

Identifying, evaluating, and treating overweight and obesity in adults¹

Overweight and obesity are increasing in prevalence in nations all over the world. Nevertheless, overweight and obesity have not received the attention they deserve from primary care practitioners, in part because of the lack of authoritative information to guide treatment.

To help address that concern, the National Institutes of Health (NIH) of the United States of America recently cooperated on the production of a guide to identifying, evaluating, and treating overweight and obesity in adults. The guide is mainly intended for such health care practitioners as primary care physicians, nurses, registered dietitians, and nutritionists, to help them provide their patients with direction and support to lose weight and to maintain that weight loss. The guide includes practical information on dietary therapy, physical activity, and behavior therapy as well as guidance on the appropriate use of pharmacotherapy and surgery as treatment options.

The working group that prepared the new guide included representatives from the North American Association for the Study of Obesity and from the NIH's National Heart, Lung, and Blood Institute (NHLBI). The working group, in turn, based its efforts on a 1998 publication entitled *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: Evidence Report*, which had been developed by a panel of experts assembled by the NHLBI. That panel used an evidence-based methodology to develop key recommendations for assessing and treating overweight and obese patients.

THE PROBLEM OF OVERWEIGHT AND OBESITY

Obesity is a complex, multifactorial disease that develops from the interaction between genotype and the environment. Our understanding of how and why obesity occurs is incomplete; however, it involves the integration of social, behavioral, cultural, physiological, metabolic, and genetic factors. Overweight or obesity substantially increase the risk of morbidity from hypertension, dyslipidemia, type 2 diabetes, coronary artery disease, stroke, gallbladder disease, osteoarthritis, and sleep apnea and respiratory problems, as well as cancers of the endometrium, breast, prostate, and

Key words: Obesity, guidelines.

¹ Based on: United States of America, National Institutes of Health, National Heart, Lung, and Blood Institute; NHLBI Obesity Education Initiative; and North American Association for the Study of Obesity. The practical guide to the identification, evaluation, and treatment of overweight and obesity in adults. Bethesda, Maryland: NIH; 2000. Available from: <http://www.nhlbi.nih.gov/guidelines/obesity/practgde.htm> [Internet site]. Accessed 11 July 2001. (NIH Publication Number 00-4084).

colon. Higher body weights are also associated with an increase in mortality from all causes.

There are various methods available to assess body fat. While some techniques are expensive and often not readily available to most clinicians, two surrogate measures—body mass index (BMI) and waist circumference—are frequently used because of their greater simplicity and convenience. BMI also provides a more accurate measure of total body fat than does body weight alone.

BMI is calculated as weight in kg per height (m) squared. A BMI value of < 18.5 is considered underweight, normal weight is 18.5–24.9, and overweight is 25.0–29.9. Class 1 obesity is for values of 30.0–34.9, Class 2 obesity is for 35.0–39.9, and extreme obesity (Class 3) is for values of ≥ 40 .

Treatment of an overweight or obese person incorporates two key steps, assessment and management. Assessment includes determination of the degree of obesity and overall health status. Management involves weight loss, maintenance of body weight, and measures to control other risk factors. Obesity is a chronic disease, and both the patient and the practitioner must understand that successful treatment requires a lifelong effort. Convincing evidence supports the benefit of weight loss for reducing blood pressure, lowering blood glucose, and improving dyslipidemias.

ASSESSMENT

Assessment of a patient should include the evaluation of body mass index (BMI), waist circumference, and overall medical risk. Excess abdominal fat is an important, independent risk factor for disease. The evaluation of waist circumference to assess the risks associated with obesity or overweight is supported by research. Waist circumference measurement is particularly useful in patients who are categorized as normal or overweight. It is not necessary to measure waist circumference in individuals with BMIs ≥ 35 kg/m² since it adds little to the predictive power of the disease risk classification of BMI.

Men who have a waist circumference greater than 40 inches (102 cm) as well as women who have a waist circumference greater than 35 inches (88 cm) are at higher risk of diabetes, dyslipidemia, hypertension, and cardiovascular disease because of excess abdominal fat.

Risk factors or comorbidities

Overall risk must take into account the potential presence of other risk factors. Some diseases or risk factors associated with obesity place patients at

a high absolute risk for subsequent mortality; these will require aggressive management. Other conditions associated with obesity are less lethal but still require treatment.

Those diseases or conditions that denote high absolute risk are established coronary heart disease, other atherosclerotic diseases, type 2 diabetes, and sleep apnea. Osteoarthritis, gallstones, stress incontinence, and gynecological abnormalities such as amenorrhea and menorrhagia increase risk but are not generally life-threatening. Having three or more of the following risk factors also confers high absolute risk: hypertension, cigarette smoking, high low-density lipoprotein cholesterol, low high-density lipoprotein cholesterol, impaired fasting glucose, family history of early cardiovascular disease, and age (male ≥ 45 years, female ≥ 55 years).

Readiness to lose weight

The decision to attempt weight-loss treatment should take into account the patient's readiness to make the necessary lifestyle changes. Evaluation of readiness should consider the reasons and motivation for weight loss; previous attempts at weight loss; support expected from family and friends; attitudes toward physical activity; and potential barriers, including financial limitations, to the patient's adoption of change.

MANAGEMENT

Weight loss

Individuals at lesser risk should be counseled about effective lifestyle changes to prevent any further weight gain. Goals of therapy are to reduce body weight and maintain a lower body weight for the long term; the prevention of further weight gain is the minimum goal. An initial weight loss of 10% of body weight achieved over 6 months is a recommended target. The rate of weight loss should be 1 to 2 pounds (.45 kg to .91 kg) each week. Greater rates of weight loss do not achieve better long-term results. After the first 6 months of weight loss therapy, the priority should be weight maintenance achieved through combined changes in diet, physical activity, and behavior. Further weight loss can be considered after a period of weight maintenance.

Prevention of weight gain

In some patients, weight loss or a reduction in body fat is not achievable. A goal for these patients

should be the prevention of further weight gain. Prevention of weight gain is also an appropriate goal for people with a BMI of 25 to 29.9 who are not otherwise at high risk.

THERAPIES

Effective weight control involves multiple techniques and strategies, including dietary therapy, physical activity, behavior therapy, pharmacotherapy, and surgery, as well as combinations of these strategies. Relevant treatment strategies can also be used to foster long-term weight control and prevention of weight gain.

Some strategies such as modifying dietary intake and physical activity can also affect obesity-related comorbidities or risk factors. For example, increased physical activity is important for weight loss and weight loss maintenance, and it can also have a bearing on other comorbidities and risk factors such as high blood pressure and high blood cholesterol levels.

Weight management techniques should take into account the needs of individual patients, should be culturally sensitive, and should incorporate the patient's perspectives and characteristics. Effective efforts also understand how the obesity treatment program integrates into other aspects of the patient's health care and self-care, and they expect and allow modifications to a program based on a patient's response and preferences.

Table 1 illustrates the therapies appropriate for use at different BMI levels, taking into account the existence of other comorbidities or risk factors.

Dietary therapy

Caloric intake should be reduced by 500 to 1 000 calories per day (kcal/day) from the current level. Most overweight and obese people should

adopt long-term nutritional adjustments to reduce caloric intake. Dietary therapy includes instructions for modifying diets to achieve this goal. The diet should be low in calories, but it should not be too low, that is, less than 800 kcal/day. Diets lower than 800 kcal/day have been found to be no more effective than low-calorie diets in producing weight loss. They should not be used routinely, and especially not by providers untrained in their use.

In general, diets containing 1 000 to 1 200 kcal/day should be selected for most women; a diet between 1 200 kcal/day and 1 600 kcal/day should be chosen for men. That higher level may also be appropriate for women who weigh 165 pounds or more (75 kg or more), or who exercise.

Long-term changes in food choices are more likely to be successful when the patient's preferences are taken into account and when the patient is educated about food composition, preparation, and portion size. Although dietary fat is a rich source of calories, reducing dietary fat without reducing calories will not produce weight loss. Frequent contact with a practitioner during the period of diet adjustment is likely to improve compliance.

Physical activity

Physical activity has direct and indirect benefits. Increased physical activity is important in efforts to lose weight because it increases energy expenditure and plays an integral role in weight maintenance. Physical activity also reduces the risk of heart disease more than that achieved by weight loss alone. In addition, increased physical activity may help reduce body fat and prevent the decrease in muscle mass often found during weight loss.

For the obese patient, physical activity should generally be increased slowly, with care taken to avoid injury. A wide variety of activities may help satisfy this goal, including walking, dancing, team or individual sports, and household chores. All

TABLE 1. Appropriate treatment of adult overweight and obesity according to body mass index (BMI) and other comorbidities or risk factors

Treatment	BMI category				
	25–26.9	27–29.9	30–34.9	35–39.9	≥ 40
Diet, physical activity, and behavior therapy	With comorbidities	With comorbidities	+ ^a	+	+
Pharmacotherapy	NR ^b	With comorbidities	+	+	+
Surgery	NR	NR	NR	With comorbidities	+

^a The + symbol signifies the use of the indicated treatment regardless of comorbidities.

^b NR = not recommended.

Making the most of the patient visit

There are many different measures that a clinician can take to help a patient achieve success in losing weight and in maintaining that weight loss. A key element in that process is making the best possible use of the patient visit, as described in the following subsections.

Consider attitudes, beliefs, and histories

In the patient-provider interaction, individual histories, attitudes, and beliefs may affect both parties. The diagnosis of obesity is rarely new or news for the patient. Except for patients with very recent weight gain, the patient brings into the consulting room a history of dealing with a frustrating, troubling, and visible problem. Obese people are often the recipients of scorn and discrimination from strangers and sometimes hurtful comments from previous health care professionals. The patient with obesity may be understandably defensive about the problem.

Be careful to communicate a nonjudgmental attitude that distinguishes between the weight problem and the patient with the problem. Ask about the patient's weight history and how obesity has affected his or her life. Express your concerns about the health risks associated with obesity, and how obesity is affecting the patient.

Similarly, most providers have had some frustrating experiences in dealing with patients with weight problems. When efforts to help patients lose weight are unsuccessful, the provider may be disappointed and may blame the patient for the failure, seeing obese people as uniquely noncompliant and difficult.

Objectively examine your own attitudes and beliefs about obesity and obese people. Remember that obesity is a chronic disease, like diabetes or hypertension. In a sense, patients are struggling against their own body's coordinated effort to stop them from losing weight. Remember that compliance is poor for most long-term treatment regimens that require behavior change. Maintain realistic expectations regarding the ease, amount, speed, and permanence of weight change.

Build a partnership with the patient

The patient must be an active partner in the consultation and must participate in setting goals for behavior change. The patient probably already has goals concerning weight loss and how to achieve it, and these goals may be different from the ones that the provider would select. The provider can be a source of general information, perspective, support, and some measure of guidance but cannot cause the patient to meet goals that he or she does not accept.

When weight is first brought up, ask what the patient's weight goals are. You may indicate that the patient's weight goals are more ambitious than necessary for health improvement, but acknowledge that the patient may have many other reasons for selecting a different goal.

Distinguish between the long-term result of weight loss and the short-term behavior changes (diet, activity, etc.) that are the means to that end. Emphasize that the patient will judge which specific goals to attempt and that your review of goal attainment is meant to evaluate the plan, not the patient. Also emphasize it is important for the patient to keep return appointments even if goals have not been met.

Set achievable goals

Setting goals should be a collaborative activity. From all the available dietary and physical activity changes that might be made, a small number should be selected on the basis of their likely impact on weight and health, the patient's current status, and the patient's willingness and ability to implement them. Once goals are selected, an action plan can be devised to implement change.

After considering the recommended dietary and physical activity guidelines, the patient should be encouraged to select two or three goals that he or she is willing and able to take on. If the patient does not select an area that appears in need of change, inquire about the perceived costs and benefits of that achievement, without presenting it as

mandatory, perhaps with a comment along these lines: "One thing that seems very important for most patients is physical activity. What are your thoughts about increasing your activity level?" Assess the patient's perceived ability to meet a specific goal, such as by asking, "On a scale from 1 to 10, how confident are you that you can meet this goal?"

Effective goals are specific, attainable, and forgiving (less than perfect). Thus, "exercise more" would become "walk for 30 minutes, 3 days a week, for now." Shaping is a behavioral technique that involves selecting a series of short-term goals that get closer and closer to the ultimate goal (e.g., an initial reduction of fat intake from 40% of calories to 35% of calories and later to 30%). Once the patient has selected a goal, briefly address what has to be done to achieve it. Your questions might include: "What are the best days for you to take your walks?," "What time of day is best for you?," and "What arrangements will you need to make for child care?" Provide the patient with a written behavioral "prescription" listing the selected goals.

Cultivate the partnership with the patient

Follow-up visits are occasions for monitoring health and weight status and for assessing responses to any medication regimens. The visits also provide the opportunity to evaluate progress toward the goals selected at the previous visit, to provide support and additional information, and to establish goals for the next visit. Imperfect goal attainment is often the norm. Focus on the positive changes, and adopt a problem-solving approach toward the shortfalls. This is achieved by communicating that the goal, not the patient, is at issue.

While in the waiting room, the patient can write down the outcomes of the previous goals, effects of the various aspects of the treatment program (diet, activity, medication), items to discuss with you, and possible targets for new goals. In the consultation, a matter-of-degree approach can be communicated. For example, asking "How many days a week were you able to walk?" is more productive than "Did you meet your walking goal?" Successes should receive positive attention and praise. If the patient has not successfully met a desired goal, emphasize the extent to which he or she approached the goal.

Acknowledge the challenging nature of weight control by adopting problem-solving responses to goals that are not fully met. Emphasize that examining the circumstances of unmet goals can lead to new and more effective strategies, such as: "What do you think interfered with your walking plans on the days you didn't walk?" Emphasize that weight control is a journey, not a destination, and that some missteps are inevitable opportunities to learn how to be more successful.

In collaboration with the patient set goals for the next visit. These goals should be based on the outcome of the previous goals, consideration of the patient-selected targets, and assessment of the patient's status. If a previous goal was missed by a wide margin, it may be useful to lower the goal somewhat.

Keep in touch with the patient

While frequency of treatment contact is a major determinant of success at weight control, that contact need not be limited to direct, in-person visits with the provider. Encourage patients to drop by the office between consultations, such as for a weight check with the office nurse or other staff, to view educational videotapes, or to pick up other informational materials. A member of your staff might also telephone the patient between visits to offer support.

Help the patient to modify behaviors

Proven behavior modification techniques can be used to assist patients in weight control. Some can be communicated readily in person or via written materials. These behavior modification techniques might include self-monitoring, providing rewards, and stimulus controls changes.

Self-monitoring refers to observing and recording some aspect of behavior, such as caloric intake, exercise sessions, and medication usage, or an outcome of these behaviors, such as changes in body weight. Self-monitoring of a behavior usually changes the behavior in the desired direction and can produce real-time records for your review.

Rewards can encourage attainment of behavioral goals, especially those that have been difficult to reach. An effective reward is something that is desirable, timely, and contingent on meeting the

goal. Patient-administered rewards may be tangible (e.g., a movie, music CD, or payment toward buying a more costly item) or intangible (e.g., an afternoon off from work or an hour of quiet time away from family). Numerous small rewards, delivered for meeting smaller goals, are preferable to bigger rewards that require a long, difficult effort.

Stimulus control changes involve learning what social or environmental cues seem to encourage undesired eating, and then modifying those cues. For example, a patient may learn from reflection or from self-monitoring records that he or she is more likely to overeat while watching television or when around a certain friend. The resulting strategies may be to sever the association of eating from the cue (do not eat while watching television) or to change the circumstances surrounding the cue (plan to meet with the friend in a setting where food is not available). In general, visible and accessible food items are often cues for unplanned eating.

Dietary behavior changes can make it easier to eat less without feeling deprived. An important

change is to slow the rate of eating to allow satiety signals to begin to develop before the end of the meal. Another tactic is to use smaller plates so that moderate portions do not appear meager. Changing the scheduling of eating can be helpful for patients who skip or delay meals and then overeat later.

Focus on what matters

Improvement of the patient's health is the goal of obesity treatment. Use simple charts or graphs to summarize changes in weight and the associated risk factors that were present initially or that were suggested by the patient's family history. For example, for a patient presenting with a body mass index (BMI) of 33, hypertension, and a history of type 2 diabetes, a chart might include successive measures of weight, BMI, waist circumference, blood pressure, and fasting blood glucose. Copy these records for the patient. Provide the patient with a written behavioral "prescription" listing the selected goals.

adults should set a long-term goal of accumulating at least 30 minutes of moderate-intensity physical activity on most, and preferably all, days of the week.

Behavior therapy

Including behavioral therapy helps with compliance. Behavior therapy is a useful adjunct to planned adjustments in food intake and physical activity. Specific behavioral strategies include self-monitoring, stress management, stimulus control, problem-solving, contingency management, cognitive restructuring, and social support (see sidebar entitled "Making the Most of the Patient Visit"). Behavioral therapies may be employed to promote adoption of diet and activity adjustments; these will be useful for a combined approach to therapy. Strong evidence supports the recommendation that weight loss and weight maintenance programs should employ the combination of a low-calorie diet, increased physical activity, and behavior therapy.

Pharmacotherapy

Pharmacotherapy, as approved by the United States Food and Drug Administration (FDA), may be helpful for eligible high-risk patients. The drugs should be used only in the context of a treatment program that includes the elements of diet, physical activity changes, and behavior therapy. If lifestyle changes do not promote weight loss after 6 months, drugs should be considered. Pharmacotherapy is currently limited to those patients who have a BMI ≥ 30 , or those who have a BMI ≥ 27 if concomitant obesity-related risk factors or diseases exist. However, not all patients respond to a given drug. If a patient has not lost 4.4 pounds (2 kg) after 4 weeks, it is not likely that this patient will benefit from the drug. Currently, sibutramine and orlistat are approved by the FDA for long-term use in weight loss. Sibutramine is an appetite suppressant, and orlistat inhibits fat absorption from the intestine. Both of these drugs have side effects. Sibutramine may increase blood pressure and induce tachycardia; orlistat may reduce the absorption of fat-soluble vitamins and nutrients.

The decision to add a drug to an obesity treatment program should be made after consideration of all potential risks and benefits and only after all behavioral options have been exhausted.

Weight loss surgery

Surgery is an option for patients with extreme obesity. Weight loss surgery provides medically significant weight loss that in most patients is sustained for more than 5 years. Although there are risks associated with surgery, it is not yet known whether these risks are greater in the long term than those of any other form of treatment. Surgery is an option for well-informed and motivated patients who have a BMI ≥ 40 or a BMI ≥ 35 and serious comorbid conditions. After surgery, patients should be monitored for complications and lifestyle adjustments throughout their lives.

The NIH guide contains a number of other useful materials that health care providers can use to increase their knowledge and skills, including a treatment algorithm that provides a step-by-step approach to assessing and managing patients.

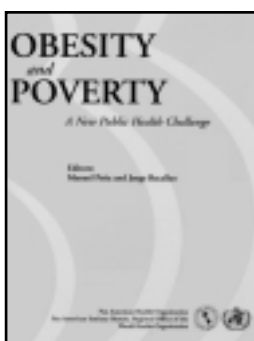
The appendices of the guide also contain a variety of practical tools that patients can use and that are in a form that care providers can easily photocopy and give to patients. These materials include guides to low-calorie and low-fat alternatives to many foods, sample reduced-calorie menus, sug-

gestions on low-calorie and low-fat cooking methods, advice on healthy choices for dining outside the home, ways to easily increase physical activity, steps to making behavior changes, and charts to record daily weight and physical activity.

SINOPSIS

Identificación, evaluación y tratamiento del sobrepeso y de la obesidad en adultos

La prevalencia del sobrepeso y de la obesidad está aumentando en varios países de todos los continentes. No obstante, este problema de salud no ha recibido de los médicos de atención primaria la atención que merece, en parte debido a la ausencia de información autorizada para orientar el tratamiento. Con el fin de contribuir a la solución de este problema, los Institutos Nacionales de la Salud (NIH) de los Estados Unidos de América han cooperado recientemente en la producción de una guía para la identificación, evaluación y tratamiento del sobrepeso y la obesidad en adultos. La guía, que está destinada fundamentalmente a los profesionales de la atención primaria (médicos, enfermeras, dietistas y nutricionistas) con el fin de ayudarlos a proporcionar a sus pacientes instrucciones para que adelgacen y mantengan la pérdida de peso, incluye información práctica sobre el tratamiento dietético, la actividad física y el tratamiento conductual, así como orientación sobre el uso apropiado de la farmacoterapia y de la cirugía como alternativas terapéuticas.



Obesity and Poverty: A New Public Health Challenge

Obesity and Poverty: A New Public Health Challenge is an essential source for understanding the new face of poverty in the Region of the Americas. This up-to-date examination of the prevalence of overweight and obesity in the Region's countries looks at these conditions' medium- and long-term harmful consequences and explores their implications for planning public health interventions.

The book analyzes how the Region's countries experience the nutritional transition process that is under way worldwide, a process that is tied to the global demographic and epidemiologic transition. In this context, the increase in obesity and overweight observed in the Hemisphere coexists with a risk factor that differs from traditional risk factors seen in developed countries--the persistence of the increase in inequalities and inequities in health.

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