

1 **Clinical Practice Guideline: Obesity/Overweight**

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3 **Date of Implementation: June 19, 2014**

4  
5 **Product: Specialty**

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8 **GUIDELINES**

9 Among portal of entry practitioners, screening for obesity and overweight using Body Mass  
10 Index (BMI) is considered best practice. Providing a direct intervention (e.g., lifestyle  
11 and/or dietary changes) for adult patients identified as having obesity or overweight, will  
12 depend upon the practitioner’s education, training, experience, and scope of practice. In  
13 the absence of such a direct intervention, providing a referral intervention (e.g., to the  
14 patient’s medical physician) is considered necessary. Measurements such as BMI may be  
15 outside the education, training, experience, or scope of some practitioner types. In the  
16 context of best practices, for these practitioners, a level of awareness of risk factors and/or  
17 signs/symptoms that overweight/obesity is present and a subsequent referral for  
18 appropriate evaluation is necessary and within the purview of all.

19  
20 **INTRODUCTION**

21 The impact of obesity and overweight on health is significant. Obesity is associated with  
22 health problems such as increased risk for coronary heart disease, stroke, type 2 diabetes,  
23 various types of cancer (e.g., liver, kidney, breast, endometrial, prostate, and colon),  
24 gallstones, and disability. Obesity is also associated with an increased risk for death,  
25 particularly among adults younger than 65 years. The leading causes of death among adults  
26 with obesity include ischemic heart disease, type 2 diabetes, respiratory diseases, and  
27 cancer.

28  
29 Risk for a number of chronic conditions increases as BMI increases above 25, including  
30 coronary heart disease (CHD), hypertension, stroke, Type 2 diabetes, and cancer of the  
31 colon, kidney, gallbladder, breast, and endometrium. Obesity and overweight also increase  
32 the likelihood of developing other conditions such as gall bladder disease, sleep apnea, and  
33 osteoarthritis of weight-bearing joints. Obesity also adversely affects general quality of  
34 life, impairing mobility that may lead to limited functional and social activities thus  
35 bringing with it social stigmatization. Among individuals  $\geq 65$  years however, a slightly  
36 higher BMI (between 25 and 27) may reduce mortality. For example, a slightly higher BMI  
37 in a person 65 years or older may help protect against osteoporosis (Winter et al., 2014).  
38 Further, obesity and overweight among children is being shown to produce similar  
39 manifestations as adults on the child’s physical and psychological health including quality  
40 of life (Cuda and Censani, 2018).

**ASSESSING OBESITY**

As appropriate to a practitioner’s education, training, experience, and scope of practice, there are various techniques in use to measure obesity, including body mass index (BMI), bioelectrical impedance, dual-energy x-ray absorptiometry (DEXA), and total body water immersion. BMI represents a calculation of body weight adjusted for height (weight in kilograms divided by height in meters squared) (USPSTF, 2018). Risk for adverse health effects increases linearly with BMI. However, increased musculature (e.g., with some athletes) increases BMI which negatively impacts the accuracy of this measure.

Consequently, the USPSTF has designated measurement of BMI by the clinician as the appropriate screening method for obesity/overweight. There are numerous online BMI calculators including the National Institutes of Health’s at [http://www.nhlbi.nih.gov/health/educational/lose\\_wt/BMI/bmicalc.htm](http://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm)

- BMI of 25-29.9 kg/m<sup>2</sup> indicates overweight while
- BMI ≥ 30 kg/m<sup>2</sup> indicates obesity.
  - Obesity is further differentiated into 3 classes:
    - I = BMI 30-34.9 kg/m<sup>2</sup>;
    - II =BMI 35-39.9 kg/m<sup>2</sup>; and
    - III =BMI ≥ 40 kg/m<sup>2</sup>.

Obesity in children is defined as a body mass index (BMI) at or above the 95th percentile of the CDC gender-specific BMI-for-age growth charts.

Another measure helpful in assessing health risks is central adiposity or waist circumference, which is associated with risk of cardiovascular disease, diabetes, and other conditions, independent of obesity. Central adiposity is measured by waist circumference (WC); men with a WC > 40 inches (102 cm) and women with a WC > 35 inches (88 cm) are at increased risk for cardiovascular disease. Because BMI does not assess body fat distribution, WC is a useful measure, since central adiposity is an indicator of health risk independent of body fat percentage or BMI. The following table summarizes the relationship of BMI and WC to health risks (Garvey et al., 2016). As with BMI, measuring central adiposity may be outside the scope for some practitioners. In such cases, one’s clinical impression/awareness that overweight/obesity might be of issue is an appropriate reason for a referral intervention.

Description	BMI (kg/m <sup>2</sup> )	Obesity class	Waist Circumference (WC) and Associated Health Risks	
			WC Men ≤ 40” or Women ≤ 35”	WC Men > 40” or Women > 35”
Underweight	<18.5			
Normal	18.5-24.9			

Description	BMI (kg/m <sup>2</sup> )	Obesity class	Waist Circumference (WC) and Associated Health Risks	
			WC Men ≤ 40” or Women ≤ 35”	WC Men > 40” or Women > 35”
Overweight	25-29.9		Increased risk	High risk
Obese	30-34.9	I	High risk	Very high risk
	35-39.9	II	Very high risk	Very high risk
Extremely Obese	40+	III	Extremely high risk	Extremely high risk

1  
2 Table 1. National Heart, Lung, and Blood Institute.  
3 [https://www.nhlbi.nih.gov/health/educational/lose\\_wt/BMI/bmi\\_dis.htm](https://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmi_dis.htm)

#### 4 INTERVENTIONS

5  
6 *Counseling and Behavioral Interventions.* “Counseling” refers to advice from the clinician  
7 to the patient to promote change. “Behavioral interventions” refers to strategies that assist  
8 people in acquiring skills, motivations, and support needed to change their health habits.  
9 The 5A’s (Ask, Advise, Assess, Assist, and Arrange) is a framework frequently used in  
10 clinical practice to guide behavioral interventions (Alexander, 2011).

11 Applied to weight management for individuals with obese/overweight.:

- 12 • Ask the patient about weight, nutrient intake, and physical activities.
- 13 • Advise with clear and impactful recommendations (e.g., related to comorbidities  
14 and the personalized health consequences of not losing weight).
- 15 • Assess the patient’s readiness to change their lifestyle (diet and exercise).
- 16 • Assist the patient by providing counseling and/or self-help materials (e.g., websites,  
17 organizations, contact information) to help them manage their weight.
- 18 • Arrange for follow up with the practitioner or another practitioner specializing in  
19 an area to help the patient (e.g., a qualified nutrition professional).

20  
21 Some behavioral interventions to obesity treatment are based on Social Learning Theory  
22 (Bandura, 2004), with the assumption that eating and exercise are learned behaviors and  
23 that by modifying them, body weight can be changed. Common behavioral strategies used  
24 in behavioral weight loss programs are detailed below

- 25 • **Self-monitoring:** Recording behaviors associated with food consumption and  
26 physical activity.
- 27 • **Stimulus control:** Restricting environmental factors associated with inappropriate  
28 behaviors.
- 29 • **Contingency management:** Rewarding appropriate behaviors.
- 30 • **Changing behavior parameters:** Changing or altering behaviors.

- 1 • **Cognitive-behavior modification:** Changing thinking patterns related to target  
2 behavior.

3  
4 The patient’s main health concerns should be addressed as the primary focus. The  
5 practitioner may integrate the discussion of weight management issues that may be  
6 affecting the patient’s physical or emotional health into the clinical dialogue.

7  
8 *Key Steps for Health Practitioners:*

- 9 • Identify at-risk individuals and help them understand that modest weight loss (5–  
10 10 percent) can lead to clinically important reductions in disease risk factors.
- 11 • Encourage individuals to adopt healthy lifestyle behaviors: healthy food choices,  
12 regular physical activity, reduce sedentary activities such as watching television or  
13 computer games.
- 14 • Monitor and treat potential health effects of overweight or obesity.

15  
16 The USPSTF recommends that health care practitioners counsel adults about physical  
17 activity selectively, based on risk factors, rather than incorporate counseling into the care  
18 of all patients within the population. These recommendations are based on the health  
19 benefits of physical activity, rather than on the effectiveness of practitioner counseling to  
20 promote changes in physical activity or long-term health outcomes. See the *Physical*  
21 *Activity (CPG 181-S)* policy for more information.

22  
23 The USPSTF (2018) found that behavior-based weight-loss interventions with or without  
24 weight loss medications resulted in more weight loss than usual care conditions. The degree  
25 of weight loss observed with the behavior-based weight loss interventions in the current  
26 review is slightly smaller but consistent in magnitude with the 2011 review on this topic.  
27 As in the previous review, authors noted that weight loss interventions resulted in a  
28 decreased risk of developing diabetes, particularly among those with prediabetes, although  
29 the prevalence of other intermediate health outcomes was less well reported. Limited  
30 evidence exists regarding health outcomes associated with weight loss interventions.  
31 Weight loss medications, but not behavior-based interventions, were associated with higher  
32 rates of harms compared with control arms. Heterogeneity within each individual  
33 intervention arm confounded with differences in the populations, settings, and trial quality,  
34 making it difficult to disentangle which variables may be driving larger effects. Long-term  
35 weight and health outcomes data, as well as data on important subgroups (e.g., those who  
36 are older, nonwhite, or overweight) were lacking and should be a high priority for future  
37 study. The USPSTF (2017) recommendations on obesity in children and adolescents stated  
38 that evidence suggests that lifestyle-based weight loss interventions with 26 or more  
39 contact hours are likely to help reduce excess weight in children and adolescents; average  
40 effect sizes were relatively small and highly variable.

1 *Pharmacotherapy.* If utilized, weight management medications are typically meant to be  
2 used along with nutrition, exercise, and behavior management. More recent formulations  
3 and unique drug combinations have come on to the market, some are approved by the FDA  
4 for weight loss and others are being prescribed for off label use in weight loss. In  
5 randomized controlled trials (RCTs), older classes of drugs and these newer formulations  
6 have resulted in modest to meaningful weight reduction over placebo, including in  
7 adolescents. Adverse effects may occur. Patients must consult with their primary treating  
8 practitioner for assistance with the appropriate use of medications as part of their weight  
9 management program. This would require a health care practitioner for whom prescriptions  
10 are within their scope of practice.

11  
12 *Surgery.* According to National Institutes of Health (NIH), patients with a BMI >40 kg/m<sup>2</sup>  
13 or with a BMI ≥ 35 kg/m<sup>2</sup> who have not responded to other treatment and who have severe  
14 health complications may be considered as candidates for bariatric surgery. The surgical  
15 approach is either restrictive or malabsorptive; currently restrictive techniques  
16 predominate. In patients with *extreme* obesity, bariatric surgery resulted in large and  
17 sustained weight reduction (10-159 kg/22-350 lb over 1-5 years) (McTigue et al., 2003).  
18 Adverse effects of bariatric surgery include wound infection, re-operation (for up to 25%  
19 of cases), vitamin deficiencies, diarrhea, hemorrhage, and death (postoperative mortality  
20 rate = 0.2%) (O'Brien et al., 2019).

21  
22 Concerns over unknown *long-term* consequences of such surgical procedures also persist.  
23 The development of persistent and unfavorable surgical consequences (e.g., symptomatic  
24 cholelithiasis, band-related complications, and bowel obstruction) requiring additional  
25 surgery, and gastrointestinal issues (bleeding, infection) and nutritional deficiencies are  
26 additional long-term concerns. These metabolic and nutritional consequences require  
27 lifelong monitoring and micronutrient supplementation (Madura and DiBiase, 2012).

28  
29 Over time, the reduction in surgical complications with the laparoscopic approach and  
30 other technical advancements, along with sustained improvements in weight loss and  
31 reductions in obesity-related comorbidities (e.g., diabetes, hypertension) have increased  
32 the use of bariatric surgery as a treatment option. Obesity management is best done as a  
33 multidisciplinary team approach and includes multiple evaluations (e.g., nutritional,  
34 exercise, behavioral health) prior to surgical consideration as well as post-surgical long-  
35 term care (Madura and DiBiase, 2012).

36  
37 *Non-surgical Bariatric Procedures.* Another option for treatment of obesity are non-  
38 surgical bariatric procedures such as the implanted gastric balloon. The balloons are placed  
39 endoscopically on an outpatient basis. The types of procedures are an option for patients  
40 who have not been successful with weight loss through nutrition and exercise, but who are  
41 not candidates for surgery. Studies have demonstrated significantly increased weight loss  
42 with the implants vs. nutritional management and exercise alone with a good safety profile.

**SCREENING RECOMMENDATIONS**

**USPSTF Recommendations**

Grade B Recommendation: *The USPSTF recommends that clinicians offer or refer adults with a body mass index (BMI) of 30 or higher (calculated as weight in kilograms divided by height in meters squared) to intensive, multicomponent behavioral interventions.*

Grade B Recommendation: *The USPSTF recommends that clinicians screen for obesity in children and adolescents 6 years and older and offer or refer them to comprehensive, intensive behavioral interventions to promote improvements in weight status.*

**Definitions:**

Grade B Recommendation: The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.

Grade C Recommendation: The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.

Grade D Recommendation: The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.

A comprehensive review of the USPSTF rating process can be found in the *Preventive Care Services(CPG 140 – S)* clinical practice guideline or at the USPSTF website (<https://www.uspreventiveservicestaskforce.org/uspstf/about-uspstf/methods-and-processes/grade-definitions> ).

**PRACTITIONER SCOPE AND TRAINING**

Practitioners should practice only in the areas in which they are competent based on their education, training, and experience. Levels of education, experience, and proficiency may vary among individual practitioners. It is ethically and legally incumbent on a practitioner to determine where they have the knowledge and skills necessary to perform such services and whether the services are within their scope of practice.

It is best practice for the practitioner to appropriately render services to a patient only if they are trained, equally skilled, and adequately competent to deliver a service compared to others trained to perform the same procedure. If the service would be most competently delivered by another health care practitioner who has more skill and training, it would be best practice to refer the patient to the more expert practitioner.

1 Best practice can be defined as a clinical, scientific, or professional technique, method, or  
 2 process that is typically evidence-based and consensus driven and is recognized by a  
 3 majority of professionals in a particular field as more effective at delivering a particular  
 4 outcome than any other practice (Joint Commission International Accreditation Standards  
 5 for Hospitals, 2020).

6  
 7 Depending on the practitioner’s scope of practice, training, and experience, a patient’s  
 8 condition and/or symptoms during examination or the course of treatment may indicate the  
 9 need for referral to another practitioner or even emergency care. In such cases it is essential  
 10 for the practitioner to refer the patient for appropriate co-management (e.g., to their primary  
 11 care physician) or if immediate emergency care is warranted, to contact 911 as appropriate.  
 12 See the *Managing Medical Emergencies (CPG 159 – S)* clinical practice guideline for  
 13 information.

14  
 15 Publicly available resources for both practitioners and members can be found through the  
 16 Centers for Disease Control and Prevention (CDC), United States Preventive Services Task  
 17 Force (USPSTF), and the Obesity Medicine Association (OMA).

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