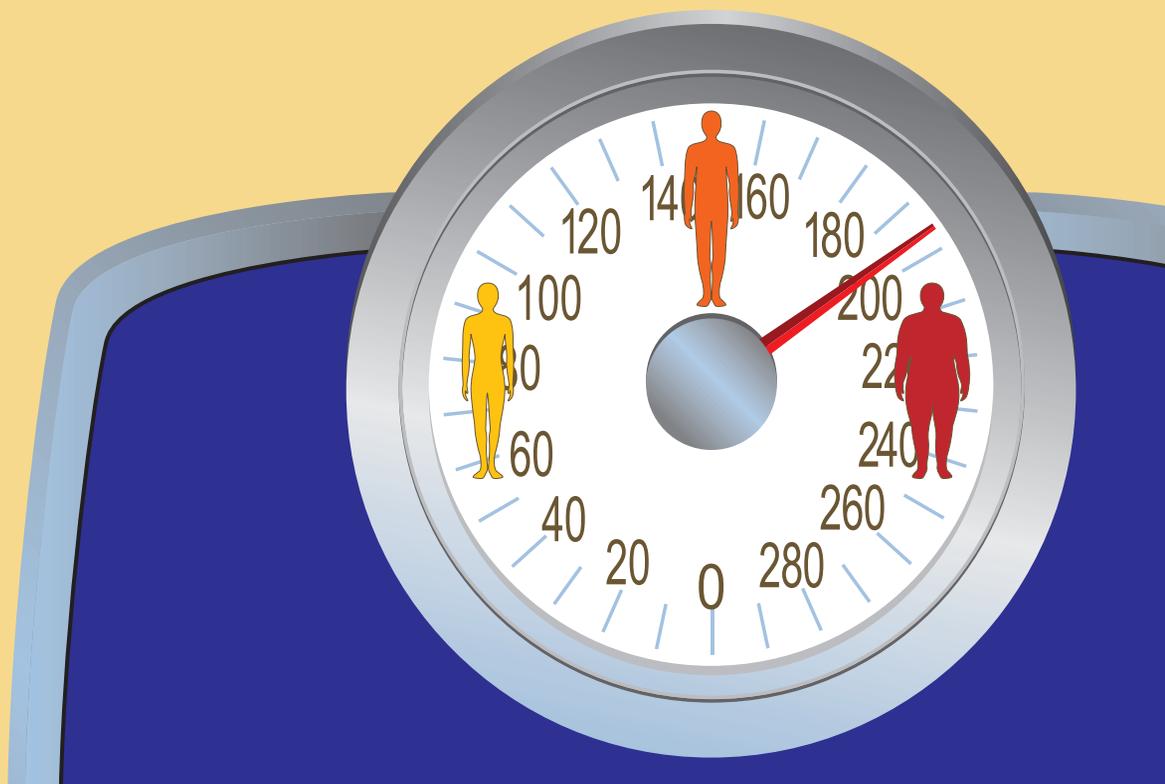


# Concepts in Comprehensive Weight Management



## **MONOGRAPH 2:** Behavioral Strategies for Weight Management



## About the *Concepts in Comprehensive Weight Management* Series

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Gary D. Foster, PhD, declares no conflicts of interest or financial interests in any product or service mentioned in this program, including grants, employment, gifts, stock holdings, and honoraria.

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More Americans than ever are overweight or obese. And as weight increases, so does the prevalence of health risks. The only proven way to lose weight and keep it off is to make long-term lifestyle changes—to consume fewer calories each day and increase physical activity. The recommended treatment strategy pairs dietary therapy and increased physical activity with behavioral techniques that help patients acquire the skills, motivation, and support to make the needed changes.

Pharmacists are well positioned to help address the growing obesity problem. They can make patients aware of the risks associated with obesity and educate patients about fundamental principles of weight management. Pharmacists also can identify patients who might benefit from adjunctive pharmacotherapy.

The *Concepts in Comprehensive Weight Management* series consists of three monographs, which can be found on [www.pharmacist.com](http://www.pharmacist.com):

- Monograph 1—“Identifying and Treating Overweight and Obesity.” This monograph provides a general introduction to the identification and treatment of overweight and obesity.
- Monograph 2—“Behavioral Strategies for Weight Management.” This monograph provides an introduction to behavior change theory and an overview of the behavioral interventions deemed most useful for weight loss and maintenance.
- Monograph 3—“Weight Loss Pharmacotherapy and the Pharmacist’s Role in Weight Management.” This monograph addresses drug treatment options for weight loss and describes the pharmacist’s role in comprehensive weight management, including specific strategies for assisting patients in their weight loss efforts.

### Learning Objectives

After reading this monograph, pharmacists will be able to:

1. Summarize key features of the Health Belief Model, the Transtheoretical Model of Change, and motivational interviewing.
2. List the distinguishing characteristics of behavior therapy for obesity.
3. Explain why patient readiness is important for successful weight loss attempts.
4. Quantify the discrepancy between recommended amounts of weight loss and the amounts frequently sought by obese patients.
5. Define common types of behavioral interventions, including self-monitoring, contingency management, stimulus control, problem solving, and cognitive restructuring, and discuss their use with patients seeking to lose weight or maintain weight loss.

### Introduction

In theory, weight control is simple: to maintain a steady body weight, a person needs only to balance energy intake (consumption of food) with energy output (physical activity) over the long term.<sup>1-3</sup> But simple does not necessarily mean easy, as the alarming prevalence of overweight and obesity in the United States demonstrates. To lose weight and maintain that weight loss successfully, patients who are overweight or obese usually need to make substantial, permanent changes in their eating and physical activity behaviors.<sup>4</sup>

Making and maintaining lifestyle changes is particularly challenging in our “obesigenic” environment, which encourages overconsumption of good-tasting, inexpensive, energy-dense foods while simultaneously promoting many time-saving and labor-saving products that discourage physical activity.<sup>5</sup> As obesity expert Xavier Pi-Sunyer has noted, successful weight management in this environment requires<sup>2</sup>:

- A consciousness of the problem.
- A motivation to remain at a healthy weight.
- Appropriate tools, confidence, and self-image to sustain the effort through the years.

The goal of behavior therapy for weight management is to help patients acquire the skills, motivation, and support needed to change their eating and physical activity behaviors.<sup>4,6</sup> The National Heart, Lung, and Blood Institute (NHLBI) Obesity Education Initiative *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults* recommend using behavioral strategies routinely during weight loss therapy, because the combination of dietary therapy, increased physical activity, and behavior therapy provides the greatest likelihood of success.<sup>4</sup>

Pharmacists generally do not receive much training in behavior change principles or techniques. This monograph provides an introduction to behavior change theory and an overview of the behavior therapy interventions deemed most useful for weight loss and maintenance. Extensive instruction in these interventions is beyond the scope of this monograph, and may be beyond the scope of many pharmacists’ practice. The intent is to familiarize pharmacists with these interventions, so that they can use them to the extent possible and recognize when patients might benefit from the assistance of a counselor or other health care professional with more extensive training in behavior change.

### How People Change

What makes people change health-related behaviors? Research in the social and behavioral sciences has produced a

number of theories and models that seek to explain behavior and suggest ways to achieve behavior change. To better understand the rationale for various behavior therapy interventions used in weight management, pharmacists should be acquainted with two models: the Health Belief Model and the Transtheoretical Model of Change. Pharmacists also should understand the theory underlying the counseling style known as motivational interviewing.

#### Health Belief Model

The Health Belief Model is one of the most widely used conceptual frameworks in health behavior.<sup>7</sup> According to this model, patients’ willingness to adopt, change, or maintain a health-related behavior depends on whether they<sup>8</sup>:

- Perceive themselves as susceptible to a particular health problem.
- View the problem or its consequences as serious.
- Are convinced that the recommended treatment or behavior will be effective, yet not be overly costly, inconvenient, or painful.
- Are exposed to a cue to take a health action (e.g., are educated about a health problem or experience symptoms of a health problem).

Applying this model to weight loss, patients should be most willing to embark on weight loss therapy if they are diagnosed with a condition caused or exacerbated by obesity, or advised to lose weight by a health care professional; understand and feel susceptible to the consequences of obesity-related health risks; and believe that weight loss therapy will reduce both their weight and their health risks (or improve their obesity-related condition). Data from the National Weight Control Registry—a voluntary registry of more than 4,800 adults who have maintained a weight loss of at least 30 lb for at least 1 year—indicate that participants who reported a medical trigger had greater initial weight loss and less weight regain over 2 years than did participants with nonmedical triggers (e.g., emotional or lifestyle triggers) or no triggers.<sup>9</sup>

A key component of the Health Belief Model—and a central component of another important behavior-change theory known as Social Cognitive Theory—is the concept of self-efficacy. Self-efficacy refers to a person’s confidence in his or her ability to take a needed action (e.g., adopt, change, or maintain a health-related behavior), including confidence in overcoming potential obstacles.<sup>7,10</sup> Self-efficacy can be enhanced by dividing a complex behavior change into a series of smaller, more easily achievable tasks or goals.<sup>7</sup> Mastering these tasks or achieving these goals allows patients to have successful experiences, which increases their confidence and sets the stage for future success.<sup>7,11</sup>

## Transtheoretical Model of Change

Many early theories of behavior change construed change as an *event*—for example, stopping smoking.<sup>12</sup> The Transtheoretical Model of Change describes behavior change as a *process* involving progress through a series of five distinct stages.<sup>12,13</sup> The stages are defined by a person’s readiness to change (Table 1).<sup>7,13,14</sup> People progress through the stages as the perceived benefits of change (i.e., the pros) increase and the perceived costs of changing (i.e., the cons) decrease.<sup>7</sup>

People do not necessarily progress through the five stages in an orderly, linear manner, however. Regression (i.e., return to an earlier stage) is possible at any stage; even people who reach the maintenance stage may, and typically do, relapse and recycle through the stages several times before they succeed in becoming long-term maintainers.<sup>12,13</sup> Fortunately, the vast

majority of people who relapse return to the contemplation or preparation stage, rather than regressing all the way back to precontemplation.<sup>13</sup> As people recycle through the stages, they often learn from their mistakes and try new approaches, increasing the likelihood of successful long-term change.<sup>12,13</sup>

In a complex behavior change such as weight loss, which entails multiple changes to interrelated eating and physical activity behaviors, it is possible for people to be in different stages of change for different target behaviors. For example, Logue et al.<sup>15</sup> asked 284 obese primary care patients about their readiness to change each of six weight-related target behaviors: increased planned exercise, increased daily activity, increased fruit consumption, increased vegetable consumption, decreased dietary fat, and decreased portion sizes. They found that patients in a particular stage of change for one of the behaviors were distributed across all five stages for the other behaviors, with little

Table 1.

### Stages of Change in the Transtheoretical Model

Stage	Explanation	Key Strategies for Moving to the Next Stage
Precontemplation	The person is not considering changing behavior in the next 6 months, and there is no intention to modify behavior in the foreseeable future. People in this stage may be uninformed about the need for change, or uninterested in changing behavior. Some people may have tried and failed to change their behavior in the past, and now are immobilized by feelings of embarrassment, shame, and guilt.	Increased information and awareness Emotional acceptance
Contemplation	The person is considering changing behavior in the next 6 months. The person is aware that a problem exists and is seriously thinking about changing behavior, but has not yet made a commitment to take action. Weighing the pros and cons of the behavior change is an important characteristic of this stage.	Increased confidence in one’s ability to adopt recommended behaviors
Preparation	The person is planning to change behavior during the next month and may have made some small changes already. People in the preparation stage often have taken action unsuccessfully in the past year.	Resolution of ambivalence Firm commitment Specific action plan
Action	The person currently is in the process of changing behavior. This stage usually requires a considerable commitment of time and energy.	Behavioral skills training Social support
Maintenance	The person has sustained a behavior change successfully for ≥6 months. This stage is considered to be a <i>continuation</i> of change, rather than an absence of change. The person must continue to work to maintain the gains realized from earlier stages and prevent relapse. For some health-related behaviors, maintenance can be considered to last a lifetime.	Problem-solving skills Social and environmental support

Source: References 13 and 14.

correlation among responses. So a given patient might be making plans to start exercising next week (preparation stage) but not even considering modifying his or her diet to reduce the percentage of fat (precontemplation stage).

A key assumption of the Transtheoretical Model is that behavior change interventions need to be matched to the patient's stage of change to be effective.<sup>16</sup> For example, because patients in the contemplation stage need to increase their confidence in their ability to make a needed behavior change (Table 1), effective interventions would include discussing and resolving barriers to change and providing positive feedback about patients' abilities.<sup>14</sup> However, such precise matching may not be practical or even possible in clinical practice.<sup>16-18</sup> Given the complexity of weight-related behavior change, it can be difficult to determine a patient's stage of change accurately.<sup>19</sup> There also is emerging evidence that not all people in a self-reported stage of change have identical needs.<sup>16,18</sup> For example, people in the precontemplation stage may be<sup>8</sup>:

- *Unaware* that there is a problem behavior.
- *Uninvolved*—they know that a problem behavior needs to be changed, but changing it is not a priority.
- *Undecided*—not sure that changing the problem behavior will be worth the effort.

### Motivational Interviewing

According to the NHLBI guidelines, patients with high motivation for weight loss are more likely to be successful.<sup>4</sup> Motivation can be thought of as having three critical components: readiness, willingness (importance), and ability (confidence).<sup>20</sup> Each of these components can be a source of ambivalence about behavior change; resolving this ambivalence is an essential prerequisite to change.<sup>20</sup>

The counseling style known as motivational interviewing seeks to elicit behavior change by helping people explore and resolve ambivalence.<sup>21</sup> It is based on the following key assumptions<sup>20,21</sup>:

- Motivation is not an immutable trait; it is a dynamic state that can be influenced.
- Motivation to change is elicited from the patient, not imposed by others.
- The patient—not the counselor—is responsible for articulating and resolving his or her own ambivalence. The counselor's task is to help the patient express all aspects of the ambivalence and guide the patient toward an acceptable resolution that triggers change.
- Direct persuasion is not an effective method for resolving ambivalence.

Motivational interviewing evolved from experience in the treatment of addictive behaviors, notably alcohol abuse.<sup>20,21</sup> In

addiction counseling settings, motivational interviewing typically involves multiple sessions of considerable duration.<sup>20</sup> A briefer form of motivational interviewing, adapted specifically for primary care settings, has been used to address a number of health behaviors, including diet and physical activity behaviors.<sup>20</sup>

Motivational interviewing for health behavior change often begins with an assessment of importance and confidence, because both have a strong influence on readiness.<sup>18</sup> Importance is assessed by asking a question such as:

How important is it to you personally to [make the behavior change]? If 0 means “not important” and 10 means “very important,” what number would you give yourself?

Confidence is assessed by asking a question such as:

If you decided right now to [make the behavior change], how confident do you feel about succeeding with this? If 0 means “not confident” and 10 means “very confident,” what number would you give yourself?

Once importance and confidence have been assessed, a number of strategies can be employed to explore the patient's responses in greater detail. These strategies help to elicit “change talk”—the patient's own reasons for the advantages of change.<sup>20</sup> One strategy is to ask “Why so high?”<sup>18</sup>:

You gave yourself a score of 6, so it's fairly important to you personally to [make the behavior change]. Why did you score this a 6 and not a 1?

By asking “Why so high?” instead of “Why so low?”, the patient is forced to think about positive reasons for change rather than dwell on the drawbacks. This question would be followed by “How can you go higher?”:

What would have to happen for you to move up from 6 to 8 or even 9?

Similar questions would be used to explore the patient's confidence ratings.

Another strategy is to have the patient identify the pros and cons of the current behavior, the behavior change, or both. This usually is done in terms of “good things” and “less good things”<sup>18</sup>:

What are the good things about [the current behavior/not making a change, or the new behavior/making a change]?

What are the less good things about [the current behavior/not making a change, or the new behavior/making a change]?

The goal is to help the patient think about change and ideally voice arguments in favor of change.<sup>18,20</sup>

**THINK IT THROUGH:  
Pros and Cons of Weight Loss**

What might be some of the *good things* about beginning weight loss therapy?

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What might be some of the *less good things* about beginning weight loss therapy?

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(See page 16 for sample responses.)

Although motivational interviewing may seem straightforward, it actually is more a method of communication than a set of techniques—a way of being with and for people.<sup>20</sup> Skillful application of this method entails much more than just asking a few questions. A detailed explanation of motivational interviewing is provided in the book *Motivational Interviewing: Preparing People for Change* by William Miller and Stephen Rollnick (Guilford Press, 2002). Information about motivational interviewing for health behavior change can be found in the book *Health Behavior Change: A Guide for Practitioners* by Stephen Rollnick et al. (Churchill Livingstone, 1999). Information about upcoming motivational interviewing training programs is available at <http://motivationalinterview.org/training/index.html#training>.

## Overview of Behavior Therapy for Weight Management

Behavior therapy for obesity assumes that patterns of eating and physical activity are learned behaviors that can be modified.<sup>4</sup> Both behavioral and cognitive approaches are used to modify those behaviors. (In this monograph, the terms “behavior therapy,” “behavioral strategies,” and “behavioral techniques” are meant to refer to this combination of behavioral and cognitive approaches.)

## Characteristics of Behavior Therapy

Behavior therapy for obesity has three general characteristics.<sup>5,11,17,22</sup> First, it is goal-directed. Very clear goals are established in terms that can be measured easily to facilitate a clear assessment of success.

Behavior therapy also is process-oriented. Patients are taught *how* to change, not just *what* to change. Successful weight management is viewed as a skill that can be learned and practiced, so that “skill power”—not willpower—becomes the key to success.<sup>5</sup>

Third, behavior therapy is based on small rather than large changes. Drastic changes of any sort tend to be short-lived. Making a series of small changes successfully facilitates long-term behavior change by increasing patient confidence and self-efficacy.

Current thinking about weight management recognizes that genetic, metabolic, and hormonal influences likely determine the range of possible weights that a person can achieve.<sup>5,22</sup> Behavior therapy for obesity seeks to equip patients with the skills to regulate their weight at the lower end of that range, even if they cannot achieve an ideal weight.

## Setting Goals for Behavior Change

As described in the first monograph in this series, “Identifying and Treating Overweight and Obesity,” the initial target weight loss recommended in the NHLBI guidelines is a 10% decrease in body weight over 6 months, at a relatively slow but progressive rate of 0.5–2 lb/wk.<sup>4</sup> But losing weight is not a behavior; it is an outcome of behavior change.<sup>18</sup> To facilitate behavior change, goals should be set for the specific target behaviors that lead to weight loss, thereby converting the behaviors into practical and manageable steps.<sup>18,23</sup>

The process of establishing a series of modest, short-term goals that move a patient closer and closer to the ultimate goal is known as shaping.<sup>24</sup> This approach is recommended because modest, short-term goals (e.g., “add a vegetable to the evening meal three times this week”) tend to be more tangible and more difficult to postpone than larger, long-term goals (e.g., “increase vegetable intake this month”).<sup>23,25</sup> Also, attaining a short-term goal provides patients with immediate positive feedback that may encourage them to set additional goals.<sup>23,25</sup>

One popular framework for creating effective goals uses the acronym SMART:

- Specific
- Measurable
- Attainable
- Realistic
- Time-bound

A goal is specific if it provides a clear target and specifies both the type and amount of effort needed to reach the target.<sup>23</sup> The goal “exercise more often” is not specific, but “walk for 20 minutes on 3 days this week” is. The latter goal also is measurable, because the patient can track progress toward the goal easily. Goals ideally should be moderately challenging but attainable—not so easy that they can be achieved with little effort, but not so difficult that they become unrealistic. For example, setting a goal to “walk for 20 minutes every day this week” can set a busy person up for failure; “walk for 60 minutes on 3 days this week” may represent an unrealistic duration for someone who is sedentary. And as described above, goals also should specify a short-term timeframe for completion (e.g., 1 week).

**THINK IT THROUGH:  
Creating a SMART Goal**

Create a SMART goal for decreasing the number of meals eaten out.

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(See page 16 for sample responses.)

It is important to avoid overwhelming patients with too much change at once. The NHLBI guidelines recommend setting no more than two to three goals at a time.<sup>24</sup> Patients should be encouraged to select goals that they are willing and able to take on. A goal contract can be a useful tool; writing the goals on a piece of paper and having the patient sign the page formalizes the agreement and may provide additional motivation for the patient to achieve the goals.<sup>25</sup> A new contract can be created each time new goals are established (e.g., at the beginning of each week).

**Behavior Therapy Strategies**

The NHLBI guidelines recommend a multimodal approach to behavior therapy for obesity, incorporating a number of different strategies.<sup>4</sup> The strategies that have been found to be consistently useful for weight-related behavior change are self-monitoring, contingency management, stimulus control, problem solving, cognitive restructuring, stress management, and social support.<sup>4,11,26,27</sup>

**Self-Monitoring**

Self-monitoring refers to the systematic observation and recording of target behaviors.<sup>27,28</sup> In the case of weight loss and maintenance, this usually means weighing oneself regularly and keeping daily records of food intake and physical activity.<sup>10,11</sup> Self-monitoring is considered to be the cornerstone of behavioral treatment, because it makes patients more aware of their weight-related behaviors and the factors that influence how they behave.<sup>11,26,27,29</sup>

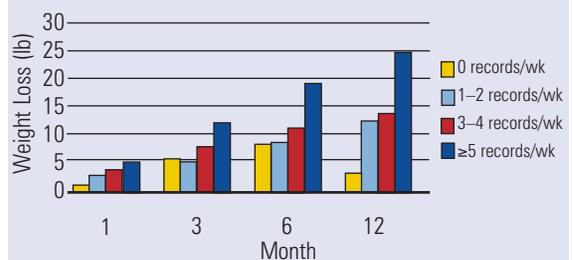
**Food and Physical Activity Records.** Both short-term and long-term studies have shown that keeping food and physical activity records correlates with successful long-term weight control.<sup>11,29</sup> For example, when Streit et al.<sup>30</sup> analyzed data for more than 2,000 participants in the Freedom from Fat weight loss program offered to Kaiser Permanente members, they found a strong apparent relationship between food record patterns and weight loss. The number of food records participants kept per week was the best predictor of their weight loss during the first year of the program; participants who kept five or more food records per week lost twice as much weight as those who kept two or fewer food records per week (Figure 1).

Keeping food and physical activity records consistently also appears to help patients navigate high-risk situations, such as holidays and vacations. Baker and Kirschenbaum<sup>31</sup> monitored weight changes among 38 volunteers from a long-term behavioral program for the treatment of obesity during the following periods:

- Three holiday weeks (Thanksgiving, Christmas/Hanukkah, and New Year’s Eve).

Figure 1.

**Relationship Between Weight Loss and Number of Food Records Kept Per Week**



Source: Reference 30.

- Seven non-holiday weeks (2 weeks before Thanksgiving, 3 weeks between Thanksgiving and Christmas, 2 weeks following New Year's Day).

At the time of the study, the participants already had been in the program for nearly 1 year and had lost an average of 22 lb. But only the participants identified as highly consistent self-monitors averaged any weight loss over the 10 weeks of the study, including the holiday weeks. All of the remaining participants gained weight during the holiday weeks; the least consistent self-monitors also gained weight during the non-holiday weeks. Similar results were found in a study by Boutelle et al.<sup>28</sup>

There are many approaches to keeping food records. At a minimum, records should include the type and amount of food eaten (and beverages consumed) plus the associated caloric values. Ideally, food records also should include information about<sup>1,4,11</sup>:

- Target nutrient values, such as fat grams.
- The exact time that food and beverages were consumed.

- The specific place where food and beverages were consumed.
- Whether the patient was eating alone or with others.
- Whether the patient was engaging in any other activities while eating (e.g., working, watching television).
- What the patient was feeling at the time the food or beverage was consumed, and how he or she felt afterward.

Much of this additional information is helpful for identifying and modifying the social, emotional, and environmental cues that can trigger overeating (see Stimulus Control section).

A simple table format can be used for food records; a sample is shown in Figure 2.<sup>1,24,32</sup> Some patients may benefit from responding (or may prefer to respond) to a series of questions about each entry, such as those presented in Table 2.<sup>32</sup>

Patients should be encouraged strongly to record every single item of food and drink, no matter how small or seemingly inconsequential.<sup>1,26</sup> Unrecorded calories can add up quickly to the point that they wipe out the intended energy deficit. Even seasoned dieters and other patients who believe they know how

Figure 2.

## Sample Food Record

Time	Food or Beverage Consumed	How Much	Calories	Fat Grams	Where	Alone or With Whom	Activities	Mood
8 am	Orange juice	4 oz	60	0	Kitchen table	Alone	Reading newspaper	Rushed
	Special K Vanilla Almond Cereal	3/4 c	110	1.5				
	1% milk	4 oz	50	1				
8:15 am	Coffee	8 oz	0	0	In car	Alone	Driving	Rushed
12:15 pm	Sweet Onion Chicken Teriyaki sub	6	370	5	Subway	With Claire and June	Talking	Happy
	Baked Lays Chips	1 pkg	130	2				
	Diet Coke	Medium	0	0				
3:25 pm	Chips Ahoy Cookies 100 Calorie Pack	2 packs	200	6	Office	Alone	Working on report	Stressed (meant to eat 1 pack)

Source: References 1, 24, and 32.

Table 2.

### Questions for Guiding Food Record Entries

- Were you aware of being physically hungry when you began eating?
  - If not, were you aware of any other emotions or thoughts, such as boredom, anger, loneliness, depression, etc.?
- How did you decide what to eat?
- How did you feel when you were finished eating?
  - Were you full, not full, or overly full?
  - Were you satisfied?
  - Were you energized or did you experience a lack of energy after consuming this meal or snack?
- How did you decide when to stop eating?
- If you could re-do this meal to produce a better outcome, what would you have done differently (if anything)?

*Source: From the book Your Diet is Driving Me Crazy by Cynthia Sass and Denise Maher  
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much they eat each day can be surprised by the results of precise record-keeping.<sup>1</sup>

All foods and beverages should be recorded at the time they are consumed or as soon as possible afterward.<sup>1</sup> End-of-day recall tends to be poor, which compromises the accuracy of the records.

The accuracy of food records is enhanced dramatically when patients use measurement tools such as measuring cups and spoons and a food scale.<sup>26,33</sup> But these tools must be used correctly. Measures of solid foods should be leveled off using a knife or other flat edge; measures of liquid foods should be read at eye level, not from above. Meat, chicken, and fish should be weighed *after* cooking.

Physical activity records generally include the type and amount (in minutes) of physical activity.<sup>4,26</sup> As with food records, physical activity records can be extended to include other types of information such as time, place, and feelings.<sup>4</sup> Patients who monitor lifestyle activity with a pedometer can simply record the number of steps taken each day.<sup>26</sup>

The importance and potential impact of accurate self-monitoring must not be underestimated. In one frequently cited study, Lichtman et al.<sup>34</sup> evaluated total energy expenditure and actual energy intake in 10 obese men and women who com-

plained of repeatedly failing to lose weight despite careful adherence to a low-calorie diet (<1,200 kcal/d). The patients had blamed their “slow” metabolism for their poor results; however, total energy expenditure and resting metabolic rate for these patients was found to be within 5% of predicted values. The real culprit in their failure to lose weight was inaccurate self-monitoring: these men and women underreported their actual energy intake by an average of 47% and overreported their actual physical activity by an average of 51%.

**Regular Weighing.** Having patients weigh themselves regularly during weight loss therapy is important for detecting changes in weight over time and monitoring progress toward the weight loss goal.<sup>1</sup> Regular weighing also helps to increase patients’ awareness of their body weight.<sup>10,25</sup>

Weekly weighing often is recommended during the active weight loss phase. When patients weigh themselves more frequently, they can become preoccupied with trivial day-to-day fluctuations in weight; this can have an adverse effect on adherence to weight loss therapy.<sup>1</sup> However, some studies show that more frequent weighing is associated with better weight loss.<sup>35</sup>

Patients should be instructed to weigh themselves at the same time each week, wearing the same clothing and using the same scale. Plotting weight data on a graph provides a visual record of progress that can be especially motivating.<sup>1</sup>

### Contingency Management

It is no secret that behavior can be changed through the use of rewards for specific actions—just consider the example of a dog that learns to sit on command because he receives a treat each time he does so. The technical term for this is contingency management. In the context of weight loss therapy, contingency management refers specifically to rewards for reaching behavior change goals (i.e., rewards that are contingent on goal attainment).<sup>4,26</sup> The promise of the reward serves as a motivator to continue progress toward the goal.<sup>23,26</sup>

Rewards can come from others (e.g., a member of the patient’s weight loss therapy team) or from the patients themselves (i.e., self-rewards).<sup>4</sup> They can take the form of verbal praise or recognition as well as more tangible items. Self-rewards may consist of things like purchasing a desired item, making time for a social activity (e.g., going to see a movie), or getting a massage; some patients deposit small amounts of money toward a larger reward (e.g., taking a desired trip). If a goal contract is used, the reward can be written into the contract: “If I walk for 20 minutes on 3 days this week, I will have permission to treat myself to a manicure.” However, it is important that food not be used as a reward for people who are trying to lose weight.

## Stimulus Control

Few people eat solely to get nutrition. Food is an integral part of our social structure: people eat when they get together with friends or to celebrate birthdays and other special events.<sup>36</sup> Eating often serves an emotional function when people eat for comfort, to overcome fatigue, to relieve anxiety or boredom, etc.<sup>36</sup> Eating also may become a habit in certain situations—eating popcorn in a movie theater or always having a snack when watching television, regardless of actual hunger.<sup>17,26</sup>

Stimulus control involves identifying the events, situations, thoughts, and feelings (known as antecedents or cues) that trigger overeating and finding ways to limit or avoid those cues.<sup>4,11,26,27</sup> Common strategies include<sup>4,26</sup>:

- Restricting the times and places of eating (e.g., eating only at the kitchen or dining room table).
- Storing tempting foods out of sight, or keeping them out of the house (or work area) altogether.
- Consciously avoiding situations in which overeating is likely to occur.

If a cue cannot be eliminated or avoided, patients may need to learn new responses to the cue.<sup>5</sup> For example, patients who always eat popcorn when they go to the movie theater can be taught to walk swiftly past the concession stand.<sup>33</sup> They might crave popcorn initially, but the association between watching a movie and eating popcorn eventually will be broken. Cravings might be managed by chewing on a piece of sugar-free gum.

Patients also might break the association between a cue and eating by substituting a behavior that is incompatible with eating.<sup>26</sup> For example, patients who eat while watching television might try knitting instead.

Another aspect of stimulus control involves increasing cues for desirable behavior, such as engaging in physical activity.<sup>26</sup> One commonly cited strategy is laying out exercise clothes the night before as a reminder to walk or jog in the morning.<sup>37</sup>

## Problem Solving

Obese patients can face any number of problems as they work on modifying their eating and physical activity behaviors. Problem solving in this context implies a systematic method of analyzing problem areas and formulating possible solutions.<sup>4,11</sup> The steps in this systematic method are<sup>1,4</sup>:

- Describing the weight-related problem in detail.
- Brainstorming as many potential solutions as possible.
- Evaluating the feasibility and likely effectiveness of each solution.
- Selecting the best solution or combination of solutions.
- Planning and implementing the chosen solution.
- Evaluating the outcome.

It is important to appreciate that no single strategy will solve all problems for all patients.<sup>38</sup> The best solution to a particular problem is the one that the patient believes will work and is willing to try. A key aspect of successful problem solving is brainstorming multiple solutions; ideally, the possible solutions are generated by the patient, not the pharmacist. The pharmacist might pose a question such as “How do you think you can handle that?” or “What could you have done differently in that situation?” To encourage patients to think of as many solutions as possible, pharmacists should continue posing open-ended follow-up questions such as “What else could you do?” and “How do you expect your [family/spouse/friends] to help you?” until the ideas for solutions seem exhausted.

One tool for analyzing weight-related problems is the behavior chain. A behavior chain is an illustration that visually depicts the chain of events (including social, emotional, and environmental cues) that contributed to an unwanted behavior such as overeating.<sup>5</sup> In the sample behavior chain shown in Figure 3, the fact that cookies were visible and reachable on the kitchen counter made them a prime target for a “snack attack” brought on by boredom and fatigue—not hunger. The unpleasant physical and emotional consequences of the snack attack led to additional overeating.

To help prevent similar future episodes, each of the links (i.e., cues and events) in the behavior chain is evaluated as a potential target for problem solving.<sup>5,11</sup> Possible solutions then are generated for all identified links. In the behavior chain depicted in Figure 3, possible solutions include<sup>5</sup>:

- Not leaving the cookies on the counter, where they would serve as a constant temptation.
- Going for a walk to combat feelings of fatigue and boredom.
- Limiting eating to a more appropriate location (e.g., kitchen table or dining room) to weaken the association between eating and watching television in the den.

### THINK IT THROUGH: Breaking the Behavior Chain

What are some other possible solutions for addressing the chain of events depicted in Figure 3?

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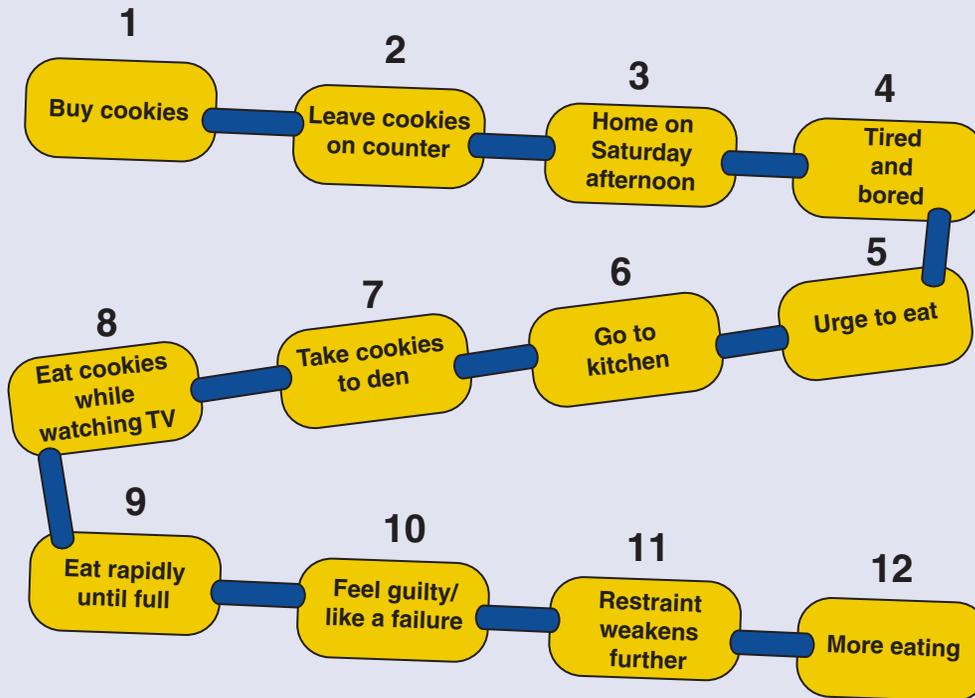
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(See page 16 for sample responses.)

Figure 3.

### Example of a Behavior Chain



Source: American Health Publishing Co., Dallas, TX. Used with permission. Brownell, KD. Bill's Sample Behavior Chain. *The Learn® Program for Weight Management—10th Edition*. Dallas, Texas; American Health Publishing Company; 2004 pg 197. All rights reserved. For ordering information, call 1-888-LEARN-41 or visit [www.TheLifesStyleCompany.com](http://www.TheLifesStyleCompany.com)

Problem solving also can be proactive. Instead of waiting for problems to arise, patients should be encouraged to identify factors that might help or hinder attainment of their behavior change goals and brainstorm strategies for success.<sup>11</sup> For example, eating away from home, traveling extensively, and eating late in the evening are common challenges.<sup>25</sup> Asking patients to think ahead of time about how they might overcome these challenges enables them to practice coping strategies and enter high-risk situations with a plan.<sup>25</sup>

### Cognitive Restructuring

A patient's thoughts and beliefs can undermine weight loss efforts in many ways. Cognitive restructuring teaches patients to identify self-defeating thoughts and beliefs, recognize distortions in those thoughts and beliefs, and replace them with more realistic, productive thoughts.<sup>4,5,11,26,39</sup>

The first step in cognitive restructuring is awareness— noticing negative “self-talk” when it occurs. Examples of common types of self-defeating thoughts and beliefs are pre-

sented in Table 3. The negative thought or belief then can be examined, using questions such as<sup>33,40</sup>:

- Is this thought or belief true? What evidence do I actually have?
- Does it help me to think this way?
- Is there another way to view this situation?

The final step is to restructure the thought or belief in a more positive way. For example, the thought “I ate a doughnut for breakfast—now I've blown my whole diet” could be restructured as “Well, I ate the doughnut this morning, but I can still eat in a healthy manner at lunch and dinner.”<sup>4</sup>

**Unrealistic Weight Loss Goals.** A common self-defeating belief among obese patients (particularly women) is that they can weigh whatever they desire if they work hard enough.<sup>39</sup> One of the biggest challenges in clinical weight management is addressing the dramatic disparity between patients' expectations about weight loss and the amount of weight loss usually achieved with the recommended treatment strategies (other than gastric surgery).<sup>5</sup> As described in the NHLBI guidelines, a weight loss of 10% over 6 months is considered to be

Table 3.

### Examples of Common Types of Self-Defeating Thoughts and Beliefs That Can Undermine Weight Loss Efforts

Category	Description	Examples
Catastrophizing	Distorting a minor problem or mistake into a major disaster	"I ate a doughnut for breakfast. Now I've blown my whole diet."
Dichotomous thinking	Taking an "all or nothing" or "black or white" approach, with nothing between the two extremes	Labeling all foods as "good" foods or "bad" foods Being "on" or "off" a diet Viewing oneself as a complete success or total failure
"Not as good as" thoughts	Comparing oneself unfavorably to others	"My friend lost 2 pounds this week, but I only lost 1 pound."
Overgeneralization	Viewing a single negative event as an endless pattern of defeat	"I couldn't resist eating those cookies. That just shows that I'll never be able to stick to a diet."
"Should" thoughts	Adhering to a rigid set of self-imposed rules ("shoulds" and "shouldn'ts"); a form of perfectionist thinking that results in guilt	"I should be exercising every day." "I shouldn't have any dessert at all if I'm trying to lose weight."

Source: References 1, 10, 11, 33, and 39.

successful, even though it is unlikely to result in a body mass index in the normal range for many overweight and most obese patients.<sup>4</sup> In contrast, patients typically seek weight losses that exceed a 30% reduction in body weight.<sup>5</sup> This degree of weight loss often equates with the lowest weight the patient was able to maintain for at least 1 year as an adult.<sup>41,42</sup>

In 1997, Foster et al.<sup>41</sup> asked 60 obese women who were participating in a clinical weight loss trial to select a goal weight and define four different weight loss outcomes:

- Dream weight—"A weight you would choose if you could weigh whatever you wanted."
- Happy weight—"This weight is not as ideal as the first one. It is a weight, however, that you would be happy to achieve."
- Acceptable weight—"A weight that you would not be particularly happy with, but one that you could accept, since it less than your current weight."
- Disappointed weight—"A weight that is less than your current weight, but one that you could not view as successful in any way. You would be disappointed if this were your final weight after the program."

The mean age of the women was 40.0 ± 8.7 years; the mean starting weight was 218 ± 27 lb, with a mean body mass index of 36.3 ± 4.3.

The mean goal weight selected by the women was 146 ± 17 lb. To achieve this goal, the women would have had to lose an average of approximately 70 lb, or nearly one third of their initial weight. The actual amount of weight lost by the 45 women who remained in the study for the full 48 weeks averaged 36 lb, or about 16% of their initial weight.

Table 4 shows the mean values assigned by the women to their dream, happy, acceptable, and disappointed weights. After 48 weeks, 9 of the 45 women (20%) reached their self-defined disappointed weight, 11 (24%) reached their acceptable weight, and 4 (9%) reached their happy weight; none reached their dream weight. For the remaining women—nearly half (47%) of the study participants—the amount of weight lost was worse than disappointing, despite exceeding the 5% to 15% loss typically produced by nonsurgical interventions. Although most of the women remained dissatisfied with their weight at the end of the study, they nonetheless reported significant positive physical, social, and psychological effects from the weight loss they had achieved.

Educating patients about realistic weight loss outcomes does not necessarily change their expectations. In 2003, Wadden et al.<sup>42</sup> administered a prescreening questionnaire to 53 women who were selected to participate in a year-long clinical trial evaluating the benefits of combining lifestyle modification with pharmacotherapy (sibutramine). Information from these ques-

**THINK IT THROUGH: Restructure Negative Thoughts**

How could the following negative thoughts and beliefs be restructured to make them more realistic and productive?

“My friend lost 2 pounds this week, but I only lost 1 pound.” \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

“I couldn’t resist eating those cookies. That just shows that I’ll never be able to stick to a diet.” \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

“I shouldn’t have any dessert at all if I’m trying to lose weight.” \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

(See page 16 for sample responses.)

tionnaires revealed that the women expected to lose the equivalent of 28% of their initial weight. Each woman subsequently attended a 1-hour meeting with a clinical psychologist who emphasized repeatedly that participants could expect to lose 5% to 15% of their initial weight over the course of the trial. But those meetings had little impact on the women’s expectations: the reported expected weight loss decreased by only 3% (to 25% of their initial weight).

The results of these studies indicate that trying to talk patients out of their ultimate weight loss goals may be futile. However, patients can be persuaded to focus on the “first step”—losing the 10% of initial body weight recommended in the NHLBI guidelines. Patients often find that they are happier than anticipated with this degree of weight loss.

**Stress Management**

Many obese patients overeat as a way to cope with stress.<sup>4,10,25</sup> Thus, stress management techniques often are a critical component of behavior therapy. Techniques that may be particularly useful for weight management include meditation, progressive muscle relaxation, and guided imagery.<sup>4,25,27</sup> These techniques are described in greater detail in this section.

Stress management is yet another reason for obese patients to engage in regular physical activity as part of weight loss therapy. The endorphins that are released during exercise produce feelings of calm and psychological well-being.<sup>25,43</sup> Regular physical activity also reduces blood pressure, decreases heart rate, and slows breathing—all of which contribute to reduced arousal and stress.<sup>43</sup>

**Meditation.** In simple terms, meditation is the practice of attempting to focus one’s attention on a single thing—for example, on the breath or on a single word or phrase. The natural tendency of the mind is to jump around from one thought to another, like a monkey jumping from branch to branch. The goal of meditation is to quiet the “monkey mind” by gently returning one’s attention again and again to the object of focus. When intrusive thoughts or images enter the mind, the meditator notices them with a passive attitude, accepts the fact that they are there, and then lets them go, returning to the object of focus.<sup>43</sup>

With practice, meditation can help a person gain greater control over thoughts, worries, and anxieties.<sup>43</sup> Meditation ideally is practiced for 20 to 30 minutes, once or twice per day. But experts stress that as little as 5 minutes will bring benefits.<sup>43</sup>

**Progressive Muscle Relaxation.** Progressive muscle relaxation (also called deep muscle relaxation) involves purposely tensing and relaxing specific muscles or groups of muscles.<sup>25,43,44</sup> People who experience high levels of stress tend to tense muscles throughout the body, often without realizing it.<sup>43,44</sup> By learning to recognize what tension feels like and identifying the muscles that are creating the tension, a person can take immediate steps to reduce unnecessary tension by consciously relaxing the muscles.<sup>43,44</sup>

Progressive muscle relaxation can be learned easily. It is best practiced lying or sitting down comfortably, with eyes closed. To begin, a person isolates and tenses the muscles of a particular body part, holds that tension for 7 to 15 seconds while noticing how it feels, and then lets go of the tension fairly quickly, letting the muscles go limp. The tension is replaced by the more pleasant sensation of relaxation; the person notices and

Table 4.

### Patient Expectations of Obesity Treatment Outcomes

Variable	Weight (lb) <sup>a</sup>	Decrease From Initial Weight (lb)	% Decrease From Initial Weight
Initial weight	218 ± 27	...	...
Goal weight	146 ± 17	72	33
Other defined weights			
Dream weight	137 ± 15	81	37
Happy weight	151 ± 18	67	31
Acceptable weight	167 ± 19	51	23
Disappointed weight	184 ± 22	34	16

<sup>a</sup>Weights converted from kg to lb.

Source: Reference 41.

concentrates on this feeling for a few breaths before moving on to the next muscle group, progressing from head to toe. The book *Stress Management for Dummies* (IDG Books Worldwide, 1999) contains a script of progressive muscle relaxation instructions that patients could record for future use.<sup>43</sup>

**Guided Imagery.** Guided imagery—also known as visualization—is a technique that focuses and directs the imagination to invoke one or more of the senses. It has been described as a type of “directed daydreaming”; it usually is performed by listening to an audio program or to someone reading from a script. The possible benefits of guided imagery for weight loss are just beginning to emerge. For example, in a small, unpublished exploratory study conducted at Canyon Ranch spa in Massachusetts, eight staff members who listened to a weight loss guided imagery daily as part of an 8-week weight reduction program lost twice as much weight (an average of 8.5 lb) as did the eight staff members who just listened to the music that accompanied the guided imagery.<sup>45</sup>

### Social Support

A strong system of social support is considered to be an important aid to weight loss and maintenance.<sup>4,10,11,27</sup> Receiving support from family members, friends, and colleagues can provide positive reinforcement for behavior changes and help patients maintain motivation.<sup>4,11</sup> Friends and colleagues who exercise together often can encourage each other to stay the course.<sup>25</sup>

Some patients enjoy the social support that comes from joining a weight loss support group or a commercial program that emphasizes behavior change.<sup>4,10</sup> Examples of the latter include Weight Watchers, TOPS (Take Off Pounds Sensibly), and Overeaters Anonymous.

### Preventing Relapse During Weight Maintenance

As discussed in the first monograph in this series, unless dietary therapy, physical activity, and behavior therapy are continued indefinitely, patients are likely to regain most or all of the weight they lost.<sup>4,10</sup> Most patients experience significant weight regain during the first year following weight loss and complete or almost complete regain within 5 years.<sup>46</sup>

Weight maintenance differs from weight loss in three important ways<sup>1</sup>:

- It is an ongoing process, not time-limited like weight loss.
- It is less reinforcing than weight loss, in part because the attention and social support that accompanied weight loss wane.
- It may involve accepting and trying to maintain a weight that had been regarded as unacceptable at the start of weight loss.

Very few people who succeed at losing weight appreciate the need to remain vigilant and recover from dietary and physical activity lapses forever.<sup>3</sup> Those who do understand often find it difficult to maintain the prolonged state of consciousness needed to police themselves and their behavior.<sup>10,47</sup> Self-monitoring tends to decline over time; patients become lax about their dietary and physical activity behaviors, and weight begins to creep up.<sup>10,48</sup>

Given these realities, the best hope for people working on long-term weight maintenance may be a thorough grounding in relapse prevention strategies. First, patients must learn to expect and accept lapses as a normal part of the weight maintenance process.<sup>25,27</sup> Their *response* to these lapses is of

paramount importance. Patients should concentrate on examining how the lapse occurred and how it can be prevented in the future.<sup>39</sup> They should be encouraged to ask “What did I learn from this?” instead of punishing themselves.<sup>4</sup>

It also is important for patients to continue weighing themselves regularly.<sup>10,49,50</sup> If sustained weight gain becomes apparent, patients should react as quickly as possible to reverse the weight gain by monitoring their food intake closely and increasing their physical activity. When Phelan et al.<sup>51</sup> examined patterns of weight change over the course of 2 years among 2,400 participants in the National Weight Control Registry, they found that nearly two thirds of the participants gained weight between baseline and year 1, but only 11% were able to return to their baseline weight or less at year 2. Participants who had gained the least amount of weight were most likely to reverse the weight gain.

The study by Phelan et al.<sup>51</sup> underscores the importance of identifying specific strategies for preventing even small weight gains. Stimulus control strategies can be very helpful because exposure to cues can precipitate lapses in behavior.<sup>27</sup>

Anticipating situations that might cause a lapse, such as holidays and vacation periods, enables patients to practice coping strategies.<sup>25,27</sup>

Stress management techniques may be particularly important during weight maintenance. Many studies have found that life stress and negative emotions are associated with lapses and weight regain.<sup>10,27</sup> In the study by Phelan et al.,<sup>51</sup> recovery from weight regain was related to a smaller overall increase in depressive symptoms between baseline to year 1. Patients who have a history of eating in response to stress and negative emotions appear to be particularly vulnerable.<sup>10</sup>

## Conclusion

Change is difficult, and behavior change is no exception. Weight loss and maintenance can be particularly challenging for patients because of the large number of interrelated behavior changes that must be made. Behavioral treatment techniques can facilitate weight-related behavior change by teaching patients *how* to change, not just *what* to change.

## Selected Resources for Learning Relaxation Techniques

Some people find it helpful to learn relaxation techniques from audio programs. Most of the resources listed below are available from retail stores (e.g., Borders, Barnes and Noble) or Web retailers such as Amazon.com; some are available directly from their creators, as noted below. Some programs also are available as MP3 download files.

### **Conscious Eating**

*Body+Soul* magazine (The Relaxation Company, 2005)  
Includes a 64-page book and guided meditation CD.

### **Dr. Andrew Weil's Mindbody Tool Kit**

Andrew Weil (Sounds True, 2006)  
Includes a 52-page interactive workbook and two audio CDs with breathing, meditation, guided imagery, and sound therapy programs.

### **Guided Mindfulness Meditation**

Jon Kabat-Zinn  
Three series of mindfulness meditation practice CDs, created to accompany the author's books (*Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*, Delta, 1990; *Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life*, Hyperion, 1995; *Coming to Our Senses: Healing Ourselves and the World Through Mindfulness*, Hyperion, 2005). Available at [www.mindfulnessstapes.com](http://www.mindfulnessstapes.com); may be available through some retail stores or Web sites.

### **Meditation for Beginners**

Jack Kornfield (Sounds True, 2004)  
Includes an 88-page book and guided meditation CD.  
Also available as an audio program on two CDs.

### **Progressive Relaxation & Autogenic Training**

Carolyn McManus  
Audio CD with separate programs on progressive relaxation and autogenic training. Available at [www.carolynmcmanus.com](http://www.carolynmcmanus.com) and [www.amazon.com](http://www.amazon.com).

### **Health Journeys: A Meditation to Help You With Weight Loss**

Belleruth Naparstek (Health Journeys, 1997)  
Guided imagery CD. Available at [www.healthjourneys.com](http://www.healthjourneys.com) (under title “Weight Loss”) and [www.amazon.com](http://www.amazon.com).

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## Sample Responses to “Think It Through” Exercises

### THINK IT THROUGH: Pros and Cons of Weight Loss

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What might be some of the *good things* about beginning weight loss therapy?

- Will be happier about my appearance.
- Will be able to wear clothes I’ve outgrown.
- Will be healthier.
- Will have more energy.

What might be some of the *less good things* about beginning weight loss therapy?

- Too much time and effort.
- Too busy to plan meals and exercise.
- Will complicate social situations.

### THINK IT THROUGH: Creating a SMART Goal

---

Create a SMART goal for decreasing the number of meals eaten out.

- I will prepare a healthy bag lunch to bring to work on 2 days this week.
- I will prepare 3 dinners for the upcoming week on Sunday afternoon and freeze them, so I will not have to resort to eating out or getting takeout.

### THINK IT THROUGH: Breaking the Behavior Chain

---

What are some other possible strategies for addressing the chain of events depicted in Figure 3?

- Not purchasing the cookies in the first place.
- Displaying low-calorie snacks on the counter (e.g., fruit in a bowl) to provide convenient, healthful snacks.
- Removing only a few cookies from the package, then putting the package away in a hard-to-reach spot.

### THINK IT THROUGH: Restructure Negative Thoughts

---

How could the following negative thoughts and beliefs be restructured to make them more realistic and productive?

“My friend lost 2 pounds this week, but I only lost 1 pound.”

“It’s not a race. I will lose weight at the rate that is appropriate for me.”

“I couldn’t resist eating those cookies. That just shows that I’ll never be able to stick to a diet.”

“One slip-up isn’t the end of the world. This is just a temporary setback. I can get back on track.”

“I shouldn’t have any dessert at all if I’m trying to lose weight.”

“Fruit is a healthy dessert that I can enjoy.”  
“Part of healthy eating is learning how to fit in the occasional treat.”

# CE Assessment Questions

Instructions: For each question, circle the letter corresponding to the correct answer on the CE Examination Form. **Please review all of your answers to be sure you have marked the proper letter.** There is only one correct answer to each question.

**1. Which of the following types of patients would be *least* likely to make a behavior change, according to the Health Belief Model?**

- a. Patients who view their health problem as serious.
- b. Patients who feel very susceptible to the adverse consequences of their health problem.
- c. Patients who must make substantial changes in their daily routine to accommodate the recommended behavior.
- d. Patients who think that the recommended behavior change will have the intended effect.

**2. The concept of self-efficacy refers to:**

- a. How important the patient thinks it is to make a needed change.
- b. How confident the patient is in his or her ability to make a needed change.
- c. How ready the patient is to make a needed change.
- d. The combination of importance and confidence to make a needed change.

**3. When people move from a later stage of change to an earlier one, it is referred to as:**

- a. Regression.
- b. Relapse.
- c. Recovery.
- d. Remodeling.

**4. A woman who comes to the pharmacy to buy a pedometer and tells you that she is planning to begin a walking program within the next 2 weeks most likely is in which stage of change?**

- a. Precontemplation.
- b. Contemplation.
- c. Preparation.
- d. Action.

**5. Which of the following strategies is key for helping the woman in Question #4 to move to the next stage?**

- a. A specific action plan.
- b. Behavioral skills training.
- c. Increased confidence.
- d. Increased information and awareness.

**6. The goal of motivational interviewing is to explore and resolve the patient's:**

- a. Ambivalence about making a behavior change.
- b. Inability to sustain a behavior change.
- c. Irrational thoughts about a behavior change.
- d. Problems related to implementing a behavior change.

**7. Motivational interviewing for health behavior change often begins with an assessment of:**

- a. The patient's stage of change.
- b. Patient readiness.
- c. Good things and less good things.
- d. Importance and confidence.

**8. During a motivational interviewing interaction, you ask a patient how important it is to him right now to work on decreasing the amount of saturated fat in his diet. He replies, "About a 5." How should you respond?**

- a. "Okay, so you would give this a 5. Now, how do you think you might go about eating less saturated fat?"
- b. "Okay, so you would give this a 5. Now, how important is it for you to get more exercise each day?"
- c. "Why did you rate it a 5 and not an 8 or a 9?"
- d. "Why did you rate it a 5 instead of a 2?"

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**9. Which of the following is one of the three general characteristics of behavior therapy for obesity?**

- a. It focuses on establishing clear goals for behavior change.
- b. It is concerned primarily on teaching patients *what* to change.
- c. It is based on large changes that result in large weight losses.
- d. It helps patients understand that willpower is the key to successful weight management.

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**10. Shaping refers to:**

- a. Replacing negative thoughts with more positive, productive ones.
- b. The need to get sufficient physical activity during active weight loss to preserve muscle mass.
- c. The process of establishing a series of modest, short-term goals that build toward a larger goal.
- d. Tailoring behavior change interventions to the patient's specific stage of change.

---

**11. Which of the following represents a "SMART" goal?**

- a. Eat fruit instead of cookies for an afternoon snack on 2 days this week.
- b. Eat more vegetables on all days this month.
- c. Lose 30 lb over the next 6 months.
- d. All of the above.

---

**12. For self-monitoring purposes, a food record ideally should include which of the following?**

- a. The type and amount of food consumed.
- b. The time the food was consumed, and where it was consumed.
- c. Information about the patient's mood when the food was consumed.
- d. All of the above.

---

**13. What is the primary argument in favor of weekly weighing during weight loss, as opposed to more frequent weighing?**

- a. Weekly weighing takes less time than more frequent weighing.
- b. Patients may not have access to a scale each day, and the stress could cause them to overeat.
- c. Weekly weighing helps to keep patients from becoming preoccupied with trivial day-to-day weight fluctuations.
- d. People who weigh themselves frequently are more likely to develop eating disorders.

---

**14. A patient is practicing contingency management if she:**

- a. Asks her husband to keep his high-fat snacks (potato chips and ice cream) on the highest pantry and freezer shelves possible, out of her immediate reach.
- b. Brainstorms possible solutions to a weight loss–related problem.
- c. Buys herself a new CD because she achieved her physical activity goal for the week.
- d. Weighs herself weekly during weight loss therapy.

---

**15. The events, situations, thoughts, or feelings that often precede episodes of eating are referred to as:**

- a. Cognitions.
- b. Consequences.
- c. Contingencies.
- d. Cues.

---

**16. Possible solutions to a weight loss–related problem ideally should come from:**

- a. Published writings of obesity experts.
- b. The patient.
- c. The patient's entire weight loss team.
- d. The patient's health care provider.

### 17. Which of the following statements is an example of dichotomous thinking?

- “I didn’t lose as much weight as I had hoped. This just proves what a complete failure I am as a human being.”
- “I really blew my diet today. I guess I’ll wait until Monday and try to go back on it then.”
- “I had a piece of birthday cake at the office today. . . now I’ll probably gain back all of the weight I lost.”
- “I know I would be a much happier person if I could just lose this weight.”

### 18. Current national guidelines for the treatment of obesity in adults call for a reduction of 10% of initial body weight. How much weight do obese patients typically want to lose?

- 15% of initial body weight.
- 20% of initial body weight.
- 25% of initial body weight.
- 30% of initial body weight.

### 19. One of the purposes of progressive muscle relaxation is to:

- Gain greater control over thoughts, worries, and anxieties.
- Help patients learn to recognize what tension feels like.
- Quiet the “monkey mind.”
- Assist patients in “directed daydreaming.”

### 20. Most patients who lose weight regain all or almost all of the lost pounds within:

- 1 year.
- 2 years.
- 5 years.
- 10 years.

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| 3. a b c d | 8. a b c d  | 13. a b c d | 18. a b c d |
| 4. a b c d | 9. a b c d  | 14. a b c d | 19. a b c d |
| 5. a b c d | 10. a b c d | 15. a b c d | 20. a b c d |

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4. The program met the stated learning objectives:	Agree	Disagree
• Summarize key features of the Health Belief Model, the Transtheoretical Model of Change, and motivational interviewing.	<input type="checkbox"/>	<input type="checkbox"/>
• List the distinguishing characteristics of behavior therapy for obesity.	<input type="checkbox"/>	<input type="checkbox"/>
• Explain why patient readiness is important for successful weight loss attempts.	<input type="checkbox"/>	<input type="checkbox"/>
• Quantify the discrepancy between recommended amounts of weight loss and the amounts frequently sought by obese patients.	<input type="checkbox"/>	<input type="checkbox"/>
• Define common types of behavioral interventions, including self-monitoring, contingency management, stimulus control, problem solving, and cognitive restructuring, and discuss their use with patients seeking to lose weight or maintain weight loss.	<input type="checkbox"/>	<input type="checkbox"/>
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