

Overweight and Obesity: A Clinician's Perspective

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In recent years, much has been published in the medical and lay literature on overweight and obesity. The most current United States data show that in 2003-2004, 32.2% of adults were obese and 66.3% were overweight or obese.¹ The increasing prevalence over the past three decades, the associated disease comorbidities, and the attributable healthcare costs of obesity have been well documented. Various etiologic factors for the relatively recent increase in weight have been described, many of which involve a permissive environment that promotes a sedentary lifestyle and increased energy intake. For these reasons, obesity is one of the major public health challenges the United States is facing.

If overweight and obesity are a public health problem, does it not require a public health solution? What can healthcare providers do in their office to make a meaningful impact on a problem that affects two-thirds of their adult patients? Compounding the challenge to clinical treatment of overweight and obesity are the limited appointment time and reimbursement available to most clinicians. While the impediments to effective treatment of obesity are real, healthcare providers can stimulate individual and collective changes in their patients by following a specific, efficient, and systematic plan. Listed below are elements of a general plan to treat overweight and obesity for the busy clinician.

1. Perform a Brief Assessment

A. Classification

Measure height, weight, and waist measurement (or estimate by inspection) and determine body mass index (BMI) from a table or by calculation. Review the established comorbidities from obesity that are present (Table 1). Health risks, and therefore the need to lose weight, increase with increasing BMI,

increasing waist measurement, and a greater number of established comorbidities (Table 2).² The initial classification of obesity can help guide treatment recommendations.

Table 1.
Medical Comorbidities of Obesity

Type 2 diabetes mellitus
Hypertension
Dyslipidemia (high triglycerides and low HDL cholesterol)
Cardiovascular disease
Coronary artery disease
Stroke
Congestive heart failure
Nonalcoholic fatty liver disease (steatosis, steatohepatitis, cirrhosis)
Respiratory diseases
Obstructive sleep apnea
Obesity-hypoventilation syndrome
Asthma
Restrictive lung disease
Many cancers
Osteoarthritis
Cholelithiasis
Gastroesophageal reflux disease (GERD)
Gynecologic abnormalities
Infertility
Abnormal menses
Venous stasis
Skin problems
Intertrigo
Cellulitis
Increased risk of complications during surgery or pregnancy
Increased overall mortality

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B. Patient Readiness

Is the patient interested in increasing their efforts to lose weight? If not, just providing a brief motivating message and educational material may be all that can be accomplished at this time. Administering treatment recommendations will probably not be effective. Questions based on the stages of change model can be used to help determine patient readiness. Examples of patient readiness questionnaires are available, some of which target general readiness,³ while others focus on specific diet and physical activity habits.⁴

Table 2.
Classification of Overweight and Obesity.¹

	BMI ² (kg/m ²)	Obesity Class	DISEASE RISK	
			Low Waist Cir	High Waist Cir ³
Underweight	< 18.5		-	-
Normal	18.5 – 24.9		-	-
Overweight	25.0 – 29.9		Increased	High
Obesity	30.0 – 34.9	I	High	Very high
	35.0 – 39.9	II	Very high	Very high
Extreme obesity	≥ 40	III	Extremely high	Extremely high

1 The Practical Guide to the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. NIH Pub. No. 00-4084, 2000. Available online at: <http://www.nhlbi.nih.gov/guidelines/obesity/practgde.htm/>, accessed July 10, 2006.

2 Body mass index (BMI) can be calculated as $\text{wt}(\text{kg})/\text{ht}^2(\text{m})$, or $\text{wt}(\text{lb})\times 703/\text{ht}^2(\text{in})$.

Tables of weight, height, and BMI are also available.

3 High waist circumference is defined as > 40" in men and > 35" in women

C. History

Much of the medical history and weight-related assessment of obesity can be performed most efficiently with a written questionnaire. The items listed in Table 3 are relevant to the assessment of obesity and may influence treatment recommendations. A questionnaire based on these items can be prepared, tailored to the physician's practice, and administered to patients undergoing assessment for weight management. If it is not possible to provide a questionnaire to patients ahead of time, asking a few brief questions, even in a busy practice, can provide a reasonably good snapshot of baseline diet and activity habits (Table 4).

2. Order Appropriate Laboratory Studies

Consider obtaining a fasting blood glucose, lipid screen, TSH, and AST. Further testing should be guided by the clinical evaluation. For example, if there is a history of snoring with possible apneic periods or overnight oximetry, an appointment in a sleep disorders center should be obtained.

3. Use a Positive Approach

This is an area that is often under appreciated and difficult to document, but can be extremely important. Patients are often discouraged by lack of results in weight management. Physician recommendations can have a strong influence on patient behavior. The physician can prepare the patient by providing motivation and encouraging a positive attitude when initiating and following through on weight loss efforts. A typical approach toward weight management is to go 'on a diet', which is often overly restrictive, has a negative connotation, and is therefore likely to be temporary. On the other hand, people often say they feel better when they are more active. By focusing on the beneficial aspects of lifestyle changes in diet and physical activity, weight management efforts are more likely to be enjoyable, sustainable, and effective.

4. Determine a Tailored Plan

The plan for weight loss should be individualized based on the initial classification of obesity and factors in the patients' history. The aggressiveness of the approach should be guided by the degree of obesity and number and extent of comorbidities. All patients should initially receive specific recommendations for diet, physical activity, and lifestyle behavior changes. If there is no response to initial therapy, some patients may be candidates for pharmacotherapy or possibly surgery (Table 5), in addition to continuing efforts with lifestyle therapies. Physicians should obviously be familiar with medications to treat obesity if they are going to use them. Referrals for possible surgery should be made to medical centers experienced in this modality.

The plan for weight loss should include specific treatment recommendations for diet, physical activity, and lifestyle changes. Suggestions for dealing with individual challenges of managing weight that were uncovered in the assessment should be included. Rather than overwhelm someone with too much to address, a few main items can be targeted. For example, if eating at restaurants occurs frequently, a plan for making appropriate choices as well as monitoring of calorie intake should be developed. Encouraging patients to use problem-solving techniques can help them confront challenges more effectively. First, the problem is identified. Barriers to change followed by benefits to change can be written down. Potential solutions to the problem can then be explored, and a specific plan for addressing the problem designed. Goals should be determined (see below) and follow up appointments arranged.

5. Outline a Dietary Program

Many different dietary plans and programs are available including low carbohydrate, low fat, counting calories, meal replacements, very-low calorie diets, and popular diets, of which some have little basis in known physiology. The

Table 3.
Items to Assess in the Medical and Weight History for Evaluation of Obesity.

Medical History
Comorbidities of Obesity
Medications and dietary supplements (some medications, e.g., corticosteroids, some antidepressants, and others may adversely affect weight)
Family history of obesity
Weight History
Reasons/expectations for weight loss
Available support
Previous methods of weight loss and results (including why results were not successful)
Potential barriers to weight loss and maintenance (time, finances, established habits, physical limitations)
High School graduation weight, minimum and maximum adult weight
Periods of increased weight gain (e.g., pregnancy, smoking cessation, stressful life periods)
Current (and past) diet
Triggers to eating
Current (and past) exercise and general activity
Type, frequency, and duration of exercise
Amount of nonexercise activity
Factors the patient believes are responsible for weight
Binge eating, purging, laxative or diuretic use

approach used should be practical, enjoyable, healthful, and sustainable. If tracking calories are used, an initial goal of 1,000 to 1,200 kcal/day for women and 1,200 to 1,600 kcal/day for men can be recommended.² Increasing the intake of low energy dense foods including vegetables and fruits can lower overall energy intake, yet maintain bulk that contributes to satiety.³ Including foods such as whole grains and small amounts of unsaturated fat while restricting saturated fat, refined carbohydrate and processed foods can help promote health while managing weight. This approach is also consistent with other dietary guidelines recommended to decrease the risk of chronic diseases. Specific areas to target that have been identified as contributing to increased caloric intake or obesity are portion control, skipping breakfast, eating away from home—particularly fast food, and consuming refined carbohydrate, particularly sugar.⁵

6. Incorporate Exercise/NEAT

Increasing total energy expenditure can be accomplished through increasing exercise and non-exercise activity thermogenesis (NEAT). Patients should be encouraged to start a regular aerobic exercise plan slowly, yet gradually and progressively increase the frequency, duration, and intensity of exercise, in that order. Patients may need individual instructions from a

physical therapist or other qualified healthcare provider on the appropriate exercises based on their fitness level and physical limitations.

While exercise is the most efficient way to burn calories, the potential for increasing total energy expenditure is just as great by increasing NEAT throughout the day. Many people exercise an hour or two of the 168 hours in a week. Increasing NEAT may increase total energy expenditure more than exercise, because of the multiple opportunities available in the rest of the waking hours of the week. Lists of potential activities and strategies are available,³ but the bottom line is any activity is good activity. The more excuses people can make to get activity during the day by performing activities such as walking during a work break or parking farther from a destination (instead of 'taking the shortcut'), the better chance they'll have at managing weight.

7. Formulate Realistic Process Goals

The goal in weight loss is obviously a lower weight. However, many people focus too much effort on this outcome goal and not how to reach that goal. This is analogous to having a goal to make \$100,000 without putting sufficient thought and effort into a plan on how to make it. It's been reported that the vast majority of people have unrealistic outcome goals for weight loss,⁶ which eventually results in frustration, abandonment of efforts, and regain of any weight that was lost.

Process goals help to focus on the day-to-day activities that result in weight loss and, more importantly, sustaining that weight loss over time. Goals should be SMART—specific, measurable, attainable, realistic, and trackable. Examples of SMART process goals include eating one more serving of vegetables daily or starting to walk 10 minutes four times per week (and increasing by one session and 5 minutes per session each week to a goal of 40 minutes 6 times per week).

Challenges and problems should be expected and a plan to deal with them should be utilized, using problem-solving techniques. For example, everyone hits a weight plateau eventually. Two basic options for addressing this are to further increase physical activity or decrease calorie intake. If it is not possible to implement further changes in these areas that are sustainable, then continuation of current lifestyle habits is much preferred over

Table 4.
Brief Questions to Assess Diet and Physical Activity Habits.

Diet
What do you eat in a typical day for breakfast, lunch, dinner, and snacks?
How much meat and how much vegetables and fruits do you eat in a typical day or week?
How often do you eat outside the home?
Physical Activity
How much exercise do you get in a typical week?
How much physical activity do you get in a typical day?

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stopping existing efforts and regaining weight.

Self-monitoring is an important aspect of adherence to change and achieving goals. People who keep diet and activity records are more likely to manage weight successfully.

8. Provide Resources

Time is limited in the office setting. Verbal recommendations should be supplemented by a written recommendations and resources such as office handouts, pamphlets, or a book. In addition, there are many websites related to weight loss, some of which are interactive, but the quality may vary. Telephonic coaching is becoming more popular. Patients should generally be referred to a Registered Dietitian who can take the time to obtain a detailed dietary history, provide education and recommendations, and follow patients over time, often in a group setting. Reputable commercial weight management programs can follow people over time and provide social support. For patients with significant behavioral issues related to weight management such as binge-eating disorder, referral to a Clinical Psychologist is indicated.

9. Arrange Follow up

Ongoing follow up is important in that it can help maintain motivation and provide an opportunity to ask questions, give feedback, refine recommendations, and revise process goals.

Patients often appreciate the support and accountability a follow up visit offers. Patients can follow up in various ways and with different types of people. Similar to the rest of the plan, follow up should be tailored to the individual.

10. Outcome Measures

A comprehensive lifestyle modification program may result in weight loss of approximately 10% in 16 to 26 weeks.⁷ While weight loss is an obvious primary objective, success can be defined in many additional ways. Long-term weight maintenance after weight loss is more important than rapid, short-term weight loss followed by weight regain. Inches lost and body composition changes are important intermediate markers. Improvement in the comorbidities of obesity and quality of life are important additional goals that can be realized. These goals can result from weight loss and from sustained health-promoting lifestyle changes in diet and physical activity, independent of weight loss.

Barriers to Clinical Treatment of Obesity

In addition to genetics and the environment, barriers to effective implementation of the clinical plan outlined above can be due to patient, healthcare provider, and health system factors. Patients often don't appreciate the strength of the connection between their obesity and health comorbidities. In fact, patients who are overweight or obese often don't recognize themselves or their children as such.⁸ In addition, many people have tried to lose weight, often with an ineffective approach, and realize the difficulty of losing and maintaining weight loss. Healthcare providers are not exempt from challenges with managing their own weight and have experienced how difficult it is to achieve lasting weight loss in their patients. In addition, healthcare providers may not have adequate training or resources to help them adequately treat obesity. Insurers do not generally reimburse for obesity as a diagnosis. An exception to this is Blue Cross Blue Shield of North Carolina, which has instituted a plan for addressing obesity as part of a healthy lifestyle program that covers a limited number of office visits for physicians and registered dietitians, as well as pharmacotherapy when indicated.⁹ Further education for healthcare providers and patients, implementation plans to treat obesity and document outcome, and resources to support these efforts are needed.

Table 5.
Treatment Options for Obesity.¹

Treatment	BMI				
	25-26.9	27-29.9	30-34.9	35-39.9	≥40
Diet, physical activity, and behavior therapy	with comorbidities	with comorbidities	Yes	Yes	Yes
Pharmacotherapy		with comorbidities	Yes	Yes	Yes
Surgery				with comorbidities	Yes

¹ The Practical Guide to the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. NIH Pub. No. 00-4084, 2000. Available online at: <http://www.nhlbi.nih.gov/guidelines/obesity/practgde.htm/>, accessed July 10, 2006.

Conclusion

The causes of the recent rise in the prevalence of overweight and obesity are multiple, diverse, collectively powerful, and pervasive. Multidisciplinary action with interventions from government, academia, public health, private industry, and

healthcare institutions will be necessary to reverse the rising trend in obesity. The healthcare providers' office is one part of this massive effort and while efforts by clinicians may not solve the problem of obesity, they may help many individuals to improve not only their weight, but their health and quality of life. **NCMedJ**

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