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Patient information: Therapy for obesity

INTRODUCTION – Obesity is a major international problem -- and Americans are among the heaviest people in the world. For instance, data collected by the National Center for Health Statistics showed that the percentage of overweight people in the United States has risen steadily from 25.4 percent in 1976 to 33.3 percent in 1991.

WHAT ARE THE CONSEQUENCES OF OBESITY? – Obesity is associated with many medical problems, most of which improve with weight loss. Both men and women with obesity are at increased risk for the following:

- Diabetes mellitus
- Gallstones
- Hypertension (high blood pressure)
- Osteoarthritis
- Coronary heart disease
- Abnormal blood lipids
- Stroke
- Sleep apnea
- Cancer (colon and prostate cancer in men; uterine and gallbladder cancer in women).

Many people find that although they initially lose weight with any given diet, they quickly regain the weight after stopping. Because long-term weight reduction can be so difficult, it is important to have as much information and support as possible. People who are ready to lose weight and who believe that their weight can be controlled long-term are usually the most successful.

HOW SHOULD WEIGHT LOSS BE APPROACHED? – No one should begin a weight loss program without a doctor's advice. A doctor can help the patient choose the appropriate treatment, monitor his or her progress, and provide advice and support along the way.

Determining the severity of the weight problem – In order to know what treatment (or combination of treatments) would work best, the doctor should determine the patient's degree of excess weight. This can be done by measuring his or her **body mass index (BMI)**. It is calculated from a person's height and weight as follows:

BMI = body weight (in kilograms) / height (in meters) squared (show table 1).

- A person with a BMI between 25 and 30 kg/m2 is considered overweight.

Overweight refers to a weight above the "normal" range.

- Anyone with a BMI greater than 30 kg/m2 is obese. Obesity is defined by the presence of excess body fat.

Determining the risk for heart disease – The patient and the doctor also need to consider the person's risk for heart disease before choosing the right therapy. For instance:

- A person with a BMI of 20 to 25 kg/m2 has little or no increased risk for heart disease unless he or she has excess fat primarily in the abdominal area or has gained more than 22 pounds since age 18.

- A person with a BMI of 25 to 30 kg/m2 has a low risk for heart disease, while a person with a BMI of 30 to 35 kg/m2 has a moderate risk.

- A person with a BMI of 35 to 40 kg/m2 has a high risk for heart disease, and a person with a BMI above 40 kg/m2 is at extremely high risk.

Regardless of one's BMI, the risk to health increases if a person:

- Has excess abdominal fat
- Has high blood pressure
- Has high levels of cholesterol in the blood
- Has heart disease
- Has a strong family history of diabetes
- Is male
- Was obese before age 40.

People with the highest risk should receive the most aggressive treatment.

Types of treatment – Depending upon a person's risk factors, BMI, and personal preferences, a doctor will suggest a combination of behavior modification, exercise, dieting, and, in some cases, drug therapy. Surgery is only used to treat severe obesity that has not responded to other treatments.

SHOULD THERE BE WEIGHT LOSS GOALS? – It is important for the doctor and patient to set goals for weight loss. The patient's first goal should be to prevent further weight gain and maintain current weight (within 5 percent). The doctor's first goal is to identify a realistic weight-loss goal for the patient. Most patients have a "dream" weight that is well below any realistic level.

A person who loses 5 percent of initial weight and maintains this loss is successful. Losing more than 15 percent of initial weight and maintaining this loss is an extremely good result, even if the patient never reaches his or her "dream" weight.

WHAT IS BEHAVIOR MODIFICATION? – Behavior modification programs are usually run by psychologists or other trained professionals. The goals of this kind of treatment are to help people modify their eating habits, increase their physical activity, and become more conscious of both of these activities, thereby helping them to make healthier choices.

This type of treatment can be broken down into three components:

- The antecedents, or "triggers," that make a person want to eat
- The behavior of eating
- The consequences of eating

Antecedents – Determining what triggers a person to eat involves identifying the food that a person eats and the settings in which eating occurs. The patient writes down the kinds of food eaten, the places where it is eaten, how often it is eaten, and the emotions he or she was feeling when it was eaten. Using these records, the person can identify triggers that cause him or her to eat. For some people, the trigger may be related to a certain time of the day or night. Or the trigger may be related to a certain place, like sitting at a desk working.

Behavior of eating – This component uses stimulus control to break the chain of events between the antecedent or trigger for eating and eating itself. There are many ways to provide stimulus control. For instance, a person can:

- Restrict or limit the places that he or she can eat
- Restrict the number of utensils used for eating
- Pick up a glass of water between each bite
- Chew the food a defined number of times
- Excuse himself or herself from the table every few minutes.

Consequences of eating – This component involves rewarding one's self for good behavior. It is important to note that this is not a reward for weight loss; instead, it is a reward for changing unhealthy behaviors.

Food should never be used as the reward. Some people find money, clothing, and hairstyling effective rewards. It depends upon the person and his or her interests. The person should receive the reward as close in proximity to the improved behavior as possible. This reinforces the value of the good behavior.

Behavior goals need to be clearly defined, and there must be an agreed-upon timeframe for achieving these goals. Sometimes, it might be important to reward small changes along the way to the final goal.

Other factors that contribute to successful weight loss – Behavior modification is more than just changing unhealthy eating habits; it also includes

developing an internal and external support system, reducing stress, and learning to be assertive.

Establishing a "buddy" system – Having a friend or family member available to provide support and reinforce good behavioral changes is very helpful. The supporting person needs to be sympathetic to the patient's goals and can be trained by the program director or the person losing weight.

Learning to be assertive – It is important to provide opportunities for role-playing in difficult situations. For instance, people trying to lose weight need to learn how to refuse food offered at parties and social gatherings. One strategy is assertiveness training, a technique for learning how to say "no" and continuing to repeat it when being urged to eat. Role playing can be done with a partner or in a group.

Developing an internal support system – Most people have conversations with themselves in their heads, which can be positive or negative. If a person eats a piece of cake that is not on the weight loss program, there are at least two ways he or she can respond. The internal response may be: "Oh, you stupid idiot, you've blown your diet!" and, as a result, he or she may eat more cake. A positive internal conversation would be, "Well, I have eaten cake when it wasn't in my plan and now I should do something to get back on track." This positive approach is much more likely to be successful than negative, self-deprecatory comments.

Stress reduction exercises – Although stress is a part of everyday life, it can trigger uncontrolled eating in some people. These people need to find ways to get through these difficult times without eating or by eating low-calorie food, like raw vegetables. One approach is to have the person identify a relaxing place that allows the stress to subside. With deep breaths and closed eyes, the person can imagine this relaxing place for a few minutes.

Self-help programs – Self-help programs like Weight Watchers, Overeaters Anonymous, and Take Off Pounds Sensibly (TOPS), work for some people. They do, however, have a high drop-out rate.

Psychotherapy – Behavioral treatments, ranging from individual psychoanalysis to family and couples training to self-help groups, can help with weight loss efforts.

WHAT IS DIET THERAPY? – A calorie is a unit of energy found in food. The body needs calories/energy in order to function. If a person takes in more calories than he uses, the extra calories will be saved mostly as fat. The goal of any diet is to use more calories than are taken in. This results in weight loss.

The rate at which a person loses weight can vary: the heavier the person, the

quicker the weight loss. Weight loss also can be influenced by age and sex.

- Men lose more weight than women of similar height and weight when dieting because they have more lean body mass and, therefore, use more energy.

- Older people have slower metabolism than young people, and thus lose weight at a slower rate.

Conventional diets – Conventional weight reduction diets provide at least 800 calories a day, but less than what the body requires. These diets fall into four groups:

- Balanced low-calorie diets
- Low carbohydrate diets
- Low-protein diets
- Fad diets (these are diets that involve unusual food combinations or eating certain foods in a particular order).

A person planning a diet needs to select a calorie intake, as well as foods to meet this intake. It is best to choose foods that contain adequate protein, carbohydrates, essential fatty acids, and vitamins. Alcohol, sugary beverages, and most sweets should be eliminated from weight-loss diets since they rarely contain adequate amounts of nutrients.

One easy way to diet is to buy packaged foods, like frozen low-calorie meals. This can be supplemented with formula diets using powdered or liquid drinks. A typical meal plan for one day may include the use of formula diets or breakfast bars for breakfast, formula diets or a frozen lunch entree for lunch, and a frozen calorie-controlled entree for dinner. This would give the person a nutritionally sound 1,000 to 1,500 calorie per day diet.

Diets in the range of 1,200 to 1,500 calories are suitable for most people, aiming toward the higher level for men and the lower level for women.

SHOULD I CONSIDER MEDICATION? – Drug therapy may be helpful for some obese patients, in combination with diet, exercise, and behavior modification. The decision to initiate drug therapy in overweight subjects should be made with one's doctor only after careful evaluation of risks and benefits. There are situations in which drug therapy is appropriate; for example:

- Obesity (BMI > 30 kg/m2)
- Oversweight (BMI between 27 and 30 kg/m2) people who have other medical problems such as diabetes, high cholesterol, or high blood pressure that further increase their risk of heart disease

Goals of drug therapy – The goals of any weight loss intervention, including drug therapy, must be realistic:

- It is unrealistic to expect the ideal outcome of a return to normal body weight.
- Weight loss should exceed 2 kg (approximately 5 pounds) during the first month of drug therapy in order to be considered effective.
- In drug studies, weight loss of 10 to 15 percent is considered a good response and loss exceeding 15 percent is considered an excellent response.

There are currently two drugs that are approved by the Food and Drug Administration for the long-term treatment of obesity:

Sibutramine – Sibutramine (Meridia®, Reductil®) is an appetite suppressant that is effective for many people:

- The recommended starting dose is 10 mg per day; doses above 15 mg per day are not approved by the FDA. In patients who complete one year of therapy, average weight loss is 10 percent of initial body weight.
- Side effects include insomnia, dry mouth, and constipation.
- Increases in blood pressure can occur. Therefore, you need to be carefully followed by your doctor if you are taking drugs that increase blood pressure.
- Sibutramine should not be given to patients with a history of heart disease or stroke.
- Thus far, there is no evidence that sibutramine causes cardiac valvular abnormalities or pulmonary hypertension like that described with Redux and Fen-phen.

Orlistat – Orlistat (Xenical®) is a drug that lowers fat absorption that helps some obese patients lose weight.

- Like sibutramine, after one year of therapy, average weight loss is approximately 10 percent of initial body weight.
- Cholesterol levels often improve.
- In diabetics, orlistat may help blood sugar control.
- Blood pressure sometimes falls.
- Side effects include stomach cramps, gas, and diarrhea. However, these symptoms are usually mild and get better after the first few weeks of treatment.

SHOULD I CONSIDER SURGERY? – Surgery is only recommended for severely obese patients who have not been successful with diet, exercise, and medication. The National Institutes of Health recommend that surgery be considered for those at the following weight levels:

- Patients with a body mass index >40 kg/m2

- Patients with a body mass index >35 kg/m2 who also have serious medical problems, including obstructive sleep apnea, that would improve with weight loss.

There are two effective surgical procedures that are currently used: gastroplasty and gastric bypass.

Gastroplasty – The most commonly performed type of gastroplasty involves decreasing the overall size of the stomach, so that one has a "full feeling" after eating only a small amount of food. The procedure is effective for many people, with 60 percent of patients losing more that 50 percent of their excess weight after one year.

Gastric bypass – Gastric bypass ("stomach bypass") is performed by creating a small stomach pouch and connecting this to the intestines. Although technically more difficult for the surgeon, gastric bypass is more effective than gastroplasty.

Although the operative mortality of both procedures is less than one percent, a variety of complications may occur with these procedures:

- postoperative infections
- anemia
- vitamin B12 or other B vitamin deficiencies
- inadequate weight loss requiring surgical revision
- gallstone formation (due to rapid weight loss).

The risk of gallstone formation can be decreased by giving a medication called ursodeoxycholic acid. In addition, most patients should have a gallbladder ultrasound performed before surgery; if gallstones are seen, the gallbladder can be removed at the time of the surgery.

It is important to note again that these surgical procedures are ONLY recommended for those with severe obesity who have not responded to diet, exercise, or medication. For those with less severe obesity, the risks of the surgical procedure outweigh any potential benefits.

WHAT'S NEW? – Doctors and scientists are very interested in finding the underlying causes of obesity, as well as new treatments. New drugs such as leptin are being tested, and there is reason to be hopeful that new treatments for obesity will be available in the future.

WHERE TO GET MORE INFORMATION – Your doctor can be a good resource for finding out important information related to your particular case. Not all patients with obesity are alike, and it is important that your situation is

evaluated by someone who knows you as a whole person.

The Internet is filled with websites providing information about obesity. The quality of this information is variable, and it is often not up to date, so be careful. In contrast, web pages from the the National Institutes of Health and medical societies are usually reliable sources of information.

- The National Institutes of Health
  (http://www.nlm.nih.gov/medlineplus)

- The Endocrine Society
  (http://www.endo-society.org)

- The American Gastroenterological Society
  (http://www.gastro.org)

- The American College of Gastroenterology
  (http://www.acg.gi.org/hd_home.html)

- The North American Association for the Study of Obesity
  (http://www.naaso.org)

- American Obesity Association
  (http://www.obesity.org)