 1205 to 2425 calories.

Participant 3

Scores from the WALI for Participant 3 indicate that overeating at dinner; continuing to eat because of not feeling full after a meal; and eating when tired or stressed contributed the greatest amount to being overweight. In addition, eating too much food; overeating at lunch; snacking after dinner; eating because of cravings; eating because of the good taste of foods; eating in response to the sight or smell of food; eating when anxious, happy or depressed; and eating when socializing or alone all contributed a moderate to large amount to being overweight. Overeating at breakfast, snacking between meals, eating because of feeling physically hungry, eating because one can’t stop once one has begun, eating while cooking and preparing food, eating when bored, and eating when angry contribute a small amount or not at all to being overweight. Before treatment began, this participant reported “not at all” to the question, “To what extent do you enjoy physical activity?” In addition, it was reported that daily lifestyle activity was a 3 on a scale of 1 – 10. Results from the WALI also show that this participant is divorced and lives alone. This participant felt that other people would support efforts to lose weight, however, the participant reported that he/she would not talk to other people about weight issues. This participant felt very dissatisfied with his/her current weight, shape and
overall appearance in addition to having poor self-esteem prior to treatment. It was reported that life has been more stressful than usual. Motivation to lose weight was an 8 on a scale of 1 to 10 (1 = not motivated, 10 = greatest motivation you have ever have), and confidence that the participant will be able to significantly change eating and exercise habits was a 7 on a scale of 1 to 10 (1 = not at all confident 10 = extremely confident).

DIET scores for Participant 3 indicated that when in a situation in which there are temptations, this person reported that he/she would resist the temptation an average of 40% of the time. In positive social situations, this participant reported that he/she would make a healthy choice an average of 30% of the time. This participant reportedly chose to eat healthy foods an average of 60% of opportunities. This participant reported that exercise or lifestyle activity was engaged in an average of 28% of the time. This participant self-responded choosing not to overeat an average of 36% of opportunities and reported that he/she engaged in negative emotional eating an average of 50% of the time. Overall, this participant reported making healthy choices an average of 40.7% of the time.

According to the SMF for this participant, eating episodes usually occurred when hungry, craving certain foods, and automatically eating (i.e., eating without thinking about eating). Participant 4 reported that meals typically fell in the range of 878 to 3252 calories.
Participant 4

Scores from the WALI for Participant 4 indicate that eating too much food; eating because of cravings; and continuing to eat because of not feeling full after a meal are the greatest contributors to being overweight. In addition, overeating at lunch and dinner; eating because he/she can’t stop once begun; eating in response to the sight or smell of foods; eating when anxious, tired, bored, stressed, angry, depressed and happy; eating when socializing/celebrating; and eating with family/friends all contributed a moderate to large amount to being overweight. Overeating a breakfast, snacking between meals, snacking after dinner, eating because of feeling physically hungry, eating while cooking or preparing food, eating when alone, and eating at business functions contributed a small amount or not at all to being overweight. Before treatment began, this participant reported that physical activity was enjoyed slightly and daily lifestyle activity was a 4 on a scale of 1 – 10. Results from the WALI also show that this participant is married and lives with a spouse and one other person. This participant felt that his/her spouse would support efforts to lose weight; however, it was reported that the spouse often brings non-diet foods into the home. The participant reported that he/she talks to one other person when upset about weight issues, however, this person is not helpful. This participant felt that his/her spouse would undermine efforts to lose weight. Participant 4 felt very dissatisfied with his/her current weight and shape and moderately dissatisfied with overall appearance. This participant reported that life has been much more stressful than usual. Motivation to lose weight was an 8 on a scale of 1 to 10 (1 = not motivated, 10 = greatest motivation you have ever had), and confidence that the participant will be able to
significantly change eating and exercise habits was a 6 on a scale of 1 to 10 (1 = not at all confident 10 = extremely confident).

DIET scores for Participant 4 indicated that when in a situation in which there are temptations, this person reported that he/she would resist the temptation an average of 50% of the time. In positive social situations, this participant reported making a healthy choice an average of 32% of the time. This participant reported that he/she chose to eat healthy foods an average of 54% of opportunities. This participant reported that he/she engaged in exercise or lifestyle activity an average of 48% of the time. This participant reported that he/she chose not to overeat an average of 62% of opportunities and reported that he/she engaged in negative emotional eating an average of 92% of the time. Overall, this participant reportedly made healthy choices an average of 42.3% of the time.

According to the SMF for this participant, eating episodes usually occurred when hungry, tired, stressed, and automatically (i.e., eating without thinking about eating). This participant reported that meals typically fell in the range of 1500 to 2425 calories.

Overall Weight Loss Results

The average weight loss for all participants combined during treatment, excluding the dropout, was 19.90 pounds over the 24 week period (i.e., an average of .83 pounds per week). Figure 1 shows weight loss for each participant over the 24 week period. Participant 1 lost a total of 20.6 pounds (8% of initial weight), Participant 2 lost a total of 20.2 pounds (10% of initial weight), Participant 3 lost a total of 33 pounds (13% of initial weight), and Participant 4 lost a total of 5.8 pounds (3% of initial weight). Participant 1
met with the researcher individually, while Participants 2, 3, and 4 met as a group with
the researcher.

Figure 1. Weight lost for each participant over a 24-week period.
Because this study was a descriptive study, no causal or correlational relationships could be established. The results of this study, however, have implications for the use of individualized behavior management combined with a functional assessment for the treatment of obesity. Consistent with many studies (e.g., Foreyt & Goodrick, 1993; Jeffery, et. al., 1993; Wadden, Foster, & Letizia, 1992; Wing, Epstein, Shapira & Koeske, 1984), it was found that participants lost weight using a behavior management program. The assessment (using various assessment devices such as the WALI, DIET, WRT, and SMF) yielded data suggesting functions of unhealthy lifestyle choices by overweight individuals. The assessment may have assisted in better individualization of the behavior management program for weight loss. This finding is consistent with Straw & Terre’s 1983 study in which the group who received individualized treatment maintained weight loss for longer periods of time, as compared to the other treatment groups who did not receive individualized treatment.

Previous studies (Wadden, 1993; Wing, 1998) have shown that participants who participate in behavioral weight loss programs lose at least 5 – 10% of their initial body weight over a 24 week period. According to the NHLBI Obesity Education Initiative Expert Panel (1998) a 10% weight loss is considered weight loss success. According to this definition of weight loss success, 3 out of 4 participants met this criterion.
Participant 1, who lost 8% (20.6 pounds) of initial body weight (250.8 pounds), began consistently exercising shortly after treatment began. This participant received reinforcement and encouragement from supportive people, such as family and friends. This participant consistently utilized the self-management techniques that were taught to him/her by recording food intake on his/her self-monitoring forms and typically received his/her first or second rated reinforcer. This participant stated that eating too much food was one of the top five obstacles to losing weight, thus, the researcher focused on antecedent manipulation in the form of teaching correct portion sizes and moderation to this participant. In addition, Participant 1 stated that overeating at dinner and snacking after dinner were also obstacles to losing weight. The researcher helped this participant to find more satisfying, high fiber foods to eat for dinner and to choose healthy snacks after dinner. This participant stated that eating when depressed and happy also contributed to being overweight. The researcher focused on finding other means to effectively handle emotions, such as calling a friend when upset or happy, or watching a favorite television show or movie, thus changing the reinforcement history of eating to cope with specific feelings. Participant 1 had the lowest percentage in the food choice section of the DIET questionnaire, indicating that this participant had the most difficulty choosing foods wisely across situations compared to the other participants. The researcher helped the participant plan foods for the day to lessen the likelihood of eating unhealthy foods. In addition, the researcher provided nutrition information about healthy and unhealthy foods to help the participant to make informed food choices.
Participant 2, who lost 10% (20.2 pounds) of initial body weight (211.8 pounds) believed that others would support efforts to lose weight. Although this participant reported significant amounts of stress in his/her life, he/she was able to cope with the stress in a healthy manner. This participant consistently utilized the self-management techniques discussed by recording food intake on his/her self-monitoring forms and typically received his/her first or second rated reinforcer. According to responses in the WALI, this participant reported that eating too much food, snacking after dinner, and overeating at dinner with the biggest obstacles to losing weight. Since this participant reported these same three obstacles as Participant 1, the researcher used similar techniques to help the participant overcome these obstacles. In addition, this participant reported that snacking between meals and eating because of the taste of good foods were also obstacles to losing weight. The researcher helped this participant pre-plan meals and grocery lists that included more filling, satisfying foods to avoid the urge to snack between meals. This technique of antecedent manipulation could have contributed to this participant’s success. If the participant still desired to have a snack, the researcher brainstormed some healthy options with the participant to avoid further weight gain. The researcher helped this participant find low-calorie or low-fat alternatives to the foods that he/she craved that met the same or similar taste requirements to help satisfy cravings in a healthier manner. Scores on the DIET indicated that this participant had the most difficulty making healthy choices when in positive social situations (e.g., parties, going to a friend’s house, etc.). The researcher advised the participant to eat something healthy before going to social situations to lessen the likelihood of overeating. In addition, the
researcher suggested that the participant bring a healthy dish to the event so there would 
be at least one thing there that he/she could eat.

Participant 3, who lost 13% (33 pounds) of initial body weight (262.8), began 
reducing portion sizes soon after Week 2 of the study. The researcher helped the 
participant find ways to increase energy and reduce stress by resting more, increasing 
exercise, and incorporating healthy foods into the diet. This participant consistently 
recorded food intake on his/her self-monitoring forms and typically received his/her first 
or second rated reinforcer. Responses on the WALI indicated that eating too much food, 
overeating at dinner, and eating because of the taste of good foods were obstacles to 
losing weight. These responses were shared by Participants 1 and 2, thus, the researcher 
used similar techniques to help the participant overcome those obstacles. In addition, this 
participant reported that continuing to eat because of not feeling full after an average 
meal and eating when stressed were also obstacles to losing weight. The researcher 
helped the participant find more filling foods to incorporate into meals and advised the 
participant to eat throughout the day to avoid becoming too hungry. In addition, the 
researcher assisted the participant with various techniques to reduce stress, such as 
walking and other forms of exercise, getting adequate amounts of sleep, and prioritizing 
tasks. Scores from the DIET indicate that this participant had the most difficulty making 
healthy lifestyle choices in the areas of exercise and positive social situations. The 
researcher used the same techniques as with Participant 2 to make more healthy choices 
when in positive social situations. To help the participant make more healthy choices in
the area of exercise, the researcher used a shaping procedure and reward contingencies to gradually increase the amount of exercise that the participant engaged in.

Participant 4, who lost 3% (5.8 pounds) of initial body weight (174.2 pounds), had the most difficult time losing weight. This was the only participant who reported that the significant other in his/her life was not supportive or helpful in weight loss efforts. Scores on the WALI indicated that this participant felt that eating too much food, overeating at dinner, continuing to eat because of not feeling full, eating because of cravings and overeating at lunch were the biggest obstacles to losing weight. The researcher worked with this participant to reduce portion sizes and slow eating rate (to allow time for the participant to feel full) in addition to the behavioral weight loss techniques that were included as part of the program. The researcher also worked with this participant by teaching about how antecedent manipulation can help reduce cravings (e.g., placing unhealthy foods out of sight, planning meals in advance, packing lunches the night before). The researcher suggested that trigger foods be removed or hidden to avoid eating foods that would hinder weight loss since this participant believed that eating too much food, eating because of cravings, and eating because of the taste of good foods were the greatest contributors to being overweight. Although this participant attempted to eat healthy foods, the participant’s significant other continued to buy unhealthy foods and cook unhealthy foods in the participant’s presence, for example, buying M & M’s and placing them in a bowl on the counter or cooking fried foods. DIET scores indicated that this participant had the most difficulty making healthy decisions when he/she was in negative emotional situations (e.g., fighting with significant other).
The researcher gave the participant suggestions for how to handle negative emotions without using food, such as going for a walk or talking to a close friend or relative.

There are some consistencies and differences between those participants who were successful in losing weight and those who were less successful. Two of the participants who lost the most weight had a support network of persons who encouraged them, thus, they received social reinforcement in addition to tangible reinforcement. The one person who was less successful did not have a support network. Reduction in portion sizes and increasing exercise were other common elements to those who were successful in weight loss. It is also interesting to note that although the participants did not consistently follow through with the delivery of their earned items/activities, it may not have been a factor in weight loss.

Although some consistencies were found among those individuals who successfully lost weight, there are a number of limitations to the present study. First, although this study can show weight loss comparable to other successful weight loss studies, causation cannot be attributed. Second, there was a possible sampling bias, as all participants in the study were volunteers. Third, both the researcher and the participants knew the purpose and hypothesis of the study, thus, it was non-blind. Fourth, due to time constraints, there was no follow-up to determine if the participants maintained their weight loss. Fifth, no single treatment that was applied to the participants could be isolated. Finally, all of the participants, except one, worked in the field of applied behavior analysis, thus, it is possible that these persons were more likely to apply behavioral analysis to their own weight loss.
The current research has been an initial attempt to link functional assessment and treatment for obese and overweight individuals by individualizing treatment according to the assessment results. The current research points to several avenues of future research. Future research should be conducted in an experimental manner with a follow-up, so as to be able to show causation between treatment and outcome. In addition, in order to reduce sampling bias, research should be conducted on a random sample of eligible participants, who do not have experience or knowledge of behavior analysis. Future research should include studying how social support can affect short-term and long-term weight loss. The current study consisted of participants who did and did not have social support from others; however, the effects of this support on weight loss were not analyzed. In addition, studies to further evaluate the effectiveness of conducting functional assessments and incorporating those results into individualized behavioral weight loss programs should be conducted. Finally, with the growing problem of childhood obesity, future research should investigate the appropriateness of using functional assessment procedures combined with behavior management to children and their caregivers.
APPENDIX A

Weight and Lifestyle Inventory (WALI)

The WALI is designed to obtain information about your weight and dieting histories, your eating and exercise habits, and your relationships with family and friends. Please complete the questionnaire carefully and make your best guess when unsure of the answer. Feel free to use the margins and bottom of pages when you need more space for your answers. You will have an opportunity to review your answers with a member of our professional staff.

Please allow 60-90 minutes to complete this questionnaire. Your answers will help us better identify problem areas and plan your treatment accordingly. Please be assured that the information you provide will be kept confidential and will only be available to the treatment staff. Thank you for taking the time to complete this questionnaire.

SECTION A: IDENTIFYING INFORMATION

1. Name ____________________________________________

2. Date of Birth ___________ 3. Age ___________

4. Weight ___________ 5. Height ___________

6. Address ___________________________________________

7. Phone: Day ___________ 8. Evening ___________

9. Occupation/# of yrs. at job ___________ 10. Social Security # ___________

11. Today’s Date ___________

12. Highest year of school completed: (Circle one.)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Masters Doctorate

High School College

13. Ethnicity (Circle all that apply). American Indian Asian African American Hispanic White Other: __________

14. How did you hear about our program? (Check all that apply.)

_____ Newspaper _____ Physician _____ Other Professional _____ Website

_____ Friend _____ Employer _____ Other (Please Specify) ___________

SECTION B: WEIGHT HISTORY

1. At what age were you first overweight by 10 lbs. or more? _____ yrs. old

How do you remember that you were overweight at this time? (e.g., pictures, clothing size, others telling you)

2. What has been your highest weight after age 21? _____ lbs. _____ yrs. old

3. What has been your lowest weight (not due to illness) after age 21, which you have maintained for at least 1 year? _____ lbs. _____ yrs. old, maintained for _____ yrs.

Was this weight reached after a weight loss effort? (Circle one.) Yes No
4. Circle the number of the statement that best describes you. “During the past 6 months my weight has…”

1. decreased more than 10 lbs. or more
2. decreased by 5 to 10 lbs.
3. been relatively stable
4. increased by 5 to 10 lbs.
5. increased by more than 10 lbs. or more

5. What was your weight: 6 months ago? _____ lbs. 1 year ago? _____ lbs. 2 years ago? _____ lbs.

6. For each time period shown below, please list your maximum weight. If you cannot remember what your maximum weight was, make your best guess and mark “G” (for guess) next to your answer. In addition, please note any events related to your gaining weight during this period. For ages 16 and beyond, please identify the figure, from those shown below, that most resembles your figure at that time. Record the number of the figure.

<table>
<thead>
<tr>
<th>AGE</th>
<th>MAXIMUM WEIGHT</th>
<th>FIGURE #</th>
<th>EVENTS RELATED TO WEIGHT GAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 5-10</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>b. 11-15</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>c. 16-20</td>
<td></td>
<td></td>
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<tr>
<td>d. 21-25</td>
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<tr>
<td>e. 26-30</td>
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<tr>
<td>f. 31-35</td>
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<tr>
<td>g. 36-40</td>
<td></td>
<td></td>
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<tr>
<td>h. 41-50</td>
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<td></td>
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<tr>
<td>i. 51-60</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>j. 60-70</td>
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</tbody>
</table>
SECTION C: FAMILY WEIGHT HISTORY

1. Please indicate the average height and weight of your biological mother and father during their middle-age years. Also, please select from the figures on the previous page, the one that is most similar to your parents' body shapes. If you do not know your biological parents' height and weight, please mark NA (not applicable) in the spaces.

<table>
<thead>
<tr>
<th>Parent</th>
<th>Height (ft.+in.)</th>
<th>Weight (lbs.)</th>
<th>Current Age or year of death</th>
<th>Figure # (from previous page)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Mother</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>b. Father</td>
<td></td>
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</tr>
</tbody>
</table>

2. Please indicate the height and weight of the following members of your immediate family. Indicate any half-brothers or half-sisters.

<table>
<thead>
<tr>
<th>Family Member</th>
<th>Height (ft.+in.)</th>
<th>Weight (lbs.)</th>
<th>Current Age or year of death</th>
<th>Figure # (from previous page)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Spouse/ Significant Other</td>
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<td></td>
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<tr>
<td>b. Oldest brother</td>
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<tr>
<td>c. 2nd oldest brother</td>
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<tr>
<td>d. 3rd oldest brother</td>
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<tr>
<td>e. Oldest sister</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>f. 2nd oldest sister</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. 3rd oldest sister</td>
<td></td>
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</tr>
</tbody>
</table>

SECTION D: WEIGHT, PREGNANCY, AND MENSTRUAL CYCLE
(For Women Only)

1. Have you borne children? (Circle one.) Yes  No
   If yes,
   a. What was your weight at the start of your pregnancy? _____ lbs.
      What was your weight at delivery? _____ lbs.
      What was your lowest weight after delivery? _____ lbs.
   b. What was your weight at the start of your second pregnancy? _____ lbs.
      What was your weight at delivery? _____ lbs.
      What was your lowest weight after delivery? _____ lbs.
   c. What was your weight at the start of your third pregnancy? _____ lbs.
      What was your weight at delivery? _____ lbs.
      What was your lowest weight after delivery? _____ lbs.
d. What was your weight at the start of your fourth pregnancy? _____ lbs.  
   What was your weight at delivery? _____ lbs.  
   What was your lowest weight after delivery? _____ lbs.  

   Please turn to the last page if you need more space.

2. Do you experience a regular menstrual cycle? (Circle one.) Yes  No  
   If yes,  
   a. Describe your eating around the time of your menstruation? (Circle one.)  
      Eat much less  Eat less  No Change  Eat More  Eat Much More  
   b. Do you crave particular foods around the time of your menstruation? (Circle one.) Yes  No  
   c. If yes, which foods do you crave?

SECTION E: WEIGHT LOSS HISTORY

1. Please record your major weight loss efforts, (i.e., diet, exercise, moderation, etc.) which resulted in a weight loss of 10 pounds or more. Take time to think over your previous efforts, starting with the first one, whether in childhood or adulthood. You may have difficulty remembering this information at first, but most people can if they take their time. Start with your first weight loss effort and proceed in order until you reach your most recent one.

<table>
<thead>
<tr>
<th>Age at time of effort</th>
<th>Weight at start of effort</th>
<th># lbs. lost</th>
<th>Method used to lose weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>b.</td>
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<td>c.</td>
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<td>d.</td>
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<td>e.</td>
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<td>f.</td>
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<td>g.</td>
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<tr>
<td>h.</td>
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<tr>
<td>i.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

   Please turn to the last page if you need additional space.

2. Please pick a number from 1 to 10 to indicate below how accurate you think you were in remembering and recording your weight loss history. Pick any number from 1 to 10: 
1= not at all accurate and 10=completely accurate. Your number is:______

3. In the past year, how many times have you started a weight loss program on your own that lasted for more than 3 days?_______

4. In the past year, how many times have you started a weight loss program that lasted for 3 days or less? _____

5. Have you ever experienced any significant physical or emotional symptoms while attempting to lose weight or after losing weight? (Circle one.) Yes No

If yes, please describe your symptoms, how long they lasted and the type of professional help sought, if any.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Year</th>
<th>Duration (wks.)</th>
<th>Type of Professional Help</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

SECTION F: WEIGHT LOSS GOALS

1. How much weight would you like to lose at this time? ______ lbs.

2. This would bring you down to a body weight of ______ lbs.

3. When did you last weigh this amount? ______

4. How long was this weight maintained? ______ months

5. Was it achieved after a weight loss effort? (Circle one.) Yes No

6. If you are successful in our program, in changing your eating and exercise habits, how much weight do you realistically expect to lose after:
   a. 6 months ____ lbs.    b. 12 months ____ lbs.    c. 24 months ____ lbs.

SECTION G: TOBACCO AND ALCOHOL USE

1. Do you currently smoke cigarettes? (Circle one.) Yes No
   If yes,
   a. How many do you smoke a day? ______
   b. How many years have you smoked? ______

2. Have you ever smoked cigarettes and stopped? (Circle one.) Yes No
   If yes,
   a. When did you stop smoking? ______
   b. How many cigarettes did you smoke? ______/day
   c. Did you experience any weight gain after stopping smoking? (Circle one.) Yes No
   If yes, how many pounds? ______
3. During the past year:
   a. How many glasses of wine did you typically drink a week? ______
   b. How many bottles of beer did you typically drink a week? ______
   c. How many mixed drinks or liqueurs did you typically have a week? ______

4. Have you ever had a problem with alcohol consumption or the use of other drugs? (Circle one.) Yes  No
   a. If yes, please describe the problem and any help you received for it.

   ____________________________
   ____________________________
   ____________________________

SECTION H: EATING HABITS

1. Please indicate the degree to which you believe each of the following behaviors causes you to gain weight. In answering these questions, please use the 5-point scale below. Pick the one number that best describes how much the behavior contributes to your increased weight:

   1. does not contribute at all
   2. contributes a small amount
   3. contributes a moderate amount
   4. contributes a large amount
   5. contributes the greatest amount

   _____a. Eating with family/friends
   _____b. Eating when socializing/celebrating
   _____c. Eating at business functions
   _____d. Eating when happy
   _____e. Eating in response to sight or smell of food
   _____f. Eating because of the good taste of foods
   _____g. Eating because I can’t stop once I’ve begun
   _____h. Overeating at dinner
   _____i. Eating too much food
   _____j. Continuing to eat because I don’t feel full after a meal
   _____k. Eating because I crave certain foods
   _____l. Eating because I feel physically hungry
   _____m. Eating while cooking/preparing food
   _____n. Eating when stressed
   _____o. Eating when depressed/upset
   _____p. Eating when angry
   _____q. Eating when anxious
   _____r. Eating when alone
   _____s. Eating when bored
   _____t. Eating when tired
   _____u. Overeating at lunch
   _____v. Overeating at breakfast
   _____w. Snacking after dinner
   _____x. Snacking between meals

Please indicate any other factors that contribute a moderate amount or more to your weight gain.

   ____________________________
   ____________________________
   ____________________________
2. How many days a week do you eat the following meals? Write the number of days in the space and the usual time of each meal.

   a. Breakfast ______ days a week  Time: ______ Morning Snack ______ days a week  Time: ______
   b. Lunch ______ days a week  Time: ______ Afternoon Snack ______ days a week  Time: ______
   c. Dinner ______ days a week  Time: ______ Evening Snack ______ days a week  Time: ______

3. Who prepares meals at your home? ____________________________________________

4. Who does the food shopping? ________________________________________________

5. Please list your five favorite foods: __________________________________________

6. Do you have any food allergies? (Circle one.) Yes  No
   If yes, please specify the food and the allergic reactions.

7. Please specify the amount (in cups, 8 oz.) of the following fluids you typically consume a day.

   _____ skim milk  _____ low fat milk  _____ whole milk  _____ seltzer water
   _____ fruit juice  _____ diet soda  _____ tea  _____ coffee  _____ beer
   _____ water  _____ regular soda  _____ wine  _____ hard liquor  _____ other

8. During a typical week, how many meals do you eat at a fast food restaurant (including drive thru and convenience stores)?

   Breakfast ______ meals a week
   Lunch ______ meals a week
   Dinner ______ meals a week

9. During a typical week, how many meals do you eat at a traditional restaurant, coffee shop, cafeteria, or similar establishment?

   Breakfast ______ meals a week
   Lunch ______ meals a week
   Dinner ______ meals a week

10. How many times a week do you typically eat out with others (including family)? _____
SECTION I: FOOD INTAKE RECALL

Please indicate the foods you consume on a typical weekday.

<table>
<thead>
<tr>
<th>Meal</th>
<th>Time</th>
<th>Location</th>
<th>Food and Beverages Consumed</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morning Snack</td>
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<td>Lunch</td>
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<td>Afternoon Snack</td>
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<td>Dinner</td>
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<tr>
<td>Evening Snack</td>
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</tbody>
</table>

Please indicate the foods you consume on a typical weekend day.

<table>
<thead>
<tr>
<th>Meal</th>
<th>Time</th>
<th>Location</th>
<th>Food and Beverages Consumed</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td></td>
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<tr>
<td>Morning Snack</td>
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<td>Evening Snack</td>
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SECTION J: EATING PATTERNS I


1. **During the past 6 months**, did you often eat an unusually large amount of food within a two hour period (an amount that most people would agree is unusually large)? *(Circle one.)*
   - Yes
   - No

2. During the times when you ate an unusually large amount of food, did you often feel you could not stop eating or control what or how much you were eating? *(Circle one.)*
   - Yes
   - No
IF NO, SKIP TO QUESTION 11 in this section. Do not complete questions 3-10.

3. **During the past 6 months**, how often, on average, did you have times when you ate unusually large amounts of food and felt that your eating was out of control? (There may have been some weeks when it was not present; just average those in.) (Circle one.)
   a. Less than one day a week  
   b. One day a week  
   c. Two or three days a week  
   d. Four or five days a week  
   e. Nearly every day

4. Did you usually have any of the following experiences during these occasions? Complete all items.
   a. Eating much more rapidly than usual? (Circle one.)  
   b. Eating until you felt uncomfortably full? (Circle one.)  
   c. Eating large amounts of food when you didn’t feel physically hungry? (Circle one.)  
   d. Eating alone because you were embarrassed by how much you were eating? (Circle one.)  
   e. Feeling disgusted with yourself, depressed or feeling very guilty after overeating? (Circle one.)  
   f. Eating large amounts of food throughout the day with no planned mealtimes? (Circle one.)  

5. Think about a typical time when you ate this way (that is, large amounts of food and feeling that your eating was out of control).
   What time of day did the episode start? (Circle one.)
   a. Morning (8 AM to 12 Noon)  
   b. Early afternoon (12 Noon to 4 PM)  
   c. Late afternoon (4 PM to 7 PM)  
   d. Evening (7 PM to 10 PM)  
   e. Night (After 10 PM)

6. Approximately how long did this episode of eating last, from the time you started to eat until you stopped and did not eat again for at least two hours? _______ hours _______ minutes

7. As best as you can remember, please list everything you might have eaten or drunk during that episode. If you ate for more than two hours, describe the food eaten and liquids drunk that you ate the most. Be specific—include amounts and brand names (when possible). Estimate as best as you can.

For example: 7 ounces Ruffles potato chips; 1 cup Breyer’s chocolate ice cream with 2 teaspoons of hot fudge; two 8-ounce glasses of Coca-Cola; and 1 and 1/2 ham and cheese sandwiches with mustard.

<table>
<thead>
<tr>
<th>FOOD</th>
<th>AMOUNT</th>
<th>BRAND (if possible)</th>
</tr>
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<tbody>
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</table>
8. At the time this episode started, how long had it been since you had previously finished eating a meal or snack?  
______ hours _______ minutes

9. In general, during the past 6 months, how upset were you by overeating episodes in which you ate unusually large amounts of food? (Circle one.)
   a. Not at all  
   b. Slightly  
   c. Moderately  
   d. Greatly  
   e. Extremely

10. In general, during the past 6 months, how upset were you by feeling that you could not stop eating or could not control what or how you were eating? (Circle one.)
    a. Not at all  
    b. Slightly  
    c. Moderately  
    d. Greatly  
    e. Extremely

11. In general, during the past 6 months, how important has your weight or shape been in how you feel about or evaluate yourself as a person-compared to other aspects of your life (i.e. how you do at work, as a parent, or how you get along with other people)?
    Weight and shape...
    a. were not very important  
    b. played a part in how I felt about myself  
    c. were among the main things that affected how I felt about myself  
    d. were the most important things that affected how I felt about myself

12. During the past 3 months, did you ever make yourself vomit in order to avoid gaining weight after binge eating? (Circle one.) Yes No
    If Yes: How often, on average, was that? (Circle one.)
    a. Less than once a week  
    b. Once a week  
    c. Two or three times a week  
    d. Four or five times a week  
    e. More than five times a week

13. During the past 3 months, did you ever take more than twice the recommended dose of laxatives in order to avoid gaining weight after binge eating? (Circle one.) Yes No
    If Yes: How often, on average, was that? (Circle one.)
    a. Less than once a week  
    b. Once a week  
    c. Two or three times a week  
    d. Four or five times a week  
    e. More than five times a week

14. During the past 3 months, did you ever take more than twice the recommended dose of diuretics (water pills) in order to avoid gaining weight after binge eating? (Circle one.) Yes No
    If Yes: How often, on average, was that?
    a. Less than once a week  
    b. Once a week  
    c. Two or three times a week  
    d. Four or five times a week  
    e. More than five times a week

15. During the past 3 months, did you ever fast (not eat anything at all for at least 24 hours) in order to avoid gaining weight after binge eating? (Circle one.) Yes No
    If Yes: How often, on average, was that?
    a. Less than once a week  
    b. Once a week  
    c. Two or three times a week  
    d. Four or five times a week  
    e. More than five times a week

16. During the past 3 months, did you ever exercise for more than one hour specifically in order to avoid gaining weight after eating? (Circle one.) Yes No
    If Yes: How often, on average, was that?
    a. Less than once a week  
    b. Once a week  
    c. Two or three times a week  
    d. Four or five times a week  
    e. More than five times a week

17. During the past 3 months, did you ever take more than twice the recommended dosage of a diet pill in order to avoid gaining weight after binge eating? (Circle one.) Yes No
    If Yes: How often, on average, was that?
    a. Less than once a week  
    b. Once a week  
    c. Two or three times a week  
    d. Four or five times a week  
    e. More than five times a week
SECTION K: EATING PATTERNS II

Directions: Please circle ONE answer for each question.

1. How hungry are you usually in the morning?
   0 Not at all 1 A little 2 Somewhat 3 Moderately 4 Very

2. When do you usually eat for the first time?
   0 1 Before 9AM 2 9:01 to 12 PM 3 12:01 to 3PM 4 3:01 to 6PM 6:01 or later

3. Do you have cravings or urges to eat snacks after supper, but before bedtime?
   0 Not at all 1 A little 2 Somewhat 3 Very much so 4 Extremely so

4. How much control do you have over your eating between supper and bedtime?
   0 Not at all 1 A little 2 Some 3 Very much 4 Complete

5. How much of your daily food intake do you consume after suppertime?
   0% (none) 1-25% (up to a quarter) 26-50% (about half) 51-75% (more than half) 76-100% (almost all)

6. Are you currently feeling blue or down in the dumps?
   0 Not at all 1 A little 2 Somewhat 3 Very much so 4 Extremely

7. When you are feeling blue, is your mood lower in the:
   Early Morning 2 Late Morning 3 Afternoon 4 Early Evening 5 Late Evening/Night

____ Check here if your mood does not change during the day.

8. How often do you have trouble getting to sleep?
   0 Never 1 Sometimes 2 About half the time 3 Usually 4 Always

9. Other than only to use the bathroom, how often do you get up at least once in the middle of the night?
   0 Never 1 Less than once a week 2 About once a week 3 More than once a week 4 Every night

*************** IF ON #9, PLEASE STOP HERE ***************

10. Do you have cravings or urges to eat snacks when you wake up at night?
    0 Not at all 1 A little 2 Somewhat 3 Moderately 4 Extremely

11. Do you need to eat in order to get back to sleep when you awake at night?
    0 Not at all 1 A little 2 Somewhat 3 Very much so 4 Extremely

12. When you get up in the middle of the night, how often do you snack?
    0 Not at all 1 A little 2 Somewhat 3 Very much so 4 Extremely
13. When you snack in the middle of the night, how aware are you of your eating?

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>About half the time</th>
<th>Usually</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Not at all | A little | Somewhat | Very much so | Completely |
14. How much control do you have over your eating while you are up at night?

<table>
<thead>
<tr>
<th>None at all</th>
<th>A little</th>
<th>Some</th>
<th>Very much</th>
<th>Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</table>

15. How long have your difficulties with night eating been going on?

_____________________ months  __________________ years

The Night Eating Questionnaire is reprinted here from:

SECTION I: PHYSICAL ACTIVITY

1. To what extent do you enjoy physical activity? (Check one.)
   - ______ not at all
   - ______ slightly
   - ______ moderately
   - ______ greatly

2. Do you have any physical problems that limit your physical activity? (Circle one.) Yes   No
   If yes, please describe: ______________________________________________________

3. Please check the types of physical activity that you enjoy. Check only those that you have participated in during the last year:
   - ______ a. walking outside
   - ______ b. walking (indoors, including treadmill)
   - ______ c. jogging
   - ______ d. running
   - ______ e. biking outside
   - ______ f. biking (stationary)
   - ______ g. aerobic class
   - ______ h. tennis/racket sports
   - ______ i. swimming
   - ______ j. basketball
   - ______ k. golf
   - ______ l. dancing
   - ______ m. strength training
   - ______ n. other, Please describe ______

4. For your most preferred activity, how many times have you participated in this activity in the past 6 months?
   ______ times

5. How many hours of TV do you watch on an average weekday? ______ hours

6. How many hours of TV do you watch on an average weekend day? ______ hours

7. Approximately how many city blocks or the equivalent do you regularly walk each day? ______ blocks (12 blocks = 1 mile)

8. How many flights of stairs do you climb up each day? ______ flights a day (1 flight = 10 steps)

9. Please describe your daily lifestyle activity (i.e., how active you are) by picking any number from 1 to 10 in which 1 = very sedentary and 10 = very active. Your number is: ______
SECTION M: FAMILY AND LIVING ARRANGEMENTS

1. I am currently: (Check one.)
   ____ Single
   ____ Married
   ____ Divorced
   ____ Separated
   ____ Widowed

2. Currently, I am: (Check all that apply.)
   ____ living alone
   ____ living with a spouse/partner
   ____ living with a significant other
   ____ living with children
   ____ living with parents/step-parents
   ____ living with other relatives
   ____ living with roommates

3. Please indicate the total number of persons living in your home. ____

4. If you are currently involved in an intimate relationship (significant other), please answer these questions. What is this person’s attitude towards your efforts to lose weight? (Circle one)
   a. strongly supports my efforts
   b. supports my efforts
   c. neutral
   d. opposes my efforts
   e. strongly opposes my efforts
   f. Please describe briefly what this person does either to help or hinder your efforts to lose weight.

   ____________________________________________

5. How satisfied are you with your overall relationship with this person? (Circle one.)
   a. very satisfied
   b. satisfied
   c. neutral
   d. dissatisfied
   e. very dissatisfied

6. Will other people support your efforts to lose weight? (Circle one.) Yes No
   If yes, how many people will? ____ Who are these people? __________________________________________

   a. How many of these people are actively helpful to you? ____

7. How many people do you talk with about your weight when you are upset about it? ____
   a. How many of these people are helpful to you? ____

8. Will other people oppose or undermine your efforts to lose weight? (Circle one.) Yes No
   If yes, how many will? ____
   a. Who are these people? __________________________________________
SECTION N: SELF-PERCEPTIONS

1. How satisfied are you with your current weight? (Check one.)
   ____ very satisfied
   ____ moderately satisfied
   ____ slightly satisfied
   ____ neutral
   ____ slightly dissatisfied
   ____ moderately dissatisfied
   ____ very dissatisfied

2. How satisfied are you with your current shape (i.e., figure or physique)? (Check one.)
   ____ very satisfied
   ____ moderately satisfied
   ____ slightly satisfied
   ____ neutral
   ____ slightly dissatisfied
   ____ moderately dissatisfied
   ____ very dissatisfied

3. How satisfied are you with your current overall appearance? (Check one.)
   ____ very satisfied
   ____ moderately satisfied
   ____ slightly satisfied
   ____ neutral
   ____ slightly dissatisfied
   ____ moderately dissatisfied
   ____ very dissatisfied

4. Pick the one sentence that best describes your overall feelings about yourself. “In general, I am...” (Check one.)
   ____ very happy with who I am
   ____ happy with who I am
   ____ ok with who I am but have some mixed feelings
   ____ unhappy with who I am
   ____ very unhappy with who I am

5. “As compared with most people, I think I have...” (Check one.)
   ____ very good self-esteem
   ____ good self-esteem
   ____ average self-esteem
   ____ poor self-esteem
   ____ very poor self-esteem

6. Pick the one sentence that best describes your feelings about the way you looked the last time you lost a lot of weight. “I was...” (Check one.)
   ____ very happy with the way I looked
   ____ happy with the way I looked
   ____ ok with the way I looked, but with some mixed feelings
   ____ unhappy with the way I looked
   ____ very unhappy with the way I looked


SECTION O: PSYCHOLOGICAL FACTORS

1. Have you ever had any problems at any time with depression, anxiety, or other emotions that disrupted your normal functioning? (Circle one.) Yes  No

2. Have you ever sought professional help for emotional problems? If yes, specify below.
   
<table>
<thead>
<tr>
<th>Problem</th>
<th>Year</th>
<th>Duration (wks.)</th>
<th>Type of Professional Help</th>
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</table>
3. **During the past month**, have you felt depressed, sad, or blue much of the time? (Circle one.)
   Yes  No

4. **During the past month**, have you often felt hopeless about the future? (Circle one.)
   Yes  No

5. **During the past month**, have you had little interest or pleasure in doing things? (Circle one.)
   Yes  No

6. Have you ever been subjected to physical abuse? (Circle one.)
   Yes  No

7. Have you ever been subjected to sexual abuse? (Circle one.)
   Yes  No

8. Are any of your immediate family members alcoholic? (Circle one.)
   Yes  No

**SECTION P: TIMING**

1. Please indicate if you are currently experiencing any greater than usual stress in your life related to the following events.
   Complete each item by circling the appropriate box.
   a. Work: (Circle one.)
      Yes  No
   b. Health: (Circle one.)
      Yes  No
   c. Relationship with spouse/significant other: (Circle one.)
      Yes  No
   d. Activities related to your children: (Circle one.)
      Yes  No
   e. Activities related to your parents: (Circle one.)
      Yes  No
   f. Legal/financial trouble: (Circle one.)
      Yes  No
   g. School: (Circle one.)
      Yes  No
   h. Moving: (Circle one.)
      Yes  No
   i. Other: ____________________________________________

   Please explain in a sentence any items to which you responded yes:

   ____________________________________________
   ____________________________________________

2. Are you planning any major life changes (i.e., new job, moving, relationship, etc.) during the next 6 months? (Circle one.)
   Yes  No

   If yes, please briefly describe below:

   ____________________________________________
3. How stressful has your life been during the past 6 months? (Circle one.)
   1. much less stressful than usual
   2. less stressful than usual
   3. average level of stress
   4. more stressful than usual
   5. much more stressful than usual

4. How stressful do you think that your life will be in the next 6 months, excluding your efforts to lose weight. Pick a number from above. _____

5. How motivated are you to lose weight at this time? Pick a number between 1 and 10, in which 1 = not motivated and 10 = greatest motivation you have ever had. Your number is: _____

6. Why do you want to lose weight right now, as compared to 1 year ago? What has prompted you to lose weight now?

______________________________________________________________

______________________________________________________________

7. What is the single most important thing that you hope to achieve as a result of losing weight?

______________________________________________________________

______________________________________________________________

8. People who want to achieve long-term weight control need to spend at least 30 minutes a day, for a minimum of 6 months trying to change their eating, exercise, and thinking habits.

Please check the number below that best describes you:

_____ 1. I definitely will not be able to devote 30 minutes daily to weight control.
_____ 2. I’m not sure if I can find 30 minutes daily for weight control.
_____ 3. I can definitely find 30 minutes daily for weight control.
_____ 4. I can devote more than 30 minutes daily to weight control.

9. Rate how confident you are that you will be able to significantly change your eating and exercise habits. Pick a number from 1 to 10 in which 1 = not at all confident and 10 = extremely confident. Your number is: _______
### SECTION Q: MEDICAL HISTORY

1. Please indicate if you have had any of the medical conditions listed below:

<table>
<thead>
<tr>
<th>Condition</th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>Heart Disease</td>
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<tr>
<td>Angina (chest pains)</td>
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<td>Palpitations, heart beats fast or hard</td>
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<td>Stroke, mild stroke (cerebrovascular accident)</td>
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<td>Rheumatic fever</td>
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<td>Heart murmur</td>
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<td>Pacemaker</td>
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<td>Breathing problems (asthma, lung disease)</td>
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<td>High blood pressure</td>
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<td>Anemia</td>
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<td>Back problems</td>
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<td>Joint or bone problems</td>
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<td>Hiatal hernia</td>
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<td>Arthritis</td>
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<td>Gout (elevated uric acid)</td>
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<td>Gallbladder disease</td>
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<td>Thyroid problems</td>
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<td>Kidney disease</td>
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<td>Bowel disease</td>
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<td>Liver disease</td>
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<td>Diabetes (type I or II)</td>
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<td>Sleep Apnea</td>
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<td>Bodily pain</td>
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<td>Other (specify)</td>
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</tbody>
</table>
2. List all medications you currently take (including vitamins and supplements). Please indicate the dosage and frequency (number of times a day) of each medication.

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dosage</th>
<th>Frequency</th>
<th>Reason for taking</th>
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Please indicate your primary care physician’s name, telephone number, and address here.

Name: ________________________________ Tel: __________________
Address: __________________________________________

ADDITIONAL INFORMATION (Please use this space to provide any additional information that you think is important to understanding you or your weight problem, as well as the goals you seek.)

________________________________________________________________________
________________________________________________________________________
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________________________________________________________________________
________________________________________________________________________
APPENDIX B

Dieter’s Inventory of Eating Temptations (DIET)

Each item in this questionnaire describes a situation and a behavior that promotes weight loss or weight control. Imagine that you are in the situation described and rate the percent of the time you would behave in the way described. If you would always act in the way described then give a rating of 100%. If you would never act that way give a rating of 0%. If you would sometimes act that way then mark an “X” at the point on the scale that shows how often you would act as described. If you feel that you never get into a situation like the one described (it does not apply to you), then rate how often you engage in the kind of behavior described in general.

1. You’re having dinner with your family and your favorite meal has been prepared. You finish the first helping and someone says, “Why don’t you have some more?” What percent of the time would you turn down a second helping?

   0 10 20 30 40 50 60 70 80 90 100

2. You would like to exercise every day but it is hard to find the time because of your family and work obligations. What percent of the time would you set aside a daily time to exercise?

   0 10 20 30 40 50 60 70 80 90 100

3. You like to eat high calorie snack foods (e.g., cookies, potato chips, crackers, cokes, beer, cake) while watching television. What percent of the time would you watch TV without eating a high calorie snack?

   0 10 20 30 40 50 60 70 80 90 100

4. When you eat in a good restaurant, you love to order high calorie foods. What percent of the time would you order a low calorie meal?

   0 10 20 30 40 50 60 70 80 90 100

5. When planning meals, you tend to choose high calorie foods. What percent of the time would you plan low calorie meals?

   0 10 20 30 40 50 60 70 80 90 100
6. You are at a party and there is a lot of fattening food. You already have eaten more than you should and you are tempted to continue eating. What percent of the time would you stop with what you have already eaten?

0 10 20 30 40 50 60 70 80 90 100

7. You like to flavor your vegetables with butter, margarine, ham, or bacon fat. What percent of the time would you choose a low calorie method of seasoning?

0 10 20 30 40 50 60 70 80 90 100

8. You often prepare many of your foods by frying. What percent of the time would you prepare your food in a way that is less fattening?

0 10 20 30 40 50 60 70 80 90 100

9. You allow yourself a snack in the evening but you find yourself eating more than your diet allows. What percent of the time would you reduce the size of your snack?

0 10 20 30 40 50 60 70 80 90 100

10. Instead of putting foods away after finishing a meal, you find yourself eating the leftovers. What percent of the time would you put the food away without eating any?

0 10 20 30 40 50 60 70 80 90 100

11. You are asked by another person to go for a walk but you feel tired and kind of low. What percent of the time would you overcome these feelings and say “yes” to the walk?

0 10 20 30 40 50 60 70 80 90 100

12. You often overeat at supper because you are tired and hungry when you get home. What percent of the time would you not overeat at supper?

0 10 20 30 40 50 60 70 80 90 100

13. When you have errands to run that are only a couple of blocks away you usually drive the car. What percent of the time would you walk on an errand when it only involves a couple of blocks?

0 10 20 30 40 50 60 70 80 90 100
14. You are invited to someone’s house for dinner and your host is an excellent cook. You often overeat because the food tastes so good. What percent of the time would you not overeat as a dinner guest?

   0  10  20  30  40  50  60  70  80  90  100

15. You like to have something sweet to eat on your coffee break. What percent of the time would you only have coffee?

   0  10  20  30  40  50  60  70  80  90  100

16. When you cook a meal you snack on the food. What percent of the time would you wait until the meal is prepared to eat?

   0  10  20  30  40  50  60  70  80  90  100

17. You planned to exercise after work today but you feel tired and hungry when the time arrives. What percent of the time would you exercise anyway?

   0  10  20  30  40  50  60  70  80  90  100

18. There is a party at work for a co-worker and someone offers you a piece of cake. What percent of the time would you turn it down?

   0  10  20  30  40  50  60  70  80  90  100

19. You would like to climb the stairs instead of taking the elevator. What percent of the time would you take the stairs to go one or two flights?

   0  10  20  30  40  50  60  70  80  90  100

20. You are happy and feeling good today. You are tempted to treat yourself by stopping for ice cream. What percent of the time would you find some other way to be nice to yourself?

   0  10  20  30  40  50  60  70  80  90  100

21. You are at a friend’s house and your friend offers you a delicious looking pastry. What percent of the time would you refuse this offer?

   0  10  20  30  40  50  60  70  80  90  100
22. You feel like celebrating. You are going out with friends to a good restaurant. What percent of the time would you celebrate without overeating?

0 10 20 30 40 50 60 70 80 90 100

23. You finished your meal and you still feel hungry. There is cake and fruit available. What percent of the time would you choose the fruit?

0 10 20 30 40 50 60 70 80 90 100

24. You are at home feeling lonely, blue, and bored. You are craving something to eat. What percent of the time would you find another way of coping with these feelings besides eating?

0 10 20 30 40 50 60 70 80 90 100

25. Today you did something to hurt your ankle. You want to get something to eat to make yourself feel better. What percent of the time would you find some other way to take your mind off your mishap?

0 10 20 30 40 50 60 70 80 90 100

26. When you spend time alone at home you are tempted to snack. You are spending an evening alone. What percent of the time would you resist the urge to snack?

0 10 20 30 40 50 60 70 80 90 100

27. You are out with a friend at lunch time and your friend suggests that you stop and get some ice cream. What percent of the time would you resist the temptation?

0 10 20 30 40 50 60 70 80 90 100

28. You just had an upsetting argument with a family member. You are standing in front of the refrigerator and you feel like eating everything in sight. What percent of the time would you find some other way to make yourself feel better?

0 10 20 30 40 50 60 70 80 90 100

29. You are having a hard day at work and you are anxious and upset. You feel like getting a candy bar. What percent of the time would you find a more constructive way to calm down and cope with your feelings?

0 10 20 30 40 50 60 70 80 90 100
30. You just had an argument with your (husband, wife, boyfriend, girlfriend). You are upset and angry, and you feel like eating something. What percentage of time would you talk the situation over with someone or go for a walk instead of eating?

## Sample Self-Monitoring Form

### Day 1  ____________________________, 2006

<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
<th>Place</th>
<th>Activity</th>
<th>Feel.</th>
<th>Calories</th>
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<tbody>
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<td>Total Calories from Dinner</td>
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<td>Total Calories from Snacks</td>
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</table>

Total Calories Eaten Today

Steps Walked Today

Points Earned
APPENDIX D

Weekly Agendas

Week One Agenda

☐ Weigh-in
☐ Go over results from WALI and Dieter’s Inventory
☐ Answer any questions/concerns
☐ Take Readiness test (www.thelifestylecompany.com)
☐ Quality of life review
☐ Go over nutrition and importance of recording food intake
  ☐ Awareness
  ☐ You learn about calories
  ☐ You become aware of what you eat
  ☐ You learn how to bank calories
  ☐ You increase control over eating
  ☐ Your eating patterns become clear
  ☐ Record everything immediately after eating!
☐ Go over physical activity
☐ Go over self-monitoring form and how to complete
☐ Setting goals
☐ Goals/Homework for this week
  ☐ Make a list of benefits and sacrifices of beginning a weight loss program
  ☐ Recommend buying a pedometer, but not necessary
  ☐ Not to start a diet but to learn about your eating habits, specific calorie levels won’t be set until week 4
☐ Review points system and go over values of points for this week
  ☐ 5 points per day of self-monitoring – total of 35 points for week
  ☐ 35 points - #1
  ☐ 30 points - #2
  ☐ 20 points - #3
  ☐ 15 points - #4
  ☐ 10 points - #5
  ☐ 5 points – no reinforcer

Week Two Agenda

☐ Weigh-in
☐ Answer any questions/concerns from last week
☐ Go over eating a sensible meal
  ☐ Satisfying, good tasting, and nutritious (low in calories, sugar and fat)
Review week one monitoring form

- You should now have a good idea about how many meals you typically eat each day and the types of foods you enjoy.
- You should also be more aware of when you are most hungry and where you are most likely to eat, both at home and away from home.
- Your job now is to analyze your eating habits and try to correct the troublesome ones. Sometimes this requires only small changes, such as bringing a small bag of pretzels to work to prepare yourself for the 3:00 munchies. In other instances, you may have to take time to plan your meals in advance.
- The patterns we find today will be the foundations for the later parts of the program.

Hand out My Eating Patterns Worksheet

- Time: Times of the day when you are likely to eat.
- Amount: Quantities and calories. Do you enjoy the food you eat so that you do not waste calories? Are there foods that you could eat less of or avoid completely? Do you eat specific amounts each time without thinking about how much you need and want?
- Foods: Patterns in the foods you choose? Which foods contribute the most to your calories? Substitutes?
- Places: Certain places where you eat?

Rating your diet:

- Nutrition is one key to successful weight management. What you eat affects how you feel, whether you are healthy and how you look.
- Take the Rate your Diet Quiz – this quiz can be helpful in that it can help provide new ideas for healthy eating choices.

Exercise: any activity in which you move your body and expend calories (aka “physical activity”)

- Benefits: improved physical and emotional well-being. Improves blood pressure, cholesterol, blood sugar and overall health.
- It takes a lot of exercise to burn one pound of fat: 25-30 miles or 5-6 hours per week in an intensive aerobics class.
- More likely to maintain weight loss

Weekly goals:

- Self-monitoring form – 5 points per day
- Eat sensible meals and snacks – 5 points per meal and all snacks (max of 20)
- Think about your attitudes towards physical activity as you prepare to increase your activity this week (5 points for listing attitudes and ideas of how to increase physical activity)
- 25 points per day = 175 + 5 = 180 for week
- 155 – 180 = #1
- 130-154 = #2
88

105 – 129 = #3
80 – 104 = #4
55 – 79 = #5
Below 54 = no reinforcer

Week Three

☐ Weigh – in
☐ Any questions/feedback from last week?
☐ Search for patterns and high-risk situations
  ☐ Time – did eating patterns cluster around certain times of the day? Can you schedule alternative activities during those times?
  ☐ Feelings – did you eat when you were bored, depressed…? Develop more adaptive ways of dealing with those feelings.
  ☐ Activity – doing two things at once ensures that neither gets full attention. Later in the program, we will talk about ways to separate eating from other activities.
  ☐ Foods – what types of foods do you eat?
☐ High-risk situations – triggers for eating
  ▪ What are your eating triggers?
  ▪ Throughout this program you will learn methods for avoiding or coping with situations that may be difficult. The first step is to identify what those triggers are.
  ▪ Given the right time, feelings and other circumstances, eating can be hard to resist. List your four main triggers.
☐ The role of physical activity
  ☐ Theoretically you can eat less, exercise more or do a combination of the two to lose weight. Doing both is the best approach. Research shows that people who exercise regularly are more likely to achieve long-term success than those who are not physically active. Why?
    ▪ Moderate intensity physical activity can be very beneficial for health and weight-management. For most people, this means moderate to brisk walking at a pace of 15-20 minutes per mile or lifestyle activities such as raking leaves.
    ▪ Small increases in exercise to count as physical activity!
    ▪ A pedometer will detect small changes in your activity and will let you know if you are increasing activity.
    ▪ Benefits:
      • Burns calories
      • Counteracts ills of being overweight – physical and psychological problems – improves metabolism
      • May help control appetite
      • Preserves the body’s muscle
- Correlates with long-term success
  - Estimate daily calorie expenditure
  - Following a balanced diet
    - Why is nutrition important? What you eat helps determine how healthy you are, which in turn, influences how you cope with life, both physically and psychologically.
    - Dietary guidelines:
      - Let the pyramid guide your choices, choose a variety of grains each day – especially whole grains, choose a variety of fruits and veggies daily
      - The food guide pyramid – right now, don’t be concerned about the number of servings or how much food it takes to make one serving, just become familiar with what is in each tier and try to include all food groups in your diet.
      - The pyramid is a useful way to see that you get balanced nutrition. Eating the number or recommended servings will probably maintain your current weight.
    - Monitoring Form
      - Don’t worry about completing the food-group section right now.
      - List the foods in the order that you eat them.
      - This will be the monitoring form that you use for the remainder of the program.
      - The middle section is for physical activity. Using the stairs, working in the yard, walking and playing sports are all examples of what could be included here.
      - There will be different goals for each lesson
      - Goals/points for this week:
        - Begin walking program – 4000 steps per day, increase by 200 steps each day – 10 points. (70 for the week)
        - Record on self-monitoring form – 5 points (35 for the week).
        - Eat servings from the 5 food groups – 5 points (35 for the week)
        - Stay within your recommended calorie range each day – 10 points (70 for the week).
        - Total of 210 available this week.
          - 180 – 210 = #1
          - 150 – 179 = #2
          - 120 – 149 = #3
          - 90 – 119 = #4
          - 60 – 89 = #5
Week 4

- How much weight you lose is only one index of the success you have.
- When you become too focused on the scale you can become disappointed, even though other positive changes may be occurring. Next week we’ll complete the Quality of Life Review again to see if anything has changed.
- There has been a great deal of research stating that even modest amounts of weight loss (5-10%) can have important health benefits. So what is a reasonable weight goal for you?
- Complete “Reasonable Weight Loss” graph. A good goal is 20 pounds at the end of week 12. You can make landmark dates too, such as birthday, wedding, etc.
- When a specific week rolls around, you can review your graph to see if you are on track.
- Solo vs. Social changing:
  - Some people like to make changes on their own and do not want other people involved. Others like the aid and support they might get from family and friends.
  - Are you a social or solo changer?
  - If you are a social changer, decide exactly when and how you would like others to be involved.
  - Why is social support so important?
    - People who have relationships they can count on for emotional support and tangible support live longer and are healthier and happier than those who do not have these relationships.
    - How can you get the support that will benefit you? Program partnerships. This can be someone else trying to lose weight. If you already have a partner in mind, take the quiz to see if this person would be a good partner.
    - Losing weight with a partner can be beneficial for some people, but it is not for everybody.
- You should feel comfortable with this person and he/she should motivate and encourage you.
- Guidelines for starting a partnership will be discussed in the next lesson.
- Optimizing your success:
  - Talking with your friends and family members can be very helpful.
  - You may also want to tell them how they can support you.
- Barriers to being active:
  - Extra weight can make physical exercise difficult.
  - It may be helpful to make goals for steps throughout the day.
  - Walking/exercising with a partner? Would this be helpful for you?
- The principle of shaping:
  - Making all of these changes can seem overwhelming. It is not necessary to meet your calorie goal perfectly or to eat the recommended number of
servings each day! Instead, you will be shaping your behavior – gradually working your way towards these goals.

- Selecting an eating plan:
  - There are several food plans for helping you eat nutritiously.
  - One is using the Food Guide Pyramid while counting calories.
  - An alternative eating plan is the Exchange Plan. This plan places foods into 6 categories: starch/bread, meat and meat substitutes, veggies, fruit, milk and fat.

- Goals for this week:
  - Continue walking/exercise and increase your activity by at least 200 steps per day. (10 points – 70 for the week)
  - Continue Self-Monitoring (5 points – 35 for the week)
  - Stay within your recommended calorie range (10 points)
  - Eat foods from the 5 food groups (5 points)

  - Total of 210 available this week.

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Week Five

(1) You have now participated in the program for one month!! Take a few minutes to review and appreciate the accomplishments that you have made.

(2) One-month review: You may have noticed changes in your health. You may feel more alert or energetic or may be sleeping better. If you are planning on seeing your doctor, ask about any changes that he or she notices.

(a) Your Health: Your doctor can assess many changes in your physical health. Examples or blood pressure, cholesterol and blood sugar – these levels may have improved since you began this program. Your overall health should continue to improve over the next few months as you progress.

(b) Your Quality of Life: Another way of assessing the changes you have made in the first month is to complete the quality of life review. Compare your responses to how you answered before you began this program. Use the comparisons form to compare your responses.

(c) Weight Loss: Improvements in quality of life and physical health are real measures of success, but it’s hard not to focus on weight loss. Sometimes, people lose weight slowly and get discouraged.

(i) During the first month in behavioral weight loss programs, women typically lose 4 – 6 pounds and men typically lose 6 – 8 pounds.
However, people vary in weight loss greatly. Remember, the people who are most successful in maintaining their weight loss are those that lost at a reasonable rate. Feeling positive about what you have accomplished is important. This will provide motivation to push ahead!

(ii) Women who have lost more than 8 pounds and men more than 12 pounds should be cautious that they are not engaging in a drastic diet. Women should be sure that they are consuming at least 1000 calories and met 1200 calories per day. Rapid weight loss can increase the risk of gallstones and other health complications.

(d) **Calorie Intake:** A smaller than anticipated weight loss can also result from not decreasing your calorie intake sufficiently. If you lost less than 4 pounds the first month, plan to pay extra attention to your potion sizes and monitoring form. Try to incorporate these tips:

(i) Record your foods and beverages immediately after consuming them. This way you will remember to record everything.

(ii) Measure portion sizes carefully to ensure that you are eating the amounts that you think you are. You may want to purchase a food scale, most people underestimate their calorie intake.

(iii) When reading food labels, be sure to determine how many servings the item contains.

(iv) Keep a running total of your calories throughout the day.

(3) **The ABC’s of Behavior**

(a) **A = Antecedent:** These are the events, situations, thoughts and feelings that occur before behaviors such as eating or being inactive. These usually occur together in a series of events called the behavior change (to be discussed in week 12!).

(b) **B = Behavior:** This is the particular conduct itself and the related events, situations, thoughts and feelings. This includes the speed of eating, rate of chewing, taste of food and the events that take place during eating. Factors that affect physical activity include intensity (pace) of the activity, the type of activity chosen, how long the activity lasts, and how you feel while doing the activity.

(c) **C = Consequences:** the events, situations, thoughts, feelings and attitudes that follow the behavior. What happens after the behavior can determine whether the same behavior will occur again.

(d) You can prepare yourself for upcoming lessons by thinking about the antecedents, behaviors and consequences related to your eating and exercising.

(4) Continue increasing your steps (by 200 steps per day) or exercise (in 5 -10 minute increments) until you are walking 10,000 steps or exercising 30 – 60 minutes most days of the week.

(5) **Choosing a Support Person:** The most extensive involvement is to have a weight management partnership. In this case, you and another person
would both be losing weight and working with each other. This may or may not be for you.

(a) You can get less intensive but equally important support from others, including a spouse, parent, friend, coworker or anyone who encourages you. This person can be involved in any way that you want.

(b) Different people respond to different types of support. Give careful thought as to what others can do to help you.

(c) Take the Support Partner Quiz.

(d) Once you have decided on a support partner, discuss the possibility with the person you have in mind. Remember that you don’t need to have a partner!!

(6) Communicating with Your Partner: There is a lot you can do to get the most out of this effort. Later we will discuss methods of dealing with family and friends. Here are some specific ideas for how to start a partnership:

(a) Are you both ready for a partnership? Is your partner ready to listen to requests for help and make the required effort? Are you ready to help your partner in return?

(b) Tell your partner how to help. Your partner can’t read your mind. Tell your partner specifically what he or she can do. Do you want to be praised when you do well or scolded when you do poorly. Should the person avoid eating in your presence? Can your partner help by exercising with you?

(c) Make specific requests. The more specific your requests, the easier it will be for your partner to comply.

(d) State your requests positively. It is better to ask for something positive than to criticize something negative.

(e) Reward your partner. One-way relationships don’t last long. If your partner is losing weight you can provide similar support, if not, ask what you can do in return.

(7) The Calorie: Even the smallest amounts of calories add up over the course of a week, a month or even a year. 3,500 calories equals one pound of body weight. Adding 10 calories to your daily total will result in one pound gained in a year. If the difference per day were 100 calories, this would be 10 pounds per year and 100 pounds over 10 years! This highlights the need for carefully recording the calories that you consume.

(a) Small changes in your diet: This week you will learn more about the number of servings you should eat from each food group. Changing your eating habits takes time. Each week try to make one small change that you can live with.

(8) Taking Control of Your Eating: The Self-Monitoring Forms have helped you discover patterns in your eating and this discussion will give you some suggestions for disrupting those patterns. Many people have
situations, times or activities that stimulate eating. These events have become *paired* with eating so that just the event alone can make you feel hungry. Separating eating from other activities is important. Here are some techniques:

(a) **Do nothing else while eating.** If this seems awkward, it is a sure sigh that you are hooked on the association of eating with other activities.

(b) **Calories should be tasted, not wasted.** Pay careful attention to how every bite tastes. Eating less can increase your enjoyment of what you do eat.

(c) **Follow an eating schedule.** You may have found time patterns in your monitoring form. Find a schedule that is convenient for you. Keep the number of times you eat under control. Following a schedule will help you eat less and think more. Do your best to stick to this schedule. When you feel like eating at times other than your scheduled eating times, think carefully about whether you are hungry or just responding to associations of eating and other factors.

(d) **Eat in one place.** Some people eat anywhere. Select one place in your home where you will eat. Do *all* your eating there, but do *nothing else.*

(e) **Do not clean your plate.** When you eat everything on your plate you are responding to the sight of food and eating stops only when no more food is in sight. Try to leave some food on your plate each time you eat.

9) **Goal Setting:** One common problem is setting unrealistic goals. Think about your goals for this program. Answer the following questions:

(a) How much weight do you expect to lose each week?

(b) How soon do you expect to be thin?

(c) Will your life be different when you lose weight?

(d) Do you expect losing weight to be easy and quick?

(e) What are your 4 goals? Do you think that they are reasonable?

10) **Servings From the 5 Food Groups**

(a) Selecting the correct number of servings from each food group is important to ensure the right mix of nutrients and total calories. The number of servings you choose from each food group will depend on your target calorie level.

(b) 1200 calories: Milk & Yogurt – 2 servings (nonfat)

   Meat, Poultry, Fish, Dry Beans, Eggs & Nuts – 5 oz. lean meat.
   Veggies – 4
   Fruits – 3
   Bread, Cereal, Rice & Pasta –6

(c) 1400 calories: Milk & Yogurt – 2-3 servings (nonfat)

   Meat, Poultry, Fish, Dry Beans, Eggs & Nuts – 5 oz. med-fat
   Veggies – 4
Fruits – 3
Bread, Cereal, Rice & Pasta –6
(d) 1500 calories: Milk & Yogurt – 2-3 servings (nonfat)
   Meat, Poultry, Fish, Dry Beans, Eggs & Nuts – 5 oz. med-fat.
   Veggies – 5
   Fruits – 3
   Bread, Cereal, Rice & Pasta –7
(e) 1800 calories: Milk & Yogurt – 2 servings (nonfat)
   Meat, Poultry, Fish, Dry Beans, Eggs & Nuts – 7 oz. med-fat
   Veggies – 6
   Fruits – 4
   Bread, Cereal, Rice & Pasta –8
(f) 2000 calories: Milk & Yogurt – 2-3 servings (nonfat)
   Meat, Poultry, Fish, Dry Beans, Eggs & Nuts – 7 oz. med-fat
   Veggies – 6
   Fruits – 4
   Bread, Cereal, Rice & Pasta –9

(11) Points:
10 points – stay within calorie range.
5 points – record food and exercise on self-monitoring form
10 – meet or exceed your exercise goals
5 points – do nothing else while eating
5 points – eat on a planned schedule
5 points – eat in one place
5 points – leave some food on your plate
Total of 45 points per day and 315 per week.

#1 – 270 -315
#2 – 225-265
#3 – 180 – 220
#4 – 135 – 175
#5 – 90 – 130

Week Six

1) **Slowing your eating rate:** Eating too fast can trick your body into thinking you’re still hungry, when in fact, your body’s mechanisms just haven’t had a chance to tell you that you’re full (this takes about 20 minutes).

a) **Techniques to slow your eating:**
   i) Put your fork down between bites. If you are eating finger foods, put the food down until you are done chewing.
ii) Pause during your meal. One study found that pausing while eating led to fewer consumption of calories, even though the animals could eat as much as they wanted after the pause.

2) More on the Food Guide Pyramid: Accurately estimating portion sizes and the calorie content of the food you eat can be important to your success.
   a) A food portion quiz. Take the quiz. If you answered “no” to any of the questions, then you may need to improve the accuracy of your estimating abilities.
      i) Food scales are the most common method of weighing food.
      ii) Hand out the Visual Portion Guide.
   b) The importance of the 5 food groups.
      i) The food guide pyramid arranges food by the key nutrients that they provide. Food choices from the Meat, poultry… are high in protein, B vitamins, iron and zinc. Choosing the right number of servings from the different food groups each day helps you to achieve a balanced diet.

3) Reviewing Your Target Calorie Level. Set new calorie level based on weight lost and amount of exercise.

4) The Role of Fat in Your Diet: The importance of fat.
   a) Dietary fat in the right amounts is essential for good health. It provides essential fatty acids that carry fat soluble vitamins throughout the body and a semi-essential fatty acid that helps prevent growth deficiencies and builds cell-wall membranes. It also provides flavoring in many of the foods we eat.
   b) Body fat protects vital organs and prevents excessive heat loss. However, too much body fat can lead to serious health problems.
   c) All fats in food are mixtures of three different types of fatty acids, saturated, monounsaturated and polyunsaturated.
      i) Saturated fats are solid at room temperature. It comes primarily from animal sources such as meat and dairy products. Butter, stick margarine, lard, shortening, and the fats in meats and cheeses are all examples.
      ii) Monounsaturated fats are found mostly in olive, peanut and canola oils. These fats are liquid at room temperature.
      iii) Polyunsaturated fats can be either liquid or soft at room temperature and are usually found in safflower, sunflower, corn, soybean and cottonseed oils.
   d) The distinction between saturated and unsaturated fat is important for health reasons. High consumption of saturated fats has been associated with heart disease and is likely related to an increased risk for colon and breast cancers.
   e) Monounsaturated and polyunsaturated fats are generally healthier than the saturated fats.
   f) All fats contain the same number of calories.
   g) Trans fats occur naturally in low amounts in certain meats and dairy products. They are also produced synthetically from unsaturated fats through a process known as hydrogenation. Examples of these foods are cakes, cookies, crackers, pies fired foods, and some snack foods. These types of fats should be limited.
h) How much fat should you eat? Fat contains twice the calories or either protein or carbohydrate. It is recommended that 30% of your calories come from fat. Saturated fat should be limited to less than 10% of your calories.
  i) Take your calorie goal and multiply this number by 30% to determine your daily calories from fat. Divide your daily calories from fat by 9 to determine your daily grams of fat.

   i) Reducing the Fat in Your Diet:
   i) Be aware of the fat content of the foods you eat.
   ii) Milk, Yogurt and Cheese Group:
      (1) Use skim or low-fat milk instead of whole, for both cooking and drinking. Substitute frozen yogurt for ice cream.
      (2) Meat, Poultry, Fish, Dry Beans, Eggs and Nuts group: Eat modest portions of meat, poultry and fish. About 3 cooked oz. is the recommended portion size. Limit your use of processed meats that tend to be high in fat. Dried beans and peas are good alternative sources of protein and have little or no fat.
      (3) Veggie and fruit Groups: Use these generously at mealtime and for snacks.
      (4) Bread, Cereal, Rice and Pasta Group: Use rice, pasta and other grain products as the mainstay of low-fat eating. Be extra cautious about looking for the hidden fats in baked goods.

   iii) Cooking Tips to Reduce Fat: Trim away all visible fat when cooking meats. Remove skin and fat from turkey before cooking. Use nonstick pans and sprays when cooking. Broil or bake instead of frying.

   iv) Fat in snacks and desserts. Eat lots of fresh fruits and veggies every day. Pop popcorn in microwave or air popper. You can flavor popcorn by spraying with hot oil or veggie spray and seasoned salts. Sorbet, flavored ice, and frozen fruit bars are good snacks.

   ii) A word of Caution about fat
      (1) Remember, it’s not fat that makes a person gain weight, it’s the number of calories consumed. Try not to fall into the trap that thinking that you can eat all you want of low fat foods and not gain weight!

5) Making Physical Activity Count:
   a) Lifestyle vs. Programmed Physical Activity.
      i) Lifestyle is simple and can be done in your day to day routine.
      ii) Programmed activity is a traditional exercise regimen.

   iii) This lesson focuses on lifestyle activity.
   iv) Ways to increase your lifestyle activity:
      (1) Use the stairs
      (2) Park further away
      (3) Increase walking
      (4) Count all activity as exercise

6) The Trap of Negative Self-Talk
a) We all have an internal dialog. These are things that we say to ourselves, but not to the outside world. The more positive you are when you talk to yourself, the better your chances are to make successful changes.

**Week Seven**

1) Weigh-in
2) Review from past weeks:
   a) Have some of the techniques you have learned become habits?
   b) Are you becoming more proficient in using the new skills you have learned?
   c) Is this a program you can live with?
3) Thinking your way to success:
   a) The way that you think can either set you up for success or failure. People in weight management programs tend to think in certain ways. Examples include expecting too much, being upset with anything less than perfection, and letting small mistakes build to catastrophe. These thoughts can get in the way of your progress and they can be difficult to change.
   b) Realistic goals and expectations:
      i) Life would be very difficult if all of our expectations were out of reach. Disappointment is often a function of unrealistic expectations. When someone does not satisfy his/her expectations, negative thoughts can trigger negative feelings, which in turn can send the person’s progress into a tailspin. These negative responses can be averted if you learn appropriate coping skills.
         (1) Setting goals and creating expectations come first and are often unconscious.
         (2) Next comes comparing what you accomplish to the expectation, resulting in either an acceptable or an unacceptable outcome.
         (3) If the outcome is unacceptable and the individual does not apply appropriate, the emotional response is usually positive.
         (4) If the outcome is unacceptable and the individual does not apply appropriate coping skills, the emotional responses can be negative.
      ii) Developing appropriate skills to handle difficult situations is a key ingredient of this program.
      iii) Last week you learned one such technique when you practiced positive self-talk.
      iv) Another skill is learning to reframe the outcome of a particular event. For example, “I’m too tired to exercise today, but I did work hard and deserve a rest. I’ll schedule another 15 minutes of walking into my day tomorrow.” Reframing the outcome allows you to see the situation as something that you can handle.
   c) Negative emotional responses can lead to setbacks. You can change the emotional response by altering the two steps that precede it, the goals and expectations and the coping response.
4) Shopping for Food:
a) Remember the ABC approach? One important antecedent is shopping for food. If you buy healthy foods, you will eat healthy foods. Several techniques follow:
   i) Shop on a full stomach.
   ii) Shop from a list. Be sure to prepare your shopping list when you are not hungry.
   iii) Buy foods that require preparation.
   iv) Buy ready to eat fruits and veggies.
   v) Park your shopping cart.

5) Rating your diet.
   a) Take the rate your diet quiz again

6) The importance of food.
   a) Our bodies need over 45 different nutrients every day. There are six classes of these nutrients that can be divided into two categories:
      i) Nutrients with energy (calories) – carbs, proteins and fats.
      ii) Nutrients without energy – minerals, vitamins and water.
         (1) Minerals and vitamins can be compared to the spark plugs in an automobile. If your car has high quality spark plugs in good condition, it will run more efficiently. Minerals and vitamins are also responsible for the metabolism of your body’s energy.
         (2) Minerals: Our bodies contain over 60 different minerals, 22 of which are essential. The 22 essential minerals are classified by the amount needed in the body as either major minerals or trace minerals. This classification is based upon the amount needed by the body and not the importance.
            (a) Minerals serve many functions. They aid in the growth of body tissue, transmit nerve impulses, regulate muscle contractions, maintain water balance in the body…. 
         (3) Vitamins: required for the regulation of the body’s metabolism and for the transformation of energy in the body. There are two types of vitamins:
            (a) Fat soluble: A, D, E and K. These are found in dietary fat and are stored in the body’s fat tissue is consumed in excess amounts. Because these vitamins are stored, high doses can be toxic.
            (b) Water soluble: C and B. These are absorbed in the body’s water and excess amounts are usually excreted.
            (c) Water: Makes up about 60% of your body. Drink water when you are thirsty. Try drinking water when you are hungry outside of meal time to see if the urge to eat goes away.

b) Milk, Yogurt and Cheese in your diet
   i) These are good sources of protein and carbs, but they can also provide large amounts of unwanted dietary fat.
   ii) Good sources of Vitamin A, D and calcium.
   iii) Eat 2-3 servings per day from this food group

7) Something for your partner to read
   a) Pass out article

8) How much are you exercising? Do you enjoy it?
Week Eight

1) Family Relationships
   a) Is your family supportive of your weight loss efforts?
   b) Do you let your family know how they can help support you?
      i) Things your family should avoid:
         (1) Do not hide food from the person losing weight.
         (2) Do not threaten.
         (3) Do not avoid social situations because of the person’s weight.
         (4) Do not expect perfection of 100% recovery.
         (5) Do not lecture, criticize or reprimand.
         (6) Do not play the role of victim or martyr.
      ii) Things your family can do:
         (1) Keep a positive attitude
         (2) Talk with others in your situation.
         (3) Keep the home and family relaxed.
         (4) Learn to ignore and forgive lapses.
         (5) Ask the person losing weight how you can help.
         (6) Exercise with the person on a program.
         (7) Develop new interests with the family member losing weight.

2) An activity blueprint
   a) Research shows that regular, moderate-intensity physical activity can result in substantial health benefits. One benefit is protection against coronary heart disease. Most of us don’t exercise regularly….why?
      i) We live in a high tech society. This entices us to be inactive.
      ii) Guidelines for physical activity:
         (1) 30 minutes or more of moderate-intensity physical activity on most days of the week.
         (2) You don’t have to do all 30 minutes at once!
      iii) Starting a programmed activity:
         (1) Identifying your barriers to being physically active can be very helpful. Possible solutions?
         (2) Choose the best activity for you.
            (a) Select something you can do.
            (b) Select something you like to do.
            (c) Select a solo or social activity.
            (d) Don’t be embarrassed.
         (3) Remember to warm up and cool down.
         (4) Cardiovascular training.
            (a) Aerobic exercise.
               (i) How much exercise do you have to do to improve your cardio condition? The F.I.T. principle:
                  1. Frequency – how often? 3 – 5 days per week
2. Intensity – how hard? 55 – 90% of maximal heart rate (220 – age)

3. Time – how long? – 20 – 60 minutes

3) **Bracing yourself against a toxic food environment.**
   a) Think of the number of fast food restaurants you pass within 15 minutes of your home. This makes today’s environment very challenging!
   b) This means that you must find creative ways to resist buying unhealthy foods.

4) **Counting grams of fat:**
   a) You don’t have to count grams of fat but you must record calories!!
   b) Low fat does not mean low calories.

5) **Supplements:**
   a) Do you take vitamins or other supplements? You may not need these!
   b) If you eat a balanced diet, you probably don’t need them.
   c) Antioxidant vitamins:
      i) Every cell in your body requires a constant supply of oxygen to use the energy supplied by blood. When the body’s cells burn oxygen, they form “free radicals” or oxygen by-products. These free radicals can damage body cells and tissues, including DNA. Cigarette smoke, burns, UV light, and other environmental factors also cause free radicals to form in your body.
      ii) Free radicals can cause oxidation in your body. Example of apple browning vs. put in Vitamin C – similar to what happens to your body. Antioxidants can help counter these effects.
      iii) Antioxidant vitamins include Vitamin A, C, and E.

6) **Reading Food Labels:**
   a) By now it should be obvious that one of the keys to losing weight is portion control. A helpful tool is a food label.
   i) The Nutrition Facts Panel:
      (1) Be sure to look at the serving size. Remember, food label sizes are not the same as Food Guide Pyramid sizes.
      (2) The percentage next to fat is not percentage of calories for that serving – it is a percent of your daily total fat based on a 2,000 calorie a day diet.
      (3) **Reference Daily Intakes:**
         (a) This replaces the more familiar term of Recommended Daily Allowance or RDA.
      (4) **Daily Reference Values:**
         (a) These are for nutrients that contain energy.
            (i) Fat is based on 30% of a 2,000 calorie diet.
            (ii) Saturated fat is based on 10% of 
            (iii) Carbs are 60%
            (iv) Protein is 10% (only for adults and children over 4)
            (v) Fiber is based on 11.5 grams per 1000 calories.
   b) They also include sources for some non-energy items such as cholesterol, sodium and potassium.

5) **Ingredients List:**
(a) Food is listed in order by weight from the most to the least.

7) **The Importance of Protein:**
   a) Protein is the most abundant material in the body besides water. It plays many roles:
      i) Protein is contained in hemoglobin, which carries oxygen in the blood.
      ii) It is related to DNA.
      iii) It is used to build muscle and all other body tissue.
      iv) It helps regulate blood sugar.
      v) It is used to build the enzymes that help digest our food.
   b) **What is protein?**
      i) Built from approximately 20 amino acids. You may have heard of high quality and low-quality proteins:
         (1) High = those the body can use to function properly, because they contain all of the essential amino acids.
         (2) Low = Have one or more essential amino acid missing.
   c) **Sources of Protein:**
      i) Meat and dairy products contain high-quality proteins. Plant proteins usually lack one or more of the essential amino acids.
      ii) Eating a variety of legumes and grains will provide high quality proteins. Legumes include dried peas and beans. Soy protein has been shown to be equivalent to animal protein.
      iii) How much protein should you eat? 10 -35% of total calories or 50 -175 grams per day. Multiply your target calorie level by 20%/4 will give you grams of protein.

8) **The Meat Poultry, Fish, Dry Beans, Eggs and Nuts Group**
   a) A serving is 2 – 3 oz. of cooked lean meat, poultry or fish. (the size of a deck of cards).
   b) 1 – 2 cups of cooked dry beans, 5 Tb. PB or 3 medium eggs
   c) Watch out for fat:
      i) Animal protein can be high in fat, follow these tips:
         (1) Choose lean meat, fish, poultry without skin and dried beans and peas.
         (2) Prepare meals in low-fat ways: trim away all visible fat and boil, roast, grill or broil instead of frying.
         (3) Eat egg yolks sparingly – they are high in cholesterol.
         (4) Eat nuts and seeds in moderation.

**Week 9**

(1) This lesson marks another milestone in your weight management program – you have participated for two months!!
(2) Quality of Life – take quiz and compare.
(3) The key to success is to make your changes work for you – making them part of your lifestyle.
(4) Exercise and Eating Habits:
(a) Are you still focused?
(b) Keeping your monitoring forms and increasing your physical activity can be two keys to long-term success.
(c) Are you measuring and weighing your food portions? You don’t have to do this every day, but it is helpful to do every now and then. Try an experiment with your estimated vs. actual food portions.
(d) Some people don’t like keeping the self-monitoring forms. If this is true for you, stop using mine and develop one that works for you! You may want to develop your own records for times when you usually eat more.
(e) Are you enjoying your exercise? Let’s review your activity over the past two weeks. Were you as active as you could have been or would like to have been? If not, try to determine the barriers that kept you from being inactive.

(5) Weight Loss:
(a) After eight weeks in a behavioral weight loss program, most people have lost about 4 to 6 months percent of their starting weight or 12 -16 pounds.
(b) If you have lost less than 3% of your starting weight, you may want to talk with your doctor.
(c) Your health has probably continued to improve with your weight loss.

(6) Cholesterol:
(a) Cholesterol is not fat. Cholesterol is a waxy, fat-like substance that belongs to a class of molecules called steroids. Cholesterol is necessary for the formation and maintenance of cell membranes, sex hormones, production of bile salts, and for the conversion of sunlight into vitamin D.
(b) High blood levels of cholesterol are related to an increased risk of heart disease, this is determined – in part – by what you eat.
(c) Knowing your own cholesterol level can be important. The desirable level is below 200 mg. 200 – 239 is borderline and above 240 is considered high.
(d) Cholesterol is found in foods that come from animal products.
(e) Physical activity can also reduce your cholesterol levels.

(7) Serving and Dispensing Food
(a) Do you feel like eating dessert when it looks appetizing, even after eating a large meal?
(b) Do you always have room for something you like?
(c) Do you get excited about a buffet?
(d) If you drive by a bakery or fast-food restaurant and smell the food, do you want to eat, regardless of whether you are hungry?
(e) Do you feel like eating when you see a picture of a delicious dessert in a magazine?
(i) If you answer “yes” to any of these questions, you may be high in externality. This means you are sensitive to external cues or signals of food. Reducing your exposure to food may be helpful in controlling your eating.

(ii) The following techniques are designed to help you control eating when your exposure to food is at its peak. The goal is to minimize your contact with these cues.

1. Remove serving dishes from the table.
2. Leave the table after eating.
3. Serve and eat one portion at a time.
4. Follow the five-minute rule: Wait 5 minutes before going back for 2nd helpings.
5. Avoid being a food dispenser.

(8) Carbohydrates and your Diet:

(a) What are carbohydrates? A combination of hydrogen, oxygen and carbon atoms, which join to make simple sugars, or starches and fibers. The sugars provide energy for the body. These consist mostly of table sugar, fructose in fruit and honey, and lactose in milk. The starches are foods like cereals, pasta, rice, bread and veggies.

(b) It is very easy to eat too many carbs since it is such a major part of our diet. 45 – 65% of your diet should consist of carbs.

(c) Be on the lookout for simple sugars in your diet. Examples are cookies, soft drinks, candy…these stimulate insulin release. Because insulin is related to hunger, you will feel hungry in less time by eating sugars than by eating starches and fiber. An exception to this is fructose, sugar found in fruits.

(d) Carbs and extra calorie burning: Your body uses 20 – 25% more energy to metabolize carbs than fats!!

(9) Veggies in Your Diet

(a) 3 – 5 servings a day. 1 serving = 1 cup of raw leafy veggies, ½ cup of other veggies, cooked or chopped raw, 6 oz. veggie juice.

(b) Serving tips: When you eat fast food, be creative – get a veggie alternative to fries, but be careful with dressings and toppings!

(10) More on Physical Activity

(a) Are you more active?
(b) Do your best to exercise each day.
(c) Have you found something that you like to do? Does it help to stick to your eating plan and lose weight?
(d) Matching your activity to your goals: speed weight loss, build strength and improve physique, improve cardiovascular health…
(e) The myth of spot reducing: where your body stores fat depends on genetic and hormonal factors. When you lose weight, you have little control over where fat is burned. Recent studies suggest that regular,
moderate-intensity exercise may prevent fat accumulation in the abdominal area.

(11) **Internal Attitude Traps**
(a) How are you doing with replacing negative thoughts?

**Week 10**

(1) **Stress and Eating:**
(a) Stress makes some people eat more and some people eat less.
(b) Stress can affect many aspects of health, from the common cold to heart disease, diabetes and asthma. It is reasonable to believe that reducing stress would make many people happier and healthier.
(c) Do you feel that stress influences your eating?
   (i) When you feel pressure to accomplish something, do you feel pulled toward food or pushed away from it?
   (ii) If you were sitting at a desk working on a project that had to be done quickly, would you want to be eating something?
   (iii) Do you believe food is something you use to feel better when you are stressed?
   (iv) Does stress make you eat more?
(d) If you answered “yes” to any of these questions, stress and eating might be linked in important ways.
(e) So what can you do about it?
   (i) Respond to stress with activities other than eating. Listen to music, reading, going for a walk, etc.
   (ii) Having several constructive activities at hand so that you know exactly how to respond can be very helpful.
   (iii) A second solution is to reduce stress. Learning stress management techniques can be helpful.
   1. Stress and physical activity:
      a. Many people tend to forego their physical activities when they are stressed. However, physical activity is what reduces stress. Physical activity can also fight fatigue and insomnia and can reduce anxiety and depression.
      b. Stress is interplay between the body, mind, environment and our behavior. We respond to situations in our environment in a unique way.
      c. Relaxation training:
      d. Appraisal: appraise the situation, then respond.
(f) Physical Activity:
   (i) Are you more comfortable with being active? Are you ready for more?
   (ii) Continue to increase walking by time or steps.
   (iii) **Exercise essentials:**
1. Exercise can help you maintain weight loss or help you continue to lose weight. It burns calories and boosts metabolic rate. Exercise also makes you feel good. It reduces stress and may give us more energy (like planning our week’s diet!). People who exercise live longer.

2. Even small amounts of exercise have a big impact on health, weight loss and maintenance.

3. Your ultimate goal should be 10,000 steps a day or more! If you are not counting steps, your goal should be 30 – 60 minutes most days of the week.

(iv) **Aerobics:** aerobic activity requires a large increase in the body’s use of oxygen.

(v) Many people losing weight use more than one form of exercise.

(g) Dealing with pressures to eat:
   (i) Why do some people encourage you to eat when you are trying to lose weight?
       1. They are unaware that offering food to you is a problem.
       2. They may be uncomfortable eating in front of you.
       3. They may be jealous of your success.
       4. They may not want you to succeed.
       5. They think you are starving.
       6. They want to test your determination.

(ii) When others pressure you to eat, stand up for yourself and refuse. Avoid being aggressive or insulting, even if you suspect evil motives.

(h) **Imperatives:** Another Attitude Trap
   (i) Imperatives includes words that imply perfection or urgency, or allow no room for error. Examples of imperative words include “always,” “must,” and “never.” This can set you up for disappointment and then you can easily lose sight of many positive accomplishments you have made just because of a few mistakes.

(ii) Replace imperatives with language that allows for flexibility.

(i) **Fiber:**
   (i) Dietary fiber comes primarily from the rough cell walls of plants.
   (ii) Fiber absorbs water during the digestive process. This helps with the movement of waste products through the bowel.
   (iii) Studies show that fiber can reduce the risk of serious diseases such as colon cancer.
   (iv) Aim to eat at least 25-35 grams of fiber each day. Fiber comes from fruits, veggies and cereals.

(j) **Fruit in your diet:**
   (i) Adding more fruit – snacks, canned juices, canned fruit in light syrup.
(ii) Aim for 2-4 servings of fruit each day. 1 medium apple, orange, banana, peach or pear, ½ cup chopped, cooked or canned fruit, 1 cup of small berries, ¾ cup or 6 oz. fruit juice.

(iii) Choose citrus fruits, melons and berries regularly – these are rich in vitamin c.

(iv) Choose fresh fruits as often as you can.

(k) Storing foods: Out of sight, Out of Mouth

(i) The less you see and think about food, the easier it will be to control your eating. Where and how you store your food can influence what and how much you eat.

(ii) The accessibility of your food can influence how much you eat.
1. Hide the high calorie foods. Of course, it would be better to not buy those foods at all!
2. Store problem foods in opaque containers.

(l) Compulsive eating and binge eating:

(i) The official definition of binge eating has two features:
1. Eating what others would consider a large amount of food
2. Feeling out of control
3. When this happens two times a week or more and over a period of 6 months or more, you fit the diagnosis of Binge Eating Disorder.
4. If you feel like you may have this disorder, take the quiz on the website.

Week Eleven

1) Taking Control of Your Physical Activity:
   a) Remember “externality?” This is the sensitivity to external cues the may influence you. This also applies to exercise. Here are some strategies to help you keep active:
      i) Make an exercise appointment in your day planner.
      ii) Set your computer to beep every hour, reminding you to get up and take a short walk.
      iii) Leave yourself a voicemail reminder to exercise.
      iv) Send yourself an email to schedule exercise.
      v) Make an exercise “date” with your partner.
      vi) Keep your walking shoes with you.
      vii) Set up a regular time to exercise with someone you know.

   b) What are some cues that keep you from being active?
      i) Television (turn it off), stretch, do chores during commercials
      ii) Favorite chair (reward yourself with sitting in it after you have exercised)
      iii) Family members relaxing when you get home
      iv) Drive-thru windows
      v) Last minute celebrations
vi) Others? How can you counter these cues?

c) Fun partner activities:
   i) Use these as rewards from you to your partner, from your partner to you or as a joint effort. (go to a concert, nature walk, flowers, bowling, nice wine, new sport, singing telegram, mystery weekend, movies, gift certificates, music, shopping, picnic, new book, fair or festival, thank you note, time together).

d) impossible dream thinking
   i) an attitude barrier to losing weight.
   ii) Fantasize or dream about impossible accomplishments.
   iii) Do you daydream about how wonderful life will be after weight loss? Weight loss alone will not make you happier.
   iv) This type of thought also occurs when you imagine succeeding at a program without hard work.
      (1) Counter the impossible dream
      (2) Set realistic short-term goals
      (3) Focus on behavior – not weight
      (4) Set flexible goals

e) Cravings vs. Hunger
   i) When you eat are you responding to physical hunger or psychological cravings?
   ii) Take the Cravings vs. Hunger quiz.
   iii) Situations 1, 3, and 5 usually indicate psychological cravings, 2 and 4 = physical hunger. Six could be either. Once you can distinguish between the two, we can work on anti-craving techniques.
   iv) Does something stimulate the urge besides hunger?
   v) Does someone offer you food?
   vi) Does something make you think about food?
   vii) Do you have bad feelings that food would help satisfy?
      (1) Conquering the cravings:
         (a) The distraction approach involves ignoring the cravings. Think about something else and the craving will usually go away. This method works best for people who have a good imagination or can change activities or thought’s in an instance.
         (b) The confrontation approach pits you against the craving. Argue with yourself and tell yourself why you will not give in. Imagine how silly it is to let the craving get the best of you.
         (c) Think of these two approaches and think of which would work best for you. If you don’t know, try both.

f) Your body and your self-esteem:
   i) Body image
   ii) Self-esteem is how we evaluate ourselves.
   iii) Developing a positive body image:
      (1) Faulty Assumptions about Appearance:
         (a) Looks are central to who I am.
(b) People first notice what is wrong with my appearance.
(c) Appearance reflects the inner person.
(d) If I looked different, I could be happier.
(e) By controlling my appearance, I can control my social and emotional life.
(f) My appearance is responsible for much of what has happened to me.
(g) The only way I could ever like my look is to change the way I look.

(2) These assumptions can lead to an overestimation if how appearance governs one’s life and to an overemphasis on changing appearance to improve well-being.

(3) What can you do?
   (a) Get accustomed to seeing your body.
   (b) Challenge the faulty assumptions about your appearance and life.
   (c) Confront what is realistic for you as an individual
   (d) Uncouple body image from self-esteem.
   (e) Focus on how your body is a gift.

(g) Breads, Cereals, Rice and Pasta in Your diet:
   i) This is the last tier of the Food Guide Pyramid.
   ii) Foods from this group should make up the most part of your diet. Be careful of hidden fats and calories in some of these foods though.
   iii) SelectionHints:
        (1) Choose several servings a day from whole grains.
        (2) Foods that contain low amounts of fat and simple sugars are the best choices for a healthful diet. Bread, English muffins, rice and pasta.
        (3) Some foods from this group that are made from flour are typically high in fat and sugar.
        (4) Spreads and toppings can add many unwanted calories to foods in this group while providing little nutrition.
        (5) Most pasta stuffing and sauces use butter or margarine.
   iv) How much is a serving?
        (1) 1 slice of bread, 1 oz. of ready to eat cereal, ½ cup of cooked cereal, rice or pasta.

(h) A note about breakfast:
   i) Most people who successfully lose weight resume eating breakfast as they lose weight.
   ii) Studies show that those who eat high-fiber breakfasts are less likely to eat too much at lunch.
   iii) Starting the day with breakfast may help control calorie intake for the rest of the day.
        (1) No time? Get up 10 minutes earlier.
        (2) Still no time? Plan ready-to-eat breakfasts (canned or fresh fruit, juices, milk, instant breakfast mixes, ready-to-eat cold cereals, yogurt, cheese, bagels or toast.
        (3) Take it to go: Pack yourself a breakfast to go the night before.
(4) Be creative.
(5) Not hungry? Drink some juice and take something with you to snack on later in the day.

i) Eating away from Home
   i) Eating at restaurants:
   (1) Order from the appetizer or salad section of the menu.
   (2) Order a la carte meals.
   (3) Share meals or get a doggie bag before the meal.
   (4) Watch the salad dressing. Ask for it on the side.
   (5) Watch for hidden calories. Rich sauces added to meats and veggies, oils added in Italian restaurants, and breaded and fried foods.
   (6) Watch the alcohol. Avoid hard alcohol and sweetened drinks. White wine is a better choice and white wine spritzer is even better. The following drinks have about 100 calories each:
      (a) 12 oz. light beer
      (b) 8 oz. regular beer
      (c) 3 ½ oz. wine
      (d) 1 shot of liquor.
   (7) Beware of the bread basket. Put it at the end of the table or have one piece without butter to take the edge off.
   (8) Be wise with dessert. Get dessert under two conditions: you are still hungry or you have planned it into your day’s calories. Fresh fruit or sorbets are good options.
   (9) Engage your partner. Tell your partner what you will order before you go in the restaurant or have your partner order for you.
   (10) Watch your emotional response.

j) Alcohol and Calories:

k) Food and weight fantasies:
   i) These are a sign of unrealistic weight loss expectations. Food fantasies reveal an expectation that the rigors of going through a program will end some magic day and old eating habits will return.

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Week 12

1) Taking stock of your progress:
   a) If you understand the circumstances that prompt you to eat well and be active, and the triggers that cue you to eat more and be inactive, you are poised to act.
   b) Acting means having a plan so that you place yourself in the circumstances where you can cope with problems in a constructive way.

2) Your lifestyle achievements:
   a) Remember in week five when we discussed the ABC’s of behavior? This is a good time to reapply this to your eating and activity patterns.
b) Have you developed a plan to change the situations that promote eating or activity?

c) What techniques that you learned are most important to you?
   i) Eating slowly, sticking to an eating schedule, making an appointment to exercise, recording food intake…

3) Your exercise achievements:
   a) Review of key points:
      i) Being physically active is one of the strongest predictors of long-term success at weight management.
      ii) Physical activity has benefits far beyond weight management. It is associated with reduced risk of a number of serious diseases.
      iii) Rigorous activity is not necessary to reap health benefits.
      iv) Several small bouts of exercise work just as well as one long one.
      v) The best type of activity is one that you enjoy.
   b) Have you found activities that you enjoy?
   c) Are you meeting your exercise goals?
   d) What can you do to overcome the barriers that interfere with being regularly active?
   e) Maybe try exercising with a partner.
   f) Make a commitment and write it down (to be physically active and how you will achieve this).

4) Your attitude achievements:
   a) How we think is central to who we are as people.
   b) How we think affects how we feel, and our thoughts and feelings are key indicators of our behavior.
   c) Eating and exercise are behaviors, so thinking goes a long way toward acting right.

5) Your relationship achievements:
   a) Have you benefited from social support?
   b) Have you been asking for support if you feel that it would help.
   c) Overeaters anonymous provides a great deal of support.

6) Your nutrition achievements:
   a) The two key issues to remember are a balanced diet and calorie control.
      Remember to accurately measure serving sizes and record them.
   b) Eating a balanced diet is necessary for good health.
   c) Are you eating a balanced diet?

7) Remember a reasonable weight:
   a) It is important to view what you have done in a positive context. Don’t expect perfection.
   b) Goals that you set for yourself should be challenging, but not impossible to reach.

8) Bringing it all together: The Behavior Chain:
   a) We have discussed ways to identify problem situations, along with techniques to help control your eating, increase your physical activity, change your attitudes, and improve your relationships.
b) Now you need to know which technique to use in what situation. The behavior chain is the path to this process. It is a method for breaking eating, exercising and thinking episodes into discrete parts. When you examine each part, ideas emerge for stopping an episode in its tracks.

i) A Chain and its links:
   (1) A chain is only as strong as its weakest link. Attacking the weakest link is ideal in breaking your behavior chains that lead to overeating or under exercising.
   (2) Identifying your behavior chains: Take some time to form a picture of a behavior chain that applies to you. Pick a high risk situation that really gives you trouble. Try to include each important detail.
   (3) Analyzing your behavior chain: Look at each of the links on the chain and write down at least two ways that you could break the chain at each link.
      (a) Concentrate on the weakest links.
      (b) Interrupt the chain as early as possible.

9) Fast Food:
   a) 7% of the American population eats at McDonalds every day.
   b) If you must go to a fast food restaurant, get a salad with low-cal dressing or dressing on the side. Choose grilled chicken sandwiches over fried and omit cheese and sauces.
   c) Control your portion sizes – order small fries.
   d) Drink diet sodas, unsweetened tea or water.

10) Dichotomous (Light Bulb) Thinking:
   a) This involves viewing the world as losing weight as right or wrong, perfect or terrible, good or bad...
   b) This tends to occur when you slip and feel you have blown the program.
   c) The danger is not the slip but the despair that you feel about making inevitable mistakes. If you feel guilty or depressed, the likely response to soothe the feelings is eating.
   d) Another example is the tendency to view foods as either good or bad. These vary from person to person. All foods, in moderation, can fit into a healthy eating plan.
   e) Being aware of your dichotomous thoughts is essential.
REFERENCES


