

American Gastroenterological Association Medical Position Statement on Obesity

This document presents the official recommendations of the American Gastroenterological Association (AGA) on Obesity. It was approved by the Clinical Practice Committee on March 3, 2002 and by the AGA Governing Board on May 19, 2002.

Obesity is a chronic disease that has become a major health problem in many countries because of its high prevalence, causal relationship with serious medical illnesses, and economic consequences. Data from prospective randomized controlled trials have demonstrated that intentional weight loss improves many of the medical complications associated with obesity.

Moreover, most of these benefits have a dose-dependent relationship with weight lost, and begin after only modest reductions of 5% of initial body weight. Weight loss also can prevent or delay the onset of new obesity-related diseases, such as diabetes.

Many patients who are seen by gastroenterologists are overweight or obese. Moreover, gastroenterologists often are consulted to help manage obesity-related gastrointestinal diseases or gastrointestinal complications of weight loss therapy. Therefore, it is important for gastroenterologists to understand the key clinical issues associated with obesity that are discussed in the accompanying technical review.¹ In addition, gastroenterologists can provide a valuable clinical service by becoming actively involved in helping their obese patients lose weight.

Recommendations

Overview

The goal of weight loss therapy is to improve or eliminate obesity comorbidities and decrease the risk of future obesity-related medical complications. Therefore, obesity-related health risks, the presence of other disease risk factors, and coexisting obesity complications should be used to help determine the need for obesity therapy and the aggressiveness of the treatment approach. The key principle of obesity therapy is to eat fewer calories than are expended in order to consume endogenous fat stores as fuel. An effective treatment plan must consider the patient's willingness to undergo therapy, ability to comply with specific treatments, access to skilled caregivers, and ability to pay for specialized services. Weight loss therapy is not recommended for patients with a BMI <25 kg/m². However, providing recommendations for a healthy lifestyle, including dietary and physical activity

modification, is reasonable for lean persons who have, or are at increased risk for, future adiposity-related diseases.

Treatment Guidelines

The following stepwise approach for treating obesity is based on the recommendations made by the National Institutes of Health's Expert Panel on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults.

1. *Medical evaluation.* A medical evaluation is needed to identify patients who either have, or are at risk for, obesity-related medical complications. This assessment should include a careful history, physical examination (including determination of body mass index [BMI]), and laboratory tests to identify eating and activity behaviors, weight history and previous weight loss attempts, obesity-related health risks, and current obesity-related medical illnesses.

2. *Assessment of weight loss readiness.* A determination of how much effort the patient is able and willing to make to lose weight is important for guiding treatment options. Several questions should be answered: (1) What is the patient's motivation for losing weight? (2) Are there any major stresses that will make it difficult to focus on weight control? (3) Does the patient have any psychiatric illnesses, such as severe depression, substance abuse, or binge eating disorder, which will derail weight loss efforts? and (4) Can the patient devote a minimal amount of time (e.g., 15 to 30 minutes per day for the next 6 months) that is needed for a serious weight loss effort?

3. *Treatment.* If the patient is not ready for obesity treatment, the therapeutic goal should be to prevent weight gain and explore barriers to weight reduction. If the patient is ready to lose weight, a structured, goal-oriented treatment plan should be instituted. The goals and expectations should be realistic and carefully discussed, and provisions made for frequent follow-up and long-term contact. The components of the treatment program depend on physician expertise and the availability of support from other professionals. In general, the aggressiveness of the treatment program is related to

obesity-related health risk. Alterations in dietary intake and physical activity, supported by behavior modification therapy, are the cornerstones of treatment for all overweight and obese patients. Pharmacotherapy and bariatric surgery can be useful additional treatment options in properly selected patients.

Principles of Obesity Therapy

The therapeutic tools for weight management include dietary intervention, physical activity, behavior modification, pharmacotherapy, and bariatric surgery.

Dietary intervention. Overweight persons (BMI of 25.0–29.9 kg/m²) with 2 or more cardiovascular risk factors, and those with class I obesity (BMI of 30.0–34.9 kg/m²), should decrease their energy intake by approximately 500 kcal/d. This energy deficit will result in approximately a 1 pound (0.45 kg) weight loss per week and about a 10% reduction of initial weight at 6 months. Persons with class II (BMI of 35.0–39.9 kg/m²) or III (BMI $\geq$ 40 kg/m²) obesity should aim for a more aggressive energy deficit of 500–1000 kcal/d, which will produce approximately a 1- to 2-pound weight loss per week and approximately a 10% weight loss at 6 months.

Several dietary strategies can be used to help patients restrict energy intake. The clinical effectiveness of each approach has been demonstrated in randomized controlled trials. The use of portion-controlled servings can enhance weight loss because obese persons who consume a diet of self-selected table foods tend to underestimate their energy intake. Providing prepackaged, prepared meals and liquid formula meal replacements increases the likelihood that patients will be compliant with their prescribed energy intake. In addition, low-fat diets help obese patients lose weight. Several short-term studies ($\leq$ 14 days) have found that energy intake is regulated by the weight of ingested food, rather than by energy content. Therefore, energy intake is inversely correlated with energy density, so consumption of a low-energy density diet can enhance compliance with a low-calorie diet. The energy density of a diet can be decreased by adding water to food, increasing the intake of high-water-content foods, such as fruits and vegetables, and by limiting the intake of high-energy-density foods, such as high-fat and dry (e.g., crackers and pretzels) foods.

Physical activity. Physical activity alone is not an effective method for achieving initial weight loss. However, retrospective analyses of data from many weight loss studies suggest that increased physical activity causes long-term weight management and improved health. The amount of physical activity associated with successful weight maintenance is considerable: approximately 60 to 90 minutes per day of moderate-intensity

activity (e.g., brisk walking) or 30 to 45 minutes per day of vigorous activity (e.g., fast bicycling or aerobics). Therefore, patients should be advised to increase physical activity slowly over time until the target goal is reached. Aerobic exercise has additional health benefits that are independent of weight loss itself. Increased fitness, determined by maximal oxygen consumption during exercise, is associated with a decreased risk of developing diabetes and dying from cardiovascular disease.

Behavior modification. Behavior therapy should be included in any weight loss program to facilitate changes in eating and activity behaviors needed for successful weight loss. Gastroenterologists can incorporate the principles of behavior therapy within their clinical practice by: (1) helping patients develop realistic goals, (2) establishing an appropriate treatment plan to achieve small and incremental diet and activity goals, (3) encouraging self-monitoring (daily records of food intake and physical activity), (4) helping patients identify and solve problems that are barriers to weight loss, and (5) scheduling regular follow-up visits with office personnel to record weight, review food records, and provide support and encouragement.

It is often difficult for physicians to provide appropriate behavior modification therapy for obesity because of limitations in time and expertise. Therefore, the use of legitimate local professionals, including psychologists, counselors and dietitians, and self-help, commercial and hospital-based obesity treatment programs should be considered.

Group behavior therapy, when available, should be considered in patients who have not been able to lose weight with less aggressive treatment approaches. Prospective randomized trials have shown that obese patients treated by group behavior therapy lose $\sim$ 0.5 kg/week, and $\sim$ 9% of their initial weight in 20 to 26 weeks of treatment. Patients usually regain about 30% to 35% of their lost weight in the year following treatment. However, persons who maintain regular contact with their treatment providers have better success at achieving long-term weight management.

Pharmacotherapy. Overweight patients (BMI 27.0–29.9 kg/m²) with comorbidities and obese patients (BMI $\geq$ 30 kg/m²) are potential candidates for treatment with obesity medications. All patients receiving pharmacotherapy for obesity should also be involved in efforts to change eating and activity behaviors because data from both randomized and nonrandomized trials shows that pharmacotherapy alone is not as effective as pharmacotherapy given in conjunction with behavior modification therapy. Pharmacotherapy should not be used as a short-

term treatment approach because patients who respond to drug therapy usually regain weight when therapy is stopped. Only 2 medications, sibutramine and orlistat, have been approved for long-term use by the United States Food and Drug Administration. Prospective randomized trials conducted for up to 2 years have shown that weight loss is greater with these agents than with placebo. However, the difference in weight loss between drug and placebo treatment groups is modest.

Bariatric surgery. Surgical therapy is the most effective approach for achieving long-term weight loss. Patients with class III obesity (BMI ≥ 40 kg/m²), or those with class II obesity (BMI 35.0–39.9 kg/m²) and one or more severe obesity-related medical complications (e.g., hypertension, type 2 diabetes mellitus, heart failure, or sleep apnea), should be considered for surgery if they have been unable to achieve or maintain weight loss with conventional therapy, have acceptable operative risks, and are able to comply with long-term treatment and follow-up.

The type of surgical procedure depends primarily on the expertise and preference of the surgeon and the patient's BMI. Gastric bypass is the most commonly performed bariatric surgical procedure. Data from several prospective randomized controlled trials demonstrate that weight loss is greater with the gastric bypass procedure than with vertical-banded gastroplasty. On average, patients who have undergone gastric bypass lose two-thirds of their excess weight (one-third of initial

weight) within the first 2 years after surgery and maintain a loss of approximately one-half of their excess weight for more than 10 years. Weight loss is similar after either laparoscopic or open gastric bypass, but the laparoscopic approach is associated with fewer postoperative complication, shorter hospital stay, and earlier return to functional life. Therefore, the laparoscopic approach is preferred in appropriate patients when it can be performed by an experienced surgeon. Malabsorptive procedures, such as biliopancreatic diversion with duodenal switch or long-limb gastric bypass, usually cause more weight loss (~three-fourths of excess weight) than generally observed after gastric bypass. Therefore, malabsorptive procedures should be considered as potential options for very obese patients (BMI >50 kg/m²). However, the weight loss efficacy of malabsorptive and restrictive operations has never been compared in a prospective randomized trial.

Reference

1. Klein S, Wadden T, Sugerman HJ. AGA Technical Review: Obesity. *Gastroenterology* 2002;123:882–932.

Address requests for reprints to: Chair, Clinical Practice Committee, AGA National Office, c/o Membership Department, 7910 Woodmont Avenue, 7th Floor, Bethesda, Maryland 20814. fax: (301) 654-5920.

© 2002 by the American Gastroenterological Association

0016-5085/02/\$35.00

doi:10.1053/gast.2002.35513