

Screening, Diagnosis, Evaluation, and Staging of Obesity in Adults: Standards of Care in Overweight and Obesity – 2026

American Diabetes Association Professional Practice Committee for Obesity

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ABSTRACT

Obesity is a heterogeneous chronic disease in which excess adiposity increases the risk of morbidity and mortality. The Obesity Association, a division of the American Diabetes Association (ADA), developed comprehensive, evidence-based guidelines on screening, diagnosis, evaluation, and staging of overweight and obesity in adults. Monitoring for consistent increases in weight over time may facilitate early intervention to prevent obesity and its complications, and screening for excess adiposity should be performed at least annually using BMI. The recommended diagnostic criteria for overweight and obesity include race- and ethnicity-specific BMI thresholds supplemented with waist circumference-based measures for certain individuals to reduce the risk of underdiagnosis. Healthcare professionals should perform a comprehensive clinical evaluation, including risk stratification and staging, of all adults diagnosed with overweight or obesity, which will inform the management plan and follow-up care. The ADA's Obesity Association encourages healthcare professionals to adopt these guidelines for evaluating obesity in adults.

INTRODUCTION

Obesity is a heterogeneous chronic disease in which excess adiposity increases an individual's morbidity and mortality risk. Complex interactions between genetic, neurobiologic, physiologic, behavioral, and environmental factors contribute to the development of obesity,¹ which may manifest as central or visceral adiposity, that is, excessive accumulation of metabolically active fat around the abdominal organs. Secondary causes of weight gain may also influence clinical presentation.² Healthcare professionals should be aware that obesity is distinct from subcutaneous adipose tissue disorders (eg, lipedema),³ although individuals with these disorders may also have obesity. Rare genetic obesity syndromes have been identified⁴ and may need to be evaluated as a cause of obesity in select individuals.

In research and clinical practice, obesity has often been identified by BMI, which was initially derived for the study of human

growth patterns ("Quetelet index") in 1832.⁵ Initial research by Keys *et al*⁶ compared weight and height ratios with markers of adiposity, including densitometry and skinfold measurements, which identified BMI as the best estimate of body fat. BMI gained prominence owing to its close correlation with excess adiposity and health,⁶ as epidemiological studies showed a consistent association between elevated BMI and risk for numerous diseases, such as diabetes,⁷ hypertension,^{8,9} and cardiovascular disease.^{10–12} In 1995, the WHO established BMI thresholds for the classification of weight status, including overweight and obesity, citing a U- or J-shaped association with clinical outcomes and mortality.¹³ However, BMI does not directly evaluate body composition or distribution of body fat. Healthcare professionals should be aware that BMI is an imperfect measure of excess adiposity, particularly on an individual level, as it may overestimate adiposity in muscular individuals and underestimate adiposity in certain populations (eg, people with Asian backgrounds, older adults).^{14,15} Therefore, other assessments are needed to identify obesity among these groups.

This section establishes standards for screening, diagnosis, evaluation, and staging of obesity in nonpregnant adults (figure 1). The methodology for the "Standards of Care in Overweight and Obesity" has been described previously.¹⁶ In brief, these guidelines are developed by the Professional Practice Committee of the American Diabetes Association (ADA)'s Obesity Association, an interprofessional team of experts. Subcommittees conduct systematic literature reviews to inform updates, guided by a methodologist and librarian. Recommendations are graded based on evidence quality (A, B, C, or expert opinion E), with the strongest evidence derived from large, well-designed



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randomized controlled trials (RCTs) and meta-analyses of such RCTs.¹⁶ While evidence forms the basis, recommendations emphasize person-centered care and pragmatic implementation in clinical settings. Recommendations are deliberated by ADA Professional Practice Committee for Obesity voting members, with an 80% consensus required for approval. External peer reviews and adherence to established guideline development principles ensure credibility and rigor in the approach. The ADA and its subdivision, the Obesity Association, will hold an ongoing public comment period to request feedback on the “Standards of Care in Overweight and Obesity.” The ADA Professional Practice Committee for Obesity will review compiled feedback on an ongoing basis to prepare pending content and subsequent updates throughout the year. Readers who wish to comment on the “Standards of Care in Overweight and Obesity” are invited to do so at <https://bit.ly/soc-obesity-comments>.

MONITORING WEIGHT AND SCREENING FOR EXCESS ADIPOSITY

Recommendations

- 3.1** Monitor for consistent increases in body weight to identify adults at high risk of developing obesity and its related diseases and complications **B**. Body weight increases of more than 1–1.5 kg/year over more than 3 years indicate potential elevated risk **C**.
- 3.2** Screen for excess adiposity in adults using BMI at least annually **B** (table 1).

Clinical practices and healthcare professionals should reduce the risk of weight bias and stigmatization when screening for and diagnosing obesity. Recommendations regarding changes to the clinical practice environment, such as making accommodations to provide privacy during anthropometric measurements, are outlined in the article “Weight Stigma and Bias: Standards of Care in Overweight and Obesity—2025”.¹⁷ Importantly, it is key for healthcare professionals to first ask permission to discuss weight with individuals (figure 1). If individuals decline, respect autonomy by refraining from forcing conversation and reevaluate in 1 year. If individuals accept, then clinicians may proceed with the evaluation. In addition, the application of an evidence-based counseling framework may be helpful in guiding the encounter; the application of the 6As (Ask, Assess, Advise, Agree, Assist, Arrange)¹⁸ during the evaluation of overweight and obesity in adults is incorporated into figure 1. healthcare professionals’ use of the 6As has been associated with improved outcomes, including increased self-efficacy, intention to change behavior, and weight reduction among people with obesity.^{19–21}

Monitoring weight

Consistent increases in body weight, regardless of BMI status, have been associated with increased risk

of developing obesity and obesity-related diseases and complications.²² Numerous prospective cohort studies have reported that weight gain increases the risk of developing diabetes,^{23 24} hypertension,⁹ coronary heart disease,^{11 25} stroke,¹² and some cancers²⁶ over time. Therefore, healthcare professionals should monitor for consistent increases in nonpregnant body weight to identify individuals at high risk of developing these complications. This screening may be particularly important among young and middle-aged adults, as weight gain during early-to-middle adulthood has been associated with greater health risks.^{22 27} For example, a longitudinal analysis of data from the National Health and Nutrition Examination Survey (NHANES) found that weight gain during young-to-middle adulthood was associated with higher risk of all-cause mortality (HR 1.22, 95% CI 1.11 to 1.33) and heart disease mortality (HR 1.49, 95% CI 1.21 to 1.83) compared with individuals who remained weight stable.²⁷ In addition, more rapid weight gain (>1.7 kg/year) during young adulthood has been associated with greater risk of diabetes, hypertension, and osteoarthritis at middle age.²⁸ It is also notable that, on average, individuals entering young adulthood today weigh 4 kg more and gain weight 1.7 times faster than young adults 20 years ago.²⁹

While the evidence is clear that weight gain is associated with health risks, the magnitude of weight increase for which healthcare professionals should be monitoring is less clear, as prospective studies have inconsistently defined weight gain. By extrapolating across multiple studies, a consistent weight gain of 1–1.5 kg/year over more than 3 years may confer increased risk of obesity and its related complications.^{12 23–25 28} This magnitude of weight increase may therefore be a reasonable indicator to monitor among individuals without obesity. However, future research is needed to evaluate outcomes with this specific threshold. While percent weight change could be another metric to monitor, absolute weight change simplifies implementation for health systems, as this measure can be easily monitored through existing fields in most electronic health record (EHR) systems.

If weight gain is identified, clinicians should perform a comprehensive history and physical examination to determine whether secondary causes of weight gain should be considered, such as hypothyroidism, polycystic ovarian syndrome, and hypercortisolemia. Clinicians should be familiar with the differential diagnosis for weight gain.² Weight-promoting medications should be identified as described in “Pharmacologic Treatment of Obesity in Adults: Standards of Care in Overweight and Obesity”.³⁰ As the number of weight-promoting medications used increases, individuals’ BMI values are more likely to show greater increases over time.³¹ Strategies for managing weight-promoting medications are outlined in the aforementioned article. In addition, the healthcare professional may need to consider appropriate intervention strategies to prevent the development of obesity and

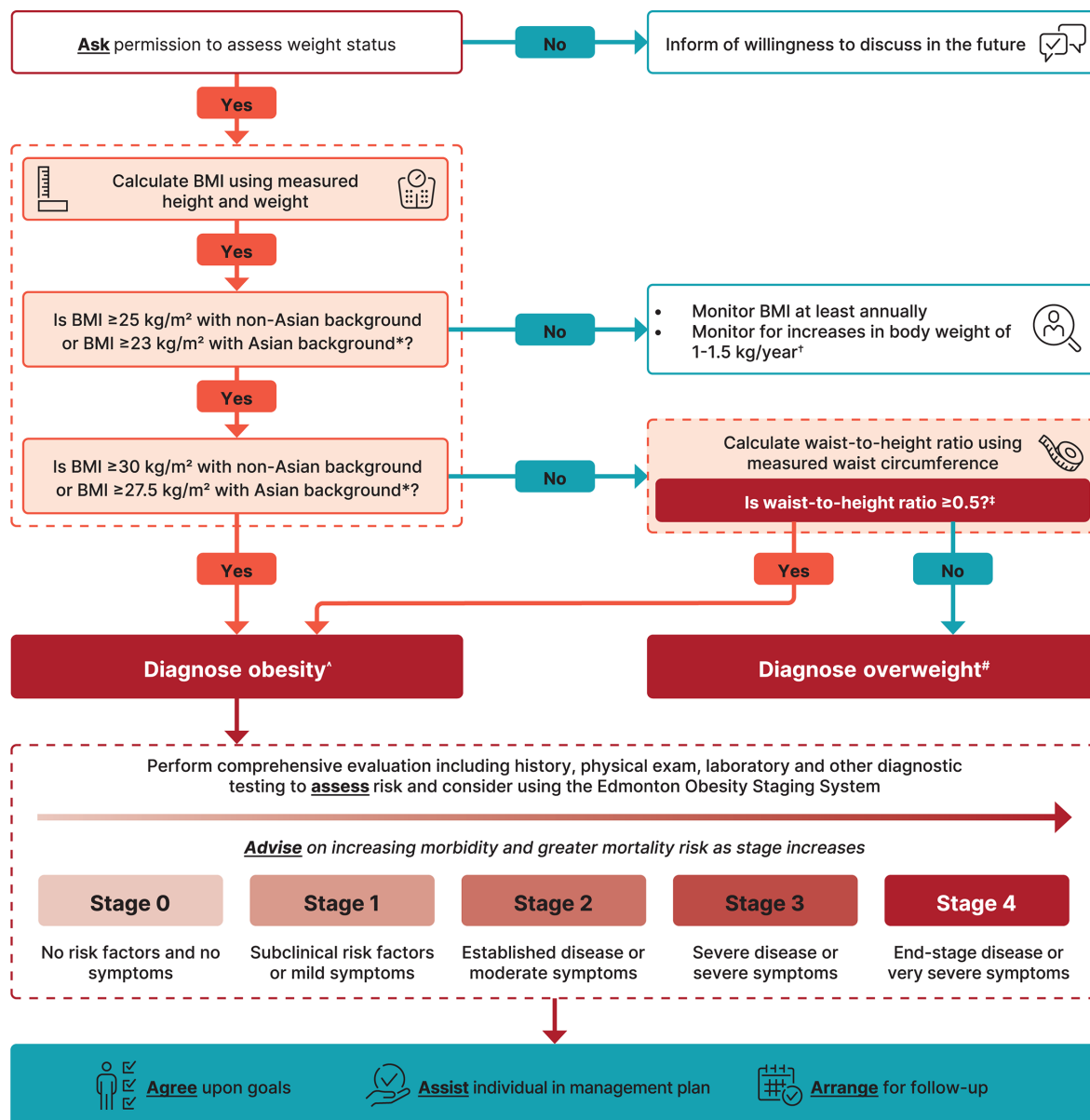


Figure 1 Evaluation of overweight and obesity in nonpregnant adults. Underlined words highlight the application of the 6As (Ask, Assess, Advise, Agree, Assist, Arrange) counseling framework for the evaluation and management of overweight and obesity. *The BMI thresholds identified for people with an Asian background represent general targets, and healthcare professionals should be aware that specific values may exist for certain Asian countries that differ from the values listed (40,41,55). †Consistent increases in body weight, regardless of BMI status, have been associated with increased risk of developing obesity and obesity-related diseases and complications. If identified, the healthcare professional should perform a comprehensive history and physical examination to determine whether secondary causes of weight gain should be considered and consider strategies, as appropriate, to prevent the development of obesity and its related diseases and complications. ‡Healthcare professionals may use waist circumference as an alternative to waist-to-height ratio in differentiating obesity and overweight. Among adults with a non-Asian background, obesity should be diagnosed if waist circumference is ≥ 88 cm in women or ≥ 102 cm in men. Among adults with an Asian background, obesity should be diagnosed if waist circumference is ≥ 80 cm in women or ≥ 90 cm in men. If waist circumference is below the appropriate threshold for the individual, then overweight should be diagnosed. §If physical examination suggests that an individual may have a predominance of muscle mass, the healthcare professional should measure waist circumference to evaluate for central adiposity and obesity should only be diagnosed in these cases if central adiposity is present. The healthcare professional may also consider evaluating body composition in these individuals via other methods (e.g., bioelectrical impedance analysis, dual X-ray absorptiometry) to confirm adiposity is $\geq 35\%$ in women or $\geq 25\%$ in men. Clinicians should be aware that individuals with a predominance of muscle mass could have increased abdominal girth due to increased abdominal musculature,²⁹⁴ which requires use of one of these other assessment methods. #If physical examination suggests that an individual may have a predominance of muscle mass, the healthcare professional should evaluate body composition via other methods (e.g., bioelectrical impedance analysis, dual X-ray absorptiometry). Overweight should be diagnosed in these cases only if adiposity is $\geq 35\%$ in women or $\geq 25\%$ in men.

its related diseases and complications among individuals with weight gain.

Screening for excess adiposity

The rationale for disease screening has been outlined by the Wilson-Jungner criteria,³² which may be applied to excess adiposity (obesity) (table 2). Despite advocacy for obesity screening,^{33–35} no prospective studies or randomized trials have examined the effect of screening for excess adiposity on outcomes. A retrospective evaluation of a national screening program among Japanese adults with central adiposity found that identified individuals who received counseling on healthy lifestyle had small improvements in BMI, blood pressure, and hemoglobin A_{1c} (A1C).³⁶ Given that individuals identified as having

obesity by a healthcare professional are more likely to be interested in treatment,^{37,38} increased screening for excess adiposity is important for diagnosis and management.

BMI has been popularized for screening due to its ease of implementation in clinical settings, as measuring weight and height are low-cost assessments that are already routinely integrated into clinical care workflows and EHRs. BMI is calculated using weight in kilograms divided by the square of height in meters (or weight in pounds divided by the square of height in inches and then multiplied by 703), and ideally both weight and height should be measured rather than self-reported.³⁹ healthcare professionals should use race- and ethnicity-specific BMI thresholds in screening for excess adiposity (table 1),^{40–41} as people with Asian backgrounds have

Table 2 Application of the Wilson-Jungner criteria to support screening for excess adiposity (obesity)

Criteria*	Evidence to support obesity screening
The condition should be an important health problem.	► Doubling of obesity prevalence has occurred in >70 countries and continually increased in others between 1980 and 2025²⁹⁵ ► Consistent association between obesity and all-cause mortality^{296–297} ► Obesity is a greater contributor to disability-adjusted life-years and death than undernutrition in >200 countries²⁹⁸ ► Higher healthcare costs are associated with excess body weight across a broad range of ages and BMI levels²⁹⁹
There should be a recognizable latent or early symptomatic stage.	► Risks to health may begin in the overweight state,²⁹⁷ which is identifiable using BMI¹³ ► Overweight (BMI 25–29.9 kg/m²) corresponds to 20–25% body fat in men and 32%–38% in women, which established the frequently cited thresholds of excess adiposity of >25% in men and >35% in women^{43–44}
The natural history of the condition, including development from latent to declared disease, should be adequately understood.	► Natural history of obesity and its trajectories over time have been described³⁰⁰ ► Expert consensus around preclinical and clinical disease¹⁵
There should be a suitable test or examination.	► BMI is closely correlated with excess adiposity and health risk⁶ ► WHO established BMI thresholds for the classification in 1995¹³
The test should be acceptable to the population.	► Diagnosis of obesity by a physician has been associated with increased interest in treatment and weight loss attempts^{37–38} ► Individuals accept being weighed as part of medical care, but some may refuse³⁰¹
There should be accepted treatment for individuals with recognized disease.	► Multiple U.S. clinical practice guidelines have outlined the treatment of obesity since 1998^{33–35–302}
Facilities for diagnosis and treatment should be available.	► Obesity can be diagnosed and treated in primary care^{303–304} ► healthcare professionals with competency in obesity medicine are in every U.S. state, and access is increasing over time^{305–306}
There should be an agreed policy on whom to treat.	► Multiple U.S. clinical practice guidelines have outlined the treatment of obesity since 1998^{33–35–302}
The cost of case-finding should be economically balanced in relation to possible expenditure on medical care as a whole.	► Screening for and primary care treatment of obesity may be cost-effective^{303–304}
*Adapted from the Wilson-Jungner criteria. ³²	

Table 1 Criteria to screen for excess adiposity and diagnose overweight and obesity in nonpregnant adults

Condition	Criteria for people with non-Asian background	Criteria for people with Asian background*
Excess adiposity	BMI ≥ 25 kg/m ²	BMI ≥ 23 kg/m ²
Overweight	BMI 25–29.9 kg/m ² with WHtR < 0.5 or BMI 25–29.9 kg/m ² with WC < 88 cm in women; BMI 25–29.9 kg/m ² with WC < 102 cm in men	BMI 23–27.4 kg/m ² with WHtR < 0.5 or BMI 23–27.4 kg/m ² with WC < 80 cm in women; BMI 23–27.4 kg/m ² with WC < 90 cm in men
Obesity	BMI ≥ 30 kg/m ² or BMI 25–29.9 kg/m ² with WHtR ≥ 0.5 or BMI 25–29.9 kg/m ² with WC ≥ 88 cm in women; BMI 25–29.9 kg/m ² with WC ≥ 102 cm in men	BMI ≥ 27.5 kg/m ² or BMI 23–27.4 kg/m ² with WHtR ≥ 0.5 or BMI 23–27.4 kg/m ² with WC ≥ 80 cm in women; BMI 23–27.4 kg/m ² with WC ≥ 90 cm in men

Elevated WC in women with a non-Asian background is ≥ 35 inches and in men with a non-Asian background is ≥ 40 inches. Elevated WC in women with an Asian background is ≥ 31.5 inches and in men with an Asian background is ≥ 35.5 inches.

*The BMI and WC thresholds identified for people with Asian backgrounds represent general targets, and healthcare professionals should be aware that specific values may exist for certain Asian countries that differ from the values listed above.^{40 41 55} Asian background includes Asia (eg, China, Japan, Korea) and the South Asian subcontinent (eg, India, Pakistan, Bangladesh). Clinicians should be aware of the evidence gap regarding individuals who identify as having mixed race or ethnicity. At this time, clinicians should use the background from which the individual identifies.

WC, waist circumference; WHtR, waist-to-height ratio.

increased visceral adiposity compared with their peers.⁴² BMI in the overweight range (25–29.9 kg/m²) corresponds to 20–25% body fat in men and 32–38% in women, which has laid the foundation for the frequently cited definition of excess adiposity of $> 25\%$ in men and $> 35\%$ in women.^{43 44} BMI strives to identify excess adiposity that may impair health, and screening should be done at least annually or opportunistically if the individual infrequently visits the healthcare setting (eg, urgent visit). Without screening, many adults could be unaware of their health risks and the potential need to seek treatment.^{45 46} For example, a cross-sectional study in primary care found that $> 80\%$ of individuals did not know their BMI or the BMI thresholds for when treatment is generally recommended.⁴⁵ Lack of recognition has been noted to be particularly common in men, racial and ethnic minorities, and individuals with low socioeconomic status.⁴⁷ Some racial and ethnic minorities also may not have a conceptual meaning of BMI in their language.⁴⁸

As with any assessment, BMI has limitations. BMI does not directly evaluate or assess body composition or body fat distribution—it is an indirect assessment of excess adiposity. Several systematic reviews and meta-analyses have described its sensitivity and specificity as well as performance relative to other anthropometric assessments.^{49–51} For example, a meta-analysis of 25 studies found that BMI had a pooled sensitivity (true positive rate) for identifying excess adiposity of 50% (95% CI 43 to 57%) and a pooled specificity (true negative rate) of 90% (95% CI 86 to 94%).⁵¹ Another systematic review found that BMI was highly correlated with waist circumference (WC),⁴⁹ and WC is correlated with central adiposity on abdominal imaging.⁵² CT and MRI can accurately assess body composition and body fat distribution, including distinguishing between subcutaneous and

visceral adipose tissue.⁵³ While these imaging modalities may be considered gold standards in evaluating adiposity, their use has been primarily limited to research studies due to practicality and costs. In clinical settings, body composition may be assessed using dual X-ray absorptiometry (DEXA) or bioelectrical impedance (BIA), although these techniques also have limitations.⁵³ Until advancements in design and access to assessments of body composition and body fat distribution occur, BMI remains a validated screening measure that is easily implemented in clinical settings.

DIAGNOSING OBESITY

Recommendations

3.3a Diagnose obesity in adults with a non-Asian background when excess adiposity is identified via any of the following criteria: BMI ≥ 30 kg/m² **B**; BMI ≥ 25 kg/m² and waist-to-height ratio ≥ 0.5 **B**; BMI ≥ 25 kg/m² and waist circumference ≥ 88 cm in women or ≥ 102 cm in men **B**.

3.3b Diagnose obesity in adults with an Asian background when excess adiposity is identified via any of the following criteria: BMI ≥ 27.5 kg/m² **B**; BMI ≥ 23 kg/m² and waist-to-height ratio ≥ 0.5 **B**; BMI ≥ 23 kg/m² and waist circumference ≥ 80 cm in women or ≥ 90 cm in men **B**.

3.3c Diagnose overweight in adults with a non-Asian background when excess adiposity is present without central adiposity via any of the following criteria: BMI 25–29.9 kg/m² and waist-to-height ratio < 0.5 **B**; BMI 25–29.9 kg/m² and waist circumference < 88 cm in women or < 102 cm in men **B**.

3.3d Diagnose overweight in adults with an Asian background when excess adiposity is present without central adiposity via any of the following criteria: BMI 23–27.4 kg/m² and waist-to-height ratio < 0.5 **B**; BMI 23–27.4 kg/m² and waist circumference < 80 cm in women or < 90 cm in men **B**.

While BMI alone is recommended for screening for excess adiposity, the diagnosis of overweight and obesity may require additional anthropometric assessments (table 1). Studies have found that $\text{BMI} \geq 30 \text{ kg/m}^2$ has a high specificity (few false positives) for identifying adiposity of $>25\%$ in men and $>35\%$ in women but low sensitivity.^{44 51} A 2020 meta-analysis reported that the sensitivity and specificity of BMI to detect obesity was 51.4% (95% CI 38.5 to 64.2%) and 95.4% (95% CI 90.7 to 97.8%), respectively, for women (16 studies) and 49.6% (95% CI 34.8 to 64.5%) and 97.3% (95% CI 92.1 to 99.1%), respectively, for men (12 studies).⁵⁰ While healthcare professionals can have confidence that an individual with $\text{BMI} \geq 30 \text{ kg/m}^2$ has obesity, relying on BMI alone for diagnosis may miss individuals with excess adiposity that increases their risk of morbidity and mortality. Therefore, individuals with $\text{BMI} < 30 \text{ kg/m}^2$ should have additional WC-based assessments (table 1).

Underdiagnosis (false negativity) is a great concern, with potentially 25% of men and 48% of women being misdiagnosed using BMI.⁵⁴ healthcare professionals should be aware that BMI is known to underestimate obesity in certain populations, particularly people from Asian backgrounds and older adults.^{14 15} Individuals with Asian backgrounds have elevated risk of obesity-related diseases and death at lower BMI values,^{41 55 56} which may be driven by the accumulation of visceral adipose tissue.⁴² Therefore, race- and ethnicity-specific BMI thresholds ($\geq 27.5 \text{ kg/m}^2$ for a person with an Asian background) should be used (table 1) to reduce underdiagnosis.^{40 57} Loss of muscle mass in older adults reduces the accuracy of BMI, which may lead to underdiagnosis of obesity.⁵⁸ A systematic review concluded that correlations between adiposity and BMI decrease with age; however, BMI still identified elevated risk for cardiovascular disease, some cancers, and impaired mobility in older adults.¹⁴

To reduce underdiagnosis, healthcare professionals should diagnose obesity for any individual with $\text{BMI} 25\text{--}29.9 \text{ kg/m}^2$ (or $\text{BMI} 23\text{--}27.4 \text{ kg/m}^2$ for a person with an Asian background) who meets race- and ethnicity-specific criteria for elevated waist-to-height ratio (WHtR) or WC, as these individuals have central adiposity that increases their risk of morbidity and mortality.^{59–63} WHtR is calculated by dividing measured WC (cm) by measured height (cm). A meta-analysis of 10 studies found that WHtR was the best discriminator for diabetes, hypertension, and dyslipidemia risk in both sexes relative to BMI and WC.⁵⁹ Another systematic review found that WHtR predicts risk of diabetes and cardiovascular disease among older adults as well.⁶⁴ A 2020 meta-analysis reported that the sensitivity and specificity of WC to detect obesity were 62.4% (95% CI 49.2 to 73.9%) and 88.1% (95% CI 77.0 to 94.2%), respectively, for women (eight studies) and 57.0% (95% CI 32.2 to 79.0%) and 94.8% (95% CI 85.8 to 98.2%), respectively, for men (six studies).⁵⁰ Another systematic review and meta-analysis of 31 studies found that WHtR and WC had significantly greater discriminatory accuracy for assessing cardiometabolic risk than

BMI.⁶⁵ While WC may be measured in any adult with $\text{BMI} \geq 25 \text{ kg/m}^2$ (or $\text{BMI} \geq 23 \text{ kg/m}^2$ in people with an Asian background), its addition is most critical among adults with $\text{BMI} 25\text{--}29.9 \text{ kg/m}^2$ (or $\text{BMI} 23\text{--}27.4 \text{ kg/m}^2$ for a person from an Asian background). Focusing on WC measurement only in these groups may ease implementation into the clinical workflow as well as avoid healthcare professionals' discomfort in obtaining the WC measurement.^{66 67} Clinicians should diagnose overweight when excess adiposity is present without central adiposity (table 1). healthcare professionals may also use other body composition assessments (eg, DEXA, BIA), if available, to confirm excess adiposity and reduce underdiagnosis.

While overdiagnosis of obesity (false positivity) can occur among individuals with high muscle or bone density, it is generally uncommon when using BMI,^{50 51} particularly among women. For adults in whom elevated BMI may be due to excess muscle mass, healthcare professionals should confirm excess adiposity via WHtR, WC, or other body composition assessment (eg, DEXA, BIA) to diagnose obesity. BMI alone in this scenario may misclassify risk for morbidity and mortality (ie, inaccurately indicates elevated risk). healthcare professionals should rely on history and physical examination to determine whether they suspect high muscle or bone density may be present.

It is critical to obtain valid and accurate anthropometric data, including measured weight, height, and WC (when indicated), when diagnosing obesity, as an inaccurate diagnosis may have major effects for individuals and the healthcare system. Clinical practices need to ensure that staff measure weight and height at least once a year to accurately calculate BMI, as self-reported values may be inaccurate. A systematic review of 62 studies found that self-reported weight was underestimated by adults, and height tended to be overestimated.³⁹ While BMI is a simple pragmatic measure that is routinely used in clinical practice, measuring WC can present challenges in the clinical setting. Studies have found that healthcare professionals report discomfort in obtaining WC,^{66 67} as they worry that the measurement might embarrass individuals with obesity. However, individuals with obesity do not necessarily report this concern as long as the procedure was explained to them and its rationale was provided.⁶⁶

Figure 2 outlines best practices for accurately measuring WC in clinical settings. Ideally, clinicians and appropriate staff should be trained in WC measurement technique, and clinical practices should develop protocols to implement this procedure within their clinical workflows. WC can be measured at different locations; therefore, it is important for practices to follow a measurement protocol to ensure consistency and accuracy for longitudinal assessment. A systematic review of 11 studies concluded that WC measured at all locations strongly correlated with BMI⁶⁸, and another review found that the anatomical location used in the

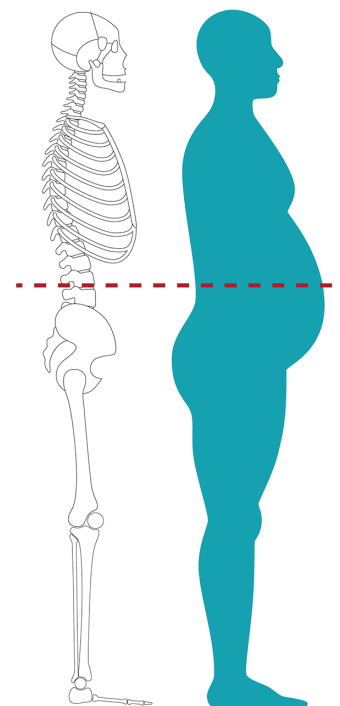
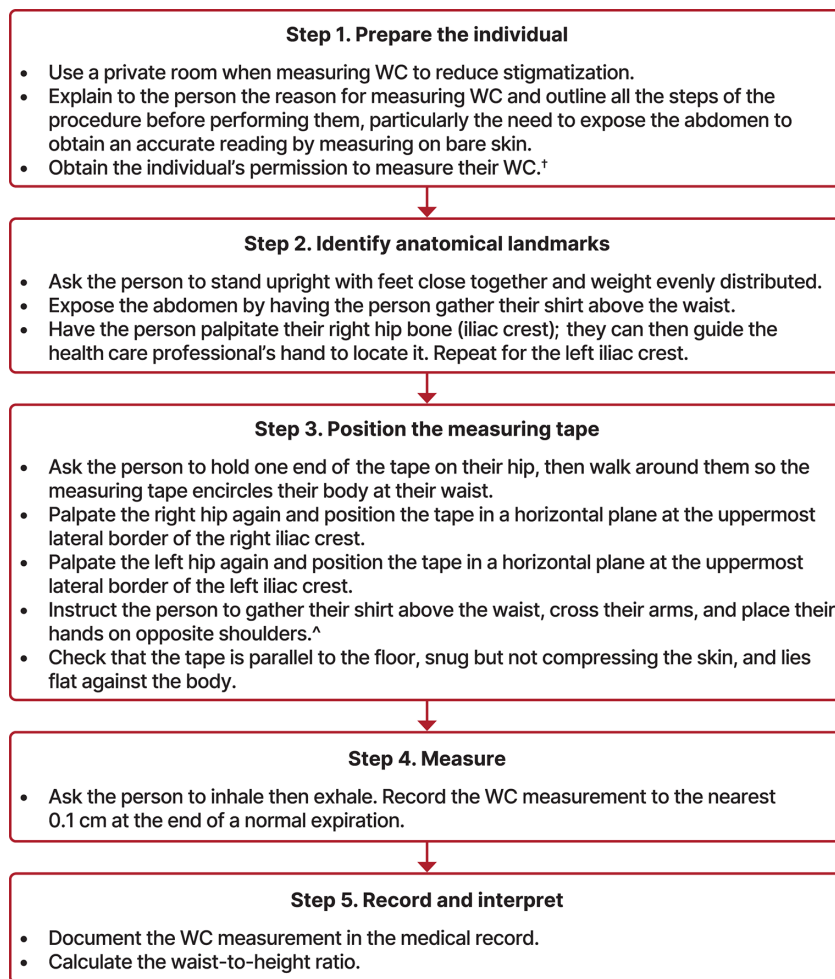


Figure 2 Best practices for measuring waist circumference (WC) in adults. The steps outlined reflect best practices for waist circumference measurement. Ideally, all clinicians and staff should be trained on how to measure waist circumference, and practices should develop protocols to implement this procedure within their clinical workflows. Clinical practices may need to determine the best protocol for their setting given available resources and time. While waist circumference may be measured in any individual, healthcare professionals may prioritize measuring waist circumference among individuals where BMI alone is inadequate to determine a diagnosis of obesity. For people with a non-Asian background, waist circumference should be measured if the BMI is between 25 and 29.9 kg/m² to distinguish between a diagnosis of overweight and obesity. For people with an Asian background, waist circumference should be measured if the BMI is between 23 and 27.5 kg/m² to distinguish between a diagnosis of overweight and obesity. Healthcare professionals may measure waist circumference to aid risk stratification regardless of BMI. [†]If possible, avoid measurement immediately after a meal or if abdominal bloating or distention is present. [^]It may help to tell them to think of giving themselves a hug. If necessary, lower the pants and underclothing to slightly below the waist.

WC measurement protocol had no substantial influence on its association with mortality, diabetes, or cardiovascular disease.⁶⁹ WC is often measured immediately above the iliac crest in clinical trials, and WC measured at the midpoint between the lowest rib and the iliac crest may be used in clinical practice. Of note, WC at the midpoint between the lowest rib and iliac crest may be the most accurate measure of visceral fat and percent body fat in both sexes as well as the most sensitive measure for visceral fat changes over time.⁶⁸ Ultimately, either WC measurement location may be used, and clinical practices should emphasize consistency in using the WC measurement protocol selected.

EVALUATING AND STAGING OBESITY

Recommendations

3.4a After diagnosing overweight or obesity, perform a comprehensive evaluation at the initial visit to obtain a weight history **B**, identify factors contributing to weight gain **C**, and assess overall health status **C**; assess current and previous treatments for obesity, including treatment barriers **C**; evaluate for obesity-related diseases and complications **B**; assess for other concurrent medical or psychological conditions **B**; identify care partners and support systems **A**; and assess social determinants of health and structural barriers to optimal health and healthcare **B**.

3.4b Using information from the comprehensive evaluation, perform risk stratification and develop a management plan: identify regional distribution of excess adiposity to risk stratify for obesity-related diseases and complications **B**; consider using the Edmonton Obesity Staging System to comprehensively stratify risk and disease prognosis in people diagnosed with obesity **B**; partner with the person with obesity in formulating a management plan, including goals of care **A**; and develop a plan for continuing care **B**.

After diagnosing overweight or obesity, an initial comprehensive evaluation should be performed that includes history and physical examination as well as laboratory and diagnostic testing (table 3). While some components of this history and physical examination will be familiar to most clinicians, other components may be new to many healthcare professionals given the known education and training gaps related to obesity.⁷⁰ Therefore, table 4 provides detailed information on these unique history-taking elements related to obesity, including the rationale for obtaining the information, sample questions, tips for real-world implementation, and how the information may affect clinicians' actions or decisions. The history outlined in table 3 aims to provide a holistic view of the individual, assessing various biopsychosocial factors over the life course for their independent, cumulative, and interactive influence on their health.⁷¹ This information, along with the individual's perspective, aids in risk assessment and treatment decision-making, including likely treatment outcomes and response.^{72–74}

While table 3 provides a comprehensive list, healthcare professionals may need to prioritize components of the clinical evaluation given available resources and time in their clinical practice. Engaging other healthcare team members can also support comprehensive obesity care (eg, registered dietitian nutritionists, behavioral health professionals),⁷⁵ as can referral to healthcare professionals with competency in obesity medicine.^{76 77} In addition, the management plan may benefit from engaging other specialists with expertise relevant to individuals' obesity-related diseases and complications (eg, endocrinology, cardiology, hepatology). People with obesity have identified the importance of being referred to specialists who treat them with care and respect⁷⁸; therefore, clinicians should consider this factor when developing their network of care partners. Finally, care partners may be outside the traditional healthcare system (eg, community-based programs). Consider establishing

Table 3 Components of a comprehensive clinical evaluation for overweight and obesity at initial, follow-up, and annual visits

Component	Visit		
	Initial	Follow-up	Annual
Medical, psychosocial, and family history			
Weight history			
► Body weight trajectory and weight change pattern over the life course	✓		
► Adult body weight maximum and minimum	✓		
► Age at onset	✓		
► Family history of obesity in first-degree relative	✓		
► Previous and current obesity treatment plans and response	✓	✓	✓
► Identify prior experiences of weight bias or stigma	✓		
Medications and supplements			
► Current medication plan, including active and inactive medications	✓	✓	✓
► Complementary and alternative medication and supplement use, including compounded medications	✓	✓	✓
► Use of weight-promoting medications	✓	✓	✓
► Medication-taking behavior, including rationing of medications	✓	✓	✓
► Medication intolerance, adverse effects, and allergies	✓	✓	✓
Surgical and procedure history			
► Metabolic-bariatric surgery, metabolic-bariatric endoscopic procedure, or other procedure for weight reduction	✓		✓
► Lifestyle behavioral factors			

Continued

Table 3 Continued

Component	Visit		
	Initial	Follow-up	Annual
► Personal goals and readiness to change	✓	✓	✓
► Eating patterns, food intake, and physical activity, including personal and cultural preferences related to these factors	✓	✓	✓
► Stress and coping	✓	✓	✓
► Sleep	✓	✓	✓
► Technology use (eg, health apps, tracking devices)	✓	✓	✓
► Visits to interprofessional healthcare team members (eg, registered dietitian, nutritionist, psychologist, physical therapist, community-based programs)	✓	✓	✓
Social factors			
► Assess daily routine and environment, including work or school schedules and ability to engage in obesity treatment plan	✓	✓	✓
► Inquire about insurance status, including coverage of obesity treatments	✓		✓
► Assess tobacco, alcohol, cannabis, and substance use	✓		✓
► Identify existing social supports	✓		✓
► Identify social determinants of health (eg, food security, housing stability, transportation access, financial security, community safety)	✓		✓
► Identify prior experiences of emotional or physical trauma	✓		
History (or symptoms) of obesity-related diseases and complications			

Continued

Table 3 Continued

Component	Visit		
	Initial	Follow-up	Annual
► Pre-diabetes or type two diabetes	✓		✓
► Elevated blood pressure or hypertension	✓		✓
► Abnormal lipids or dyslipidemia	✓		✓
► Atherosclerotic cardiovascular disease	✓		✓
► Heart failure with preserved ejection fraction	✓		✓
► Metabolic dysfunction–associated steatotic liver disease or metabolic dysfunction–associated steatohepatitis	✓		✓
► Obstructive sleep apnea; screen for obstructive sleep apnea (eg, STOP-Bang questionnaire) ³⁰⁷	✓		✓
► Knee osteoarthritis	✓		✓
► Other obesity-related conditions (eg, atrial fibrillation, PCOS, asthma, urinary incontinence, idiopathic intracranial hypertension, lymphedema, gastroesophageal reflux disease)	✓		✓
► Visits to specialists	✓		✓
► Family history of obesity-related diseases or complications in first-degree relative	✓		✓
► Assess functional status, activities of daily living, and disability	✓		✓
► Self-reported health status	✓		✓
History of mental health conditions associated with obesity			

Continued

Table 3 Continued

Component	Visit		
	Initial	Follow-up	Annual
► Disordered eating; screen for disordered eating (eg, Questionnaire on Eating and Weight Patterns ³⁰⁸ or brief Eating Disorder Examination Questionnaire (EDE-Q7-Brief)) ³⁰⁹	✓		✓
► Depression; screen for depressive symptoms (eg, PHQ-2 or PHQ-9 questionnaire) ³¹⁰	✓		✓
► Anxiety; screen for anxiety symptoms (eg, GAD-2 or GAD-7) ³¹¹	✓		✓
History of other concurrent medical or psychological conditions			
► Other medical conditions not necessarily related to obesity (eg, pancreatitis, glaucoma)	✓		✓
► Other mental health conditions or symptoms (eg, schizophrenia, ADHD, suicidal ideation)	✓		✓
Reproductive status for people of childbearing potential			
► Menstrual status	✓		✓
► Contraception strategy	✓	✓	✓
► Current lactation status	✓		✓
► Upcoming plans for pregnancy	✓	✓	✓
Physical examination			
Anthropometrics			
► Measure height* and weight; calculate BMI	✓	✓	✓
► Measure WC if indicated;† calculate WHtR	✓	✓	✓
Vital signs			
► Measure blood pressure using appropriately sized cuff and procedures	✓	✓	✓

Continued

Table 3 Continued

Component	Visit		
	Initial	Follow-up	Annual
► Measure heart rate	✓	✓	✓
► Physical examination			
► Cardiac exam	✓		✓
► Pulmonary exam	✓		✓
► Dermatologic exam (eg, acanthosis nigricans, intertrigo, acne, hirsutism, male-pattern hair loss, hyperpigmented abdominal striae)	✓		✓
► Throat and neck exam (eg, crowded oropharynx, neck circumference, palpate thyroid)	✓		✓
► Extremities exam (eg, lymphedema, disproportionate and symmetric increase of adipose tissue in the legs with sparing of the feet that is tender to palpation, suggestive of lipedema)	✓		
Laboratory evaluation and diagnostic testing			
Identify or monitor obesity-related diseases or complications			
► A1C	✓	✓	✓
► Lipid profile, including total, LDL, and HDL cholesterol and triglycerides	✓		✓
► Echocardiogram if indicated	✓		✓
► Aspartate aminotransferase, alanine aminotransferase, and platelet count; calculate FIB-4 ³¹²	✓		✓
► Vibration-controlled transient elastography if indicated	✓		
► Sleep study if indicated	✓		
► Knee X-ray if indicated	✓		
Identify secondary causes of weight gain			

Continued

Table 3 Continued

Component	Visit		
	Initial	Follow-up	Annual
► Thyroid-stimulating hormone in people with symptoms of hypothyroidism if indicated	✓		
► Salivary cortisol in people with symptoms of hypercortisolemia if indicated	✓		
► Total testosterone in people with symptoms of PCOS if indicated	✓		
Other factors influencing treatment plan			
► Serum creatinine and estimated glomerular filtration rate	✓		✓
► Urine pregnancy test in people of childbearing potential if indicated‡	✓		
► ECG if indicated	✓		
► Vitamin and mineral status if indicated (eg, 25-OH vitamin D, vitamin B12, iron, ferritin)	✓		✓
*Height should be measured at the initial visit and annually thereafter. †WC should be measured in adults with a non-Asian background when BMI is between 25 and 29.9 kg/m² and in adults with an Asian background when BMI is between 23 and 27.5 kg/m². ‡Urine pregnancy test should be checked initially if appropriate for the treatment plan and as needed thereafter. ADHD, attention-deficit/hyperactivity disorder; ECG, electrocardiogram; FIB-4, fibrosis-4 score; GAD, generalized anxiety disorder; PCOS, polycystic ovarian syndrome; PHQ, Patient Health Questionnaire; WC, waist circumference; WHtR, waist-to-height ratio.			

trusted partnerships with local organizations to facilitate referrals, as individuals may find it challenging to identify evidence-based programs on their own as information presented online may be inadequate.⁷⁹

Throughout the initial evaluation, healthcare professionals should be aware of their own potential weight bias, weight bias among clinic staff, and the stigmatization that may occur due to the clinic's physical environment or protocols. The article "Weight Stigma and Bias: Standards of Care in Overweight and Obesity—2025"¹⁷ provides strategies on how to ensure approaches and environments are nonstigmatizing. Additional details regarding assessment of prior experiences of weight bias and stigma are described in "Weight History," below.

The subsections that follow are organized in order as presented in [table 3](#) with the goal of providing additional information to healthcare professionals on each component, including evidence supporting its inclusion as well as using the information to guide the diagnostic evaluation and treatment plan.

Weight history

Obtaining a weight history and identifying contributing factors to weight gain are paramount in understanding individuals' determinants of obesity ([table 4](#)), which may inform risk stratification, diagnostic evaluation, and treatment approach.⁸⁰ Weight history also offers an opportunity to build or strengthen the relationship between the individual and healthcare professional, as obtaining this information with empathy may help build rapport and trust and support improved health outcomes.^{81–84} Individuals with obesity want to be treated with care and respect and ideally prefer a clinician who listens to them.⁷⁸

Asking individuals to recall their body weight trajectory and weight change pattern helps the healthcare professional to understand the individual's journey over their life course as well as appreciate the life events and other factors that contribute to weight gain and weight loss. This information may also help to identify individuals who should be evaluated for secondary causes of weight gain (eg, hypothyroidism, hypercortisolemia).² Of note, not all individuals with obesity should be screened for these causes—testing should be focused on those with other symptoms of these conditions. These life course weight trajectories may be identified by asking the individual to graph their weight using a "life events weight graph" ([figure 3](#))² or viewing a weight graph in the EHR.

Maximum nonpregnant body weight, defined as the highest BMI during adulthood, is another historical factor predictive of disease risk in longitudinal studies.^{85–86} For example, an analysis of 225 072 adults found that participants with maximum BMI in the overweight, obesity class 1 (BMI 30–34.9 kg/m²) and obesity classes 2 and 3 (BMI ≥35 kg/m²) groups had significantly and progressively increased risk for all-cause mortality as well as cardiovascular disease, cancer, and respiratory disease mortality compared with those who maintained their weight in the normal range long-term.⁸⁵ Therefore, adult body weight maximum can inform risk assessment. Adult body weight minimum can help set realistic treatment expectations, as returning to their lowest weight as an adult is not the primary treatment goal. Instead, treatment goals should be set collaboratively between the individual and clinician that focus on achieving clinically meaningful health and quality-of-life benefits, such as preventing or improving obesity-related diseases and complications.

Age at onset of obesity is a key characteristic to evaluate, as it aids healthcare professionals in understanding if the individual has been living with obesity for most of their life or if they started to experience weight gain in recent years. Longitudinal studies show that

Table 4 Information on history elements unique to a comprehensive clinical evaluation for overweight and obesity

Element	Rationale	Sample questions	Tips and tools	Actions
Weight history				
Body weight trajectory and weight change pattern ^{2 27 88 313–316}	► Understand the individual's journey by appreciating the multidimensional factors that contributed to weight gain ► Employ empathy and understanding to build rapport	► How has your weight changed over the course of your life? ► What events contributed to your weight gain? ► What events contributed to any prior weight losses?	Pre-visit or visit questionnaire can facilitate data collection Have the individual complete a “life events weight graph” before or during visit (see online supplemental file 3) Review questionnaire or obtain history during visit Employ empathy and acknowledgment Review weight graph in the EHR	Establish partnership between healthcare professional and individual
Adult body weight maximum and minimum ^{85 86 317 318}	► Maximum BMI is associated with increased risk for obesity-related complications and mortality	► What was your highest body weight as an adult? ► What was your lowest body weight as an adult? ► At what weight did you feel your best? ► What is hard to do at your current weight?		Inform risk assessment Set realistic expectations
Age at onset ^{80 319}	► Early onset associated with increased risk for obesity-related complications ► History of severe childhood-onset obesity may warrant evaluation for genetic obesity syndromes⁴	► At what age did a healthcare professional first state that they were concerned about your weight? ► At what age were you first concerned about your weight? ► Do you recall any life events or other contributing factors that occurred at this time?		Inform risk assessment and prognosis Inform diagnostic evaluation
Family history of obesity ^{97–99 320–322}	► Genetic predisposition; may influence increased risk of obesity	► Do any other family members have excess weight?		

Continued

Table 4 Continued

Element	Rationale	Sample questions	Tips and tools	Actions
Obesity treatment plan and response	► Understand the individual's perspectives, preferences and considerations for a treatment plan	► What have you done or tried in the past to manage your weight? ► If so, what strategy has been the most successful for you in managing your weight? ► What methods, if any, are you currently using to manage your weight? ► Have you ever worked with a healthcare professional to manage your weight?		Inform treatment plan
Weight bias and stigma ^{323 324}	► Understand the individual's lived experience due to their weight ► Build trust	► Have you ever been teased because of your weight? ► Have you ever been treated unfairly because of your weight? ► Have you ever been discriminated against because of your weight? ► If so, how have these experiences affected your mental and physical health?	If individual reports weight-stigmatizing experiences, evaluate for internalized weight bias	Tailor communication strategy and treatment plan
Lifestyle and behavioral factors				

Continued

Table 4 Continued

Element	Rationale	Sample questions	Tips and tools	Actions
Personal goals and readiness to change ^{110–114}	► Understand the individual's motivation and timing to consider treatment ► Establish readiness, importance and confidence in related to the treatment plan	► What factors make you ready to take action toward weight management right now? ► On a scale of 1–10, how confident are you in your ability to make changes to manage your weight (eg, changing eating habits or food intake, increasing physical activity, taking medication)? ► On this scale, why is your score not lower? Why is it not higher? ► On a scale of 1–10, how important is it to you to make changes to manage your weight (eg, changing eating habits or food intake, increasing physical activity, taking medication)? ► On this scale, why is your score not lower? Why is it not higher?	Use brief motivational interviewing technique of a readiness ruler (scale of 1–10 readiness for, importance of, or confidence in change) Compare ratings of importance and confidence	Engage in collaborative goal setting Identify barriers and facilitators of change

Continued

Table 4 Continued

Element	Rationale	Sample questions	Tips and tools	Actions
Eating patterns and food intake	► Understand the individual's eating habits, usual food intake, meal planning ► Understand the individual's preferences and cultural influences regarding food ► Diet history can be obtained by using several methods: – Typical day recall – 24 hours food recall – Food frequency – Food diary	Use typical day recall approach: ► What is a typical day like for you? ► What time do you wake up? ► What time do you first eat or drink something? ► What do you have? When is the next time you eat or drink something? (Continue to ask this question until you get to the end of the day.) ► What time do you go to bed? ► Do you ever eat or drink something after you have gone to bed? ► How does your cultural background influence your eating habits?	Previsit or visit questionnaire can facilitate collection of diet history Consider using a questionnaire such as Rapid Eating Assessment for Participants–Short Version (REAP-S)^{117 118}	Identify abnormal eating habits; refer for mental health evaluation Inform nutrition plan

Continued

Table 4 Continued

Element	Rationale	Sample questions	Tips and tools	Actions
Physical activity	► Understand the individual's level of physical activity and sedentary behavior ► Understand the individual's preferences and cultural influences regarding physical activity	► On average, how many days per week do you engage in moderate physical activities like taking a brisk walk? For how many minutes do you do this activity? ► On average, how many days per week do you engage in strenuous physical activities like going for a run? For how many minutes do you do this activity? ► How much do you enjoy physical activity? ► On average, how many hours per day do you spending sitting for work or during leisure time? ► How does your cultural background influence your physical activity habits?	Integrate “exercise as a vital sign” into clinic protocols ^{119 120} Consider using a questionnaire such as Physical Activity Readiness Questionnaire for Everyone (PAR-Q+) ³²⁵	Identify physical activity limitations; refer to physical therapy as appropriate Inform physical activity plan
Stress ^{122–124}	► Understand current stressors that may be triggers for unhealthy behaviors and challenge the treatment plan	► What are the current sources of stress in your life?	Consider using a questionnaire such as Perceived Stress Scale (PSS) ^{326–328}	Identify need for mental health evaluation Set stress management goals
Sleep ^{125–127}	► Insufficient sleep hours (<6 hour) associated with increased obesity ► Night shift workers have increased risk of obesity	► How many hours of actual sleep do you get at night? ► Do you have difficulty falling asleep? Do you have difficulty staying asleep? ► Do you experience sleepiness or fatigue during the day? ► Do you work night shift?	Consider using a questionnaire such as: ► Pittsburgh Sleep Quality Index¹²⁹ ► Epworth Sleepiness Scale³²⁹	Identify need for evaluation with behavioral sleep medicine professional Set sleep goals

Continued

Table 4 Continued

Element	Rationale	Sample questions	Tips and tools	Actions
Technology ^{130 131 330}	▶ Assess familiarity with digital resources including smartphone apps and tracking devices (eg, home scale, smart watch)	▶ Have you used or are you familiar with any apps or online resources that support weight management? ▶ If so, have they been helpful to you in managing your weight? ▶ Do you have a scale at home?	EHR may be able to integrate some tracking data from apps or devices	Inform treatment plan
Social factors (select)				
Social support ¹³⁸	▶ Understand the social resources available to support or undermine the management plan	▶ What support do you have from family or friends to make changes in your daily routine?	Previsit or visit questionnaire can facilitate data collection	Identify need for referral to behavioral health professional or social work

Continued

Table 4 Continued

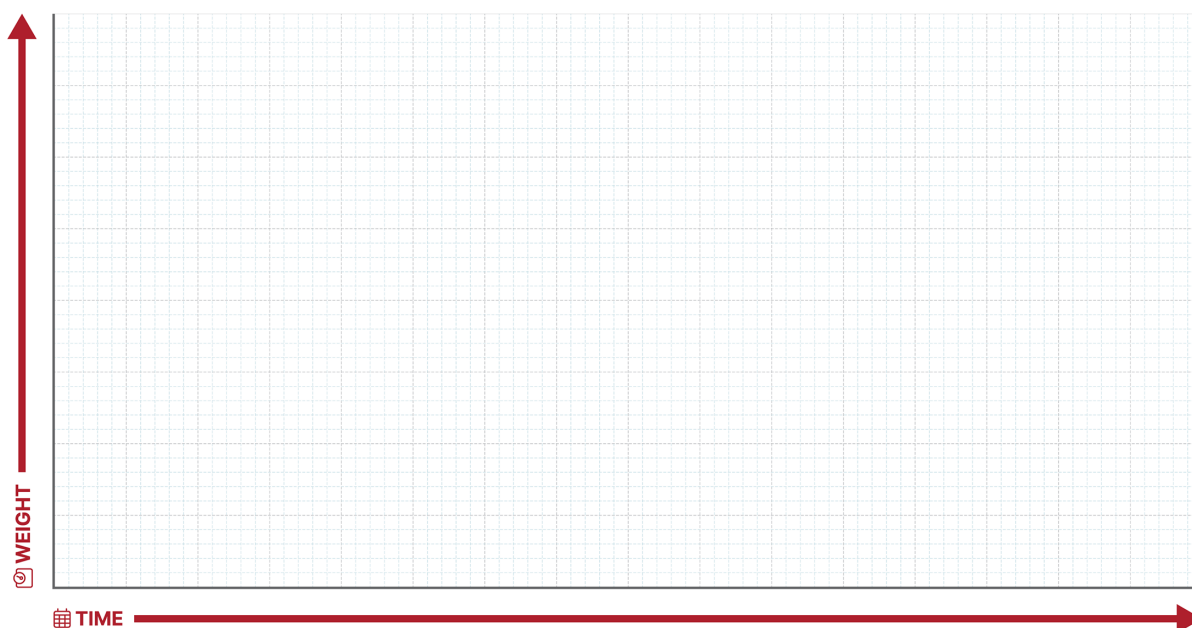
Element	Rationale	Sample questions	Tips and tools	Actions
Social determinants of health ^{149 152 153 331}	► Understand context and lived experience of the individual ► Identify social factors that may present barriers to engagement in management plan such as housing instability, food insecurity, access to safe and affordable resources for physical activity, or lack of transportation	► I want to ask you about your social and financial situation so we can determine if you need additional resources to support you on your weight management journey. Some of these questions may be a little sensitive, and if you do not feel comfortable answering that is okay. ► Could you describe your current living situation? ► Do you have resources (park, sidewalks, community centers) in your neighborhood to use for physical activity? ► Do you feel safe walking around in your neighborhood? ► Some people experience trouble paying for certain things they need to make it day-to-day. Have you ever or recently had that experience? ► Because people may sometimes have trouble paying for things like food, we can become worried about not having enough food to last. Have you	EHR may have tools available to evaluate social determinants of health. Consider using a questionnaire such as Accountable Health Communities Health-Related Social Needs screening tool ³³²	Identify need for referral to social work or community health worker

EHR, electronic health record.

development of obesity in childhood predicts future obesity in adulthood,⁸⁷ and weight gain in early adulthood through midlife is associated with increased risk of

cardiovascular disease,^{88 89} type two diabetes,⁹⁰ metabolic dysfunction-associated steatotic liver disease,^{91 92} some cancers,⁹³ and other major chronic diseases.²² Inherent

People's weight changes in different ways over the course of their lives. Some people may slowly gain weight upwards over time, while others may recall an event happening after which they gained weight quickly. Some people describe weight gain following some events and weight loss following other activities. **This graph can help tell the story of how your weight has changed over time.**



- **Please fill in life events or activities that you relate to changes in your weight.** For example, people may recall periods of weight gain due to pregnancy, a stressful job, death in the family, new medication, or physical injury, and people may identify periods of weight loss that occurred with lifestyle changes, participating in a commercial program, or taking a medication.
- **Take note of your pattern so that you and your health care professional can better understand your weight history together.** Your health care professional may also use this information to help determine an evaluation or treatment strategy that might work best for you.

Here are some example weight graphs that might help you make your own graph:

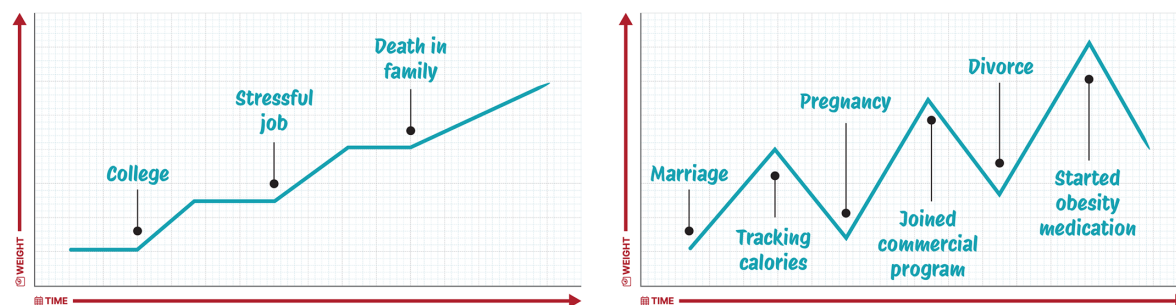


Figure 3 Sample life events weight graph. Shown is a sample life events weight graph that healthcare professionals may consider using as a tool when obtaining a weight history. This figure was adapted with permission from Kushner and Kushner.³³³

in the concept of early development of obesity is the effect of long-term exposure or “years lived with obesity.” An analysis of nearly 1.5million adults found that the relative risk of all-cause mortality was highest among individuals with the longest exposure to elevated weight.⁹⁴ In another longitudinal study of 20 746 participants, a dose-response relationship was observed between the duration of obesity and all risk factors for cardiovascular disease, particularly AIC.⁹⁵ Among individuals with a history of severe childhood-onset obesity (BMI≥99 th percentile),⁹⁶ healthcare professionals should consider referring for evaluation for rare genetic obesity syndromes.⁴

As part of the weight history, healthcare professionals should be aware of the presence of obesity among individuals’ first-degree relatives. Family history reflects the complex interplay of genetic susceptibility and shared environmental exposures. Prior research has shown that personal obesity and family history of obesity in first-degree relatives is highly correlated,⁹⁷ and this family history of obesity is also associated with significantly increased risk of obesity-related diseases and complications in the individual, including dyslipidemia, hypertension, and type two diabetes. While rare functional single-gene mutations associated with obesity have been

identified,⁹⁸ the heritability of obesity is most commonly polygenic, a cumulative effect of many common genetic variants. In fact, a genome-wide polygenic score has quantified the inherited susceptibility to obesity and severe obesity over the life course.⁹⁹ Research suggests that lifestyle behaviors (physical activity, sedentary behavior, diet, alcohol consumption, and sleep duration) may modify this polygenic risk of obesity.¹⁰⁰ Among individuals with high genetic risk, the HR for incident obesity was 2.16 (95% CI 1.59 to 2.94) among individuals with healthy lifestyles relative to 3.54 (95% CI 2.63 to 4.77) among individuals with less healthy lifestyles.¹⁰⁰ Finally, family history may be important in identifying individuals who may have subcutaneous adipose tissue disorders,³ given the heritability of some of these conditions. In particular, healthcare professionals should be aware of the clinical features of lipedema,¹⁰¹ which typically presents as symmetrical, bilateral enlargement of subcutaneous adipose tissue in the extremities, accompanied by pain or discomfort, as lipedema occurs more commonly than the other disorders.

The weight history should include prior and current treatments for obesity (table 4). For this component, the healthcare professional should ascertain the nature of the therapeutic intervention, how it was administered or supervised, the duration of treatment, and treatment response. Clinicians should inquire about the following interventions: self-directed approaches, supervised lifestyle management (eg, nutrition, physical activity, behavioral counseling), pharmacotherapy, supplements, and metabolic-bariatric surgical procedures or endoscopic procedures or devices (eg, Roux-en-Y gastric bypass, sleeve gastrectomy, endoscopic sleeve gastroplasty, intra-gastric balloon). It is also important to determine if the individual has seen a registered dietitian nutritionist or behavioral health professional or has attended a commercial or community-based program. This information can be used to help formulate a treatment plan based on experience, responsiveness, and self-efficacy (the individual's belief in their ability to carry out and succeed with the treatment).

Past experiences of weight bias and stigma may influence health status and treatment outcomes^{17 102}; therefore, the healthcare professional should be aware if this history is present. Table 4 includes three simple questions that healthcare professionals can ask to assess the individual's experience with weight stigma. If any prior weight stigmatization is identified, the healthcare professional should consider evaluation for internalized weight bias in the individual (eg, Weight Bias Internalization Scale¹⁰³, Weight Self-Stigma Questionnaire).¹⁰⁴ Internalized weight bias is characterized by self-derogation and negative weight stereotypes that individuals apply to themselves because of their body weight, which has strong associations with adverse mental health outcomes and may also negatively affect physical health.¹⁰⁵

Medications and supplements

In addition to typical components of a medication history (table 3), healthcare professionals should include an assessment of prior and current use of weight-promoting medications. In an analysis of 132 057 participants with overweight or obesity in the All of Us research program, 36% used at least one weight-promoting medication and approximately 20% used more than one weight-promoting medication.¹⁰⁶ In the Look AHEAD: Action for Health in Diabetes (Look AHEAD) trial, which tested the outcomes of an intensive lifestyle intervention among adults with overweight or obesity and type two diabetes, exposure to at least one weight-promoting medication significantly decreased the odds of achieving $\geq 5\%$ wt loss by 32% and achieving $\geq 10\%$ wt loss by 19%.¹⁰⁷ “Pharmacologic Treatment of Obesity in Adults: Standards of Care in Overweight and Obesity”³⁰ provides detailed information to aid healthcare professionals in identifying weight-promoting medications as well as non-weight-promoting alternatives that may be possible substitutes. Given their increasing use as well as safety and efficacy concerns, identifying complementary or alternative medication and supplement use, including compounded medications, is important (table 3).

Lifestyle and behavioral factors

A comprehensive evaluation includes assessing multiple lifestyle behaviors, as these factors may contribute to weight gain as well as affect an individual's ability to engage in and maintain treatment. Table 3 provides an overview of these factors, while table 4 provides detailed and pragmatic information related to these domains. When possible, an interprofessional team should be involved in the evaluation of lifestyle and behavioral factors, which include registered dietitian nutritionists, behavioral health professionals, and physical activity professionals. Other healthcare professionals who deliver lifestyle interventions may also be engaged, as they often have skills in assessing lifestyle and behavioral factors (eg, health coaches). A future section of the “Standards of Care in Overweight and Obesity” will provide additional recommendations regarding lifestyle assessment and treatment of obesity in adults.

Assessing an individual's personal goals helps the clinician understand that individual's motivation to consider treatment, which affects the collaborative treatment goals agreed on by the healthcare professional and the individual. A systematic review identified goal setting as an effective health behavior change tool among individuals with obesity.¹⁰⁸ Personal goals may also influence treatment outcomes. Within a community weight loss program, individuals motivated to seek treatment for health reasons were significantly less likely to drop out and had significantly greater weight losses than individuals motivated by appearance.¹⁰⁹ Clinicians should also understand the individual's readiness to change,^{110–112} which may influence timing of treatment as well as identify barriers to and facilitators of change. Motivational

interviewing or the 6As model may be a helpful strategy to support behavior change in obesity care.^{113 114}

Key lifestyle behavioral factors relevant to obesity include eating patterns, current dietary intake, engagement in physical activity, and sedentary time (physical inactivity).^{115 116} Registered dietitian nutritionists and physical activity professionals may be involved in assessing these factors. Alternatively, healthcare professionals can use simple tools identified in [table 4](#), such as the 16-item Rapid Eating and Activity Assessment for Patients—Shortened Version (REAP-S)^{117 118} or 2-item Exercise Vital Sign tool.^{119 120} These assessments provide information on baseline health behaviors that can help both the healthcare professional and the individual identify areas for improvement as well as track progress over time.

Other key lifestyle behavioral factors to assess are stress and sleep. A longitudinal cohort study of 2570 adults identified significant relationships between psychosocial stress and weight gain in both men and women.¹²¹ Clinicians should ask about current stressors among all individuals, as these factors may interfere with uptake of and engagement in the treatment plan.^{122–124} While the relationship between obesity and obstructive sleep apnea is discussed in “Assessing Obesity-Related Diseases and Complications,” below, other sleep factors have been associated with obesity, including inadequate sleep, short sleep duration, and poor sleep quality,^{125–128} which may negatively affect treatment outcomes. Sleep can be assessed by simply asking individuals how many hours of sleep they get per night or administering a tool such as the Pittsburgh Sleep Quality Index.¹²⁹ Based on the individual’s experience with stress or sleep problems, referral to behavioral health or behavioral sleep medicine professionals, respectively, may be warranted.

Finally, healthcare professionals should inquire about access to and familiarity with devices and digital resources that may be helpful tools in the treatment plan. For example, individuals may not have access to a scale in their home for self-weighing,¹³⁰ while smartphone apps may be helpful tools for self-monitoring lifestyle behaviors such as food intake, physical activity, and sleep.¹³¹

Social factors

An assessment of social factors is important to include in a comprehensive evaluation, as these elements may affect individuals’ ability to access, engage, and maintain the treatment plan. In addition to typical components of a social history ([table 3](#)), healthcare professionals should inquire about insurance status and be familiar with benefits coverage for obesity treatment services, including nutritional counseling, obesity medications, and metabolic-bariatric surgery. Coverage for these services varies widely by state and insurance type.^{132–134} Some individuals have no or limited insurance coverage for obesity care, which may restrict access to treatment, especially obesity pharmacotherapy.^{135–137} Limited access is more common among racial and ethnic minoritized groups as well as low-income individuals.¹³⁵

The comprehensive evaluation is an opportunity to identify the individual’s support system ([table 4](#)).⁷⁴ Assessing one’s level of social support among family, friends, and their community can help inform the treatment plan. Undermining of attempts to eat healthier by family members¹³⁸ as well as belonging to a community with a strong affinity for unhealthy eating habits¹³⁹ can derail an individual’s efforts to manage their weight. In contrast, a good source of social support along one’s weight management journey is associated with increased likelihood of continuing treatment and improved outcomes.^{138–141} Discussing the topic and helping individuals to establish and refine their support system will help maintain support in following the treatment plan between visits.

Contextual and structural factors such as culture, marital status, socioeconomic status, nutrition insecurity, housing instability, racism, and built environment contribute to weight gain and obesity. They may also create treatment access and engagement barriers.^{142–155} For example, obesity is more prevalent among racial and ethnic minoritized groups as well as groups with low socioeconomic status.^{150 151} However, the relationship between social determinants of health and obesity can be complex, as some groups can be more affected than others. For instance, experiencing nutrition insecurity was significantly associated with greater BMI among NHANES participants, particularly among women,^{147 148} who also tended to experience lower levels of social support.¹⁵² Furthermore, one health system–based study found that living in a high-resourced built environment (eg, greater availability of supermarkets and fast food restaurants) was associated with less weight gain over time among non-Hispanic White and Black/African American individuals compared with individuals with other backgrounds.¹⁵³ When assessing social determinants of health in clinical practice, healthcare professionals should consider using a reliable and pragmatic screening questionnaire (eg, Accountable Health Communities Health-Related Social Needs screening tool)¹⁵⁶ or a conversational approach ([table 4](#)). Given that clinicians are likely to identify individuals with social risks, they should consider establishing trusted partnerships with local organizations to facilitate referrals to social services or community-based resources that address adverse social determinants of health.^{157–159} Referral to a social worker or community health worker should be considered for individuals experiencing adverse social determinants of health.

Prior experiences of trauma have been associated with obesity. For example, history of adverse childhood experiences, such as abuse, neglect, and household dysfunction, has been associated with high risk of obesity in adulthood.¹⁶⁰ A systematic review identified that traumatic experiences and posttraumatic stress disorder were risk factors for developing obesity.¹⁶¹ Among adults pursuing metabolic-bariatric surgery, a third reported experiencing sexual violence in the past.¹⁶² Healthcare professionals should consider applying a trauma-informed care

approach, where appropriate, when evaluating individuals with obesity.^{163 164} In brief, a trauma-informed care approach recognizes the widespread impact of trauma and promotes environments of safety, trustworthiness, and collaboration.¹⁶⁵ If a prior trauma experience is identified, clinicians should be prepared to refer the individual to appropriate resources for further evaluation.

Assessing Obesity-Related diseases and complications

Obesity is associated with over 200 diseases and complications involving every organ system; their development is driven by mechanistic changes including increased mechanical stress, insulin resistance, ectopic adipose accumulation, and systemic inflammation.¹⁶⁶ For example, a longitudinal cohort study using the UK Biobank database (n=392541) found that obesity was associated with increased risk of 27 noncommunicable chronic diseases, with the highest risk being for type two diabetes (HR 6.61, 95% CI 6.25 to 6.99), osteoarthritis (HR 2.59, 95% CI 2.51 to 2.68), and hypertension (HR 2.35, 95% CI 2.29 to 2.41).¹⁶⁷ Importantly, the risk of having multiple long-term conditions (multimorbidity) increases with increasing BMI^{168 169}—people living with obesity may be affected by multiple diseases and complications. A meta-analysis of 43 studies (n=969 130) found that the risk of developing multiple long-term conditions was 1.75 times higher for individuals with obesity than for individuals without obesity.¹⁷⁰

An estimated 20%–60% of people living with obesity experience psychosocial concerns,¹⁷¹ and the most common mental health conditions include depression, anxiety, eating disorders, and disordered eating behaviors.^{171–178} There is also growing evidence of relationships between obesity and attention-deficit/hyperactivity disorder¹⁷⁸ as well as substance use disorders.¹⁷¹ While associations between obesity and mental health conditions are incompletely understood, studies suggest several possible explanations. Biological pathways, such as systemic inflammation or hypothalamic-pituitary-adrenocortical axis dysregulation, could explain the relationships.^{176–178} In addition, the experience of weight stigma and discrimination, which has been demonstrated to exacerbate symptoms of depression, anxiety, and eating disorders, may contribute.^{171 177} Furthermore, some evidence suggests a bidirectional relationship between obesity and mood disorders (depression and anxiety), particularly among women.^{171 176–178} In a meta-analysis of 15 longitudinal studies, individuals with obesity had a 55% increased risk of developing depression in their lifetime, while individuals with depression had a 58% risk of developing obesity.¹⁷⁹ A recent cohort study with >16 000 European adults found that people living with overweight or obesity experienced increased depression scores and decreased quality of life over a subsequent 10-year period.¹⁸⁰ In addition, binge eating disorder is the most common eating disorder reported by individuals with obesity, and it has an estimated prevalence of 5–15% among individuals seeking metabolic-bariatric

surgery.¹⁷¹ Research has found that the prevalence of binge eating disorder increases with greater severity of obesity.¹⁷⁸ Given this body of evidence, it is important for healthcare professionals to use validated tools to screen for mental health conditions commonly identified among people with obesity, particularly to identify symptoms concerning for depression, anxiety, eating disorders, and disordered eating behaviors (table 3). Individuals with concerning symptoms should be referred for additional evaluation to qualified behavioral health professionals, ideally ones with experience in obesity. Overall, it is important for clinicians to use a comprehensive biopsychosocial assessment to inform the management plan.

Table 5 provides an overview of common obesity-related diseases and complications in adults, and healthcare professionals may already be aware of the presence of many of these obesity-related diseases and complications in individuals with whom they have established care relationships or who have previously received care within their health system (eg, documented in the EHR's problem list or past medical history section). Given the resources and time available in clinical practice, healthcare professionals may need to initially focus their assessment on conditions relevant to the individual's personal or family history. In addition, the assessment should prioritize identifying history of or screening for symptoms concerning for key diseases and complications that may influence the treatment approach or treatment outcomes: pre-diabetes, type two diabetes, hypertension, dyslipidemia, atherosclerotic cardiovascular disease (ASCVD), heart failure with preserved ejection fraction, metabolic dysfunction-associated steatohepatitis, obstructive sleep apnea, knee osteoarthritis, disordered eating, disordered eating behaviors, depression, and anxiety (table 3). In addition to obtaining the history and symptoms of obesity-related diseases and complications, healthcare professionals should ensure that their physical examination includes the necessary components to evaluate for signs of disease or diagnose the aforementioned key conditions (eg, blood pressure measurement, cardiac exam). Finally, clinicians should ensure that individuals have had laboratory and diagnostic testing appropriate for their clinical context. In many individuals, it may be reasonable to screen for pre-diabetes and type two diabetes with A1C,¹⁸¹ screen for dyslipidemia and assess ASCVD risk with a lipid profile,¹⁸² and assess AST, ALT, and platelet count to calculate fibrosis-4 score for metabolic dysfunction-associated steatohepatitis.¹⁸³

Factors impacting obesity care or influencing the treatment plan

Beyond obesity-related conditions, healthcare professionals should be aware of other medical or psychological conditions within each person that incidentally coexist with obesity. Some may complicate obesity care or treatment outcomes, which might include increasing the potential for drug-drug interactions, whether it be a contraindication to a specific obesity medication,

Table 5 Overview of common obesity-related diseases and complications in adults by domain

Domain	Obesity-related diseases and complications
Metabolic/endocrine	► Dyslipidemia
	► Gestational diabetes
	► Metabolic syndrome
	► pre-diabetes
	► Type two diabetes (T2D)
Cardiovascular	► Atrial fibrillation
	► Coronary artery disease (CAD)
	► Heart failure with preserved ejection fraction (HFpEF)
	► Heart failure with reduced ejection fraction (HFrEF)
	► Hypertension
	► Peripheral vascular disease (PVD)
Gastrointestinal/hepatic	► Cholelithiasis
	► Gastroesophageal reflux disease (GERD)
	► Metabolic dysfunction-associated steatohepatitis (MASH)
	► Metabolic dysfunction-associated steatotic liver disease (MASLD)
Musculoskeletal	► Degenerative joint disease
	► Gout
	► Osteoarthritis
	► Plantar fasciitis
Pulmonary	► Asthma
	► Pulmonary artery hypertension
	► Obesity hypoventilation syndrome (OHS)
	► Obstructive sleep apnea (OSA)
Oncologic/hematologic	► Breast cancer
	► Colorectal cancer
	► Deep venous thrombosis (DVT)
	► Endometrial cancer
	► Pulmonary embolism (PE)
	► Prostate cancer
Neurologic/ophthalmologic	► Ovarian cancer
	► Idiopathic intracranial hypertension (IIH)
	► Stroke

Continued

Table 5 Continued

Domain	Obesity-related diseases and complications
Renal/urologic	► Focal segmental glomerulosclerosis
	► Stress incontinence
Reproductive	► Infertility
	► Male hypogonadism
	► Polycystic ovarian syndrome (PCOS)
Dermatologic	► Uterine fibroids
	► Hidradenitis suppurativa
	► Lymphedema
Immunologic/infectious	► Venous stasis
	► Poor outcomes with infections (eg, COVID-19)
	► Susceptibility to infection
Psychologic	► Anxiety
	► Binge eating disorder
	► Depression
	► Night eating syndrome
Functional limitations	► Stigmatization
	► Limitations in mobility
	► Limitations in activities of daily living (ADL)
Diseases and complications presented were informed by several sources ^{15 334 335} ; however, healthcare professionals should be aware that this list is not exhaustive of all obesity-related conditions.	

requiring nutritional modifications, or limiting engagement in physical activity. In addition, healthcare professionals should consider laboratory and diagnostic testing appropriate for each individual's clinical context that may influence the treatment plan as well as identify secondary causes of weight gain, if clinically indicated (table 3). Reproductive status is particularly important among people of childbearing potential, as pregnancy and lactation affect treatment options and timing of treatment.

Risk stratification

The information obtained during the comprehensive clinical evaluation can be used for risk stratification, a process to identify each person's risk level that may aid the healthcare professional in predicting health outcomes and tailoring care. While various strategies can be used, two common approaches to inform risk stratification among people with obesity are 1) regional distribution of excess adiposity to stratify risk for obesity-related diseases and complications and 2) the Edmonton Obesity Staging System (EOSS) to stratify risk of morbidity and mortality that informs disease prognosis.

Distribution of adipose tissue influences cardiometabolic disease, where identification of visceral adiposity (typically using WHtR or WC) adds to risk prognostication above BMI alone. Multiple prospective cohort studies confirm the association between visceral adiposity and cardiometabolic risk independent of overall adiposity, including incident metabolic syndrome,¹⁸⁴ type two diabetes,¹⁸⁵ steatotic liver disease,¹⁸⁶ cardiovascular risk factors,^{184 187} cardiovascular disease,^{188 189} and mortality.¹⁸⁸ There is a dose-response relationship between change in visceral adiposity and cardiometabolic risk,^{9 190 191} which may help guide treatment goals. healthcare professionals should be aware that studies have reported conflicting results regarding the association between WC and mortality risk in older adults.¹⁹² Decrease in visceral adiposity, as clinically indicated by decrease in WHtR or WC, is associated with reduced cardiometabolic risk. Visceral adiposity may also be a key factor in other noncardiometabolic diseases, which is an area of increasing research interest with implications for overall health risk.^{193–197}

While several staging and classification systems have been proposed to assess the stage and severity of obesity and its related conditions,^{198–200} EOSS independently predicts increased mortality beyond traditional adiposity assessments.²⁰¹ EOSS evaluates the medical, physical, psychological, and functional effects of obesity across five stages (stages 0–4, where higher stages indicate greater severity) (figure 1). EOSS has been used to provide standardized assessments of severity and functional effect of obesity within clinical research and real-world contexts,^{202–204} and EOSS may be used to guide treatment decisions.²⁰⁵ table 6 suggests a strategy for operationalizing EOSS within the clinical setting, which may increase feasibility of EOSS use within clinical and community settings.

Management strategy

After completing the comprehensive clinical evaluation, healthcare professionals should collaborate with the individual to develop a management strategy (figure 1). Clinicians are encouraged to use evidence-based counseling approaches to facilitate shared decision-making when setting goals and developing management strategies or treatment plans. Clinicians' use of the 6As model has been associated with improved outcomes, including increased self-efficacy, intention to change behavior, and weight reduction among people with obesity.^{19–21} healthcare professionals routinely "ask" and "advise" when providing weight-related counseling but often find it challenging to include "assist" and "arrange" in busy clinical encounters.²⁰ Alternatively, using brief motivational interviewing techniques, such as reflective listening, has been associated with weight reduction, as has the individual having a sense of high autonomy support.^{82 113 206 207} Motivational interviewing is particularly useful when trying to establish an individual's readiness to make health behavior changes and engage in

the treatment plan. For example, the healthcare professional can ask the individual to rate their readiness, importance of the goal, and confidence to meet the goal on a scale of 1 to 10 to evaluate their level of motivation, which may then help identify factors that might increase and maintain their motivation.^{113 114} An individual's level of readiness can inform tailoring and timing of treatment. When assessing readiness, clinicians will identify some individuals who are not yet ready to make changes or begin treatment. However, it is important to reassess readiness at follow-up visits, as these elements can change over time. healthcare professionals need to be prepared to engage in counseling when such a change occurs. Based on available resources and time, clinical practices can consider identifying and referring to other care partners to support evidence-based counseling, such as psychologists, registered dietitian nutritionists, and other allied health professionals.⁷⁵

Goals of care should be established. Individuals should be encouraged to set health goals, behavior change goals (eg, nutrition, physical activity, sleep), and quality-of-life goals (eg, improved mobility), as goal setting contributes to greater success in changing lifestyle behaviors and greater weight reduction.^{108 109 206 208 209} healthcare professionals should collaborate to set SMART (specific, measurable, achievable, relevant, and time-bound) goals. Goal setting can be combined with other behavior change techniques, such as self-monitoring and problem-solving. Goal setting may involve the use of self-monitoring tools (eg, home scale, wearables) to provide feedback to the individual and healthcare professional on implementation of the treatment plan.

healthcare professionals should educate patients on obesity as a chronic, relapsing disease. As such, clinicians should anticipate that the initial goals of care and initial management strategy or treatment plan will change over time, thus developing a plan for continuing care is essential. It is important to set expectations for the frequency of follow-up visits and discuss strategies to support engagement in the treatment plan between visits (eg, social support, working with other care partners, self-monitoring). Previous research indicates that a higher number of visits and longer duration of treatment are significantly associated with greater weight reduction.^{210 211} However, real-world clinical practice is often challenged by overwhelmed clinic schedules, time constraints during visits, and barriers to care access (eg, lack of transportation, limited clinic hours),¹³⁷ which may make it difficult to implement frequent, in-person follow-up visits. To facilitate timely and effective care, follow-up may be delivered via telehealth, delivered by interprofessional members of the treatment team with experience in obesity care, or supported by community-based or commercial programs with peer-reviewed evidence of their efficacy and safety.^{212 213} as part of the plan for continuing care. Clinical practices may also consider referral to healthcare professionals with competency in obesity medicine.

Table 6 Operationalization of the Edmonton Obesity Staging System in adults with overweight or obesity

Stage	Obesity-related diseases and complications	Physical symptoms	Psychological symptoms	Functional limitations
0	None ▶ A1C<5.7% ▶ BP<130/80 mmHg ▶ Triglycerides<150 mg/dL ▶ HDL>60 mg/dL ▶ ALT<36 IU/L and AST<33 IU/L	None ▶ No dyspnea on exertion ▶ No aches/pains	None ▶ PHQ-9 score<5 ▶ GAD-7 score<5	None ▶ No impact on daily activities ▶ Self-reported health of “very good” or “excellent” ▶ VO ₂ peak/kg over the 25th percentile (normal functional capacity)*
1	Subclinical ▶ A1C 5.7%–6.4% or diagnosis of pre-diabetes ▶ BP 130/80–139/89 mmHg ▶ Triglycerides 150–199 mg/dL ▶ HDL 40–60 mg/dL ▶ ALT≥36 IU/L or AST≥33 IU/L; FIB-4<1.3	Mild ▶ Dyspnea on moderate exertion ▶ Occasional aches/pains	Mild ▶ PHQ-9 score 5–9 ▶ GAD-7 score 5–9	Mild; QoL not impacted ▶ Mild functional limitations in daily activities ▶ Self-reported health of “good” ▶ VO ₂ peak/kg between the 10th and 25th percentile (mild reduction of functional capacity)*
2	Established ▶ A1C≥6.5%, diagnosis of type two diabetes, or use of glucose-lowering medication ▶ BP≥140/90 mmHg, diagnosis of hypertension, or use of BP-lowering medication ▶ Triglycerides≥200 mg/dL, HDL<40 mg/dL, diagnosis of dyslipidemia, or use of lipid-lowering medication ▶ Diagnosis of metabolic dysfunction-associated steatotic liver disease ▶ Diagnosis of obstructive sleep apnea ▶ Diagnosis of other obesity-related diseases or complications	Moderate ▶ Dyspnea on mild exertion ▶ Regular aches/pains ▶ Joint stiffness ▶ Fatigue ▶ Diagnosis of moderate knee osteoarthritis ▶ Diagnosis of low back pain	Moderate ▶ Diagnosis of depression, use of depression medication, or PHQ-9 score>9 ▶ Diagnosis of anxiety, use of anxiety medication, or GAD-7 score>9 ▶ Diagnosis of an eating disorder	Moderate; QoL impacted ▶ Moderate functional limitations in daily activities ▶ Self-reported health of “fair” ▶ VO ₂ peak/kg between the fifth and 10th percentile (moderate reduction of functional capacity)*

Continued

Table 6 Continued

Stage	Obesity-related diseases and complications	Physical symptoms	Psychological symptoms	Functional limitations
3	Severe ▶ Diagnosis of type two diabetes with complications ▶ Diagnosis of atherosclerotic cardiovascular disease ▶ Diagnosis of heart failure with reduced ejection fraction ▶ FIB-4 >2.67 or diagnosis of metabolic dysfunction-associated steatohepatitis ▶ Diagnosis of obesity hypoventilation syndrome	Severe ▶ Dyspnea when sitting or sleeping ▶ Angina ▶ Reduced mobility ▶ Diagnosis of severe knee osteoarthritis	Severe ▶ Diagnosis of major depression ▶ Suicidal ideation	Severe; QoL substantially impacted ▶ Unable to work ▶ Significant functional limitations in daily activities ▶ Self-reported health of “poor” ▶ VO₂ peak/kg below the fifth percentile (severe reduction of functional capacity)*
4	Very severe; end-stage disease ▶ Diagnosis of end-stage renal disease ▶ Diagnosis of end-stage heart failure (eg, AHA stage D) ▶ Diagnosis of cirrhosis ▶ Diagnosis of respiratory failure	Very severe; limited mobility ▶ Continuous dyspnea ▶ Severe lethargy or lassitude ▶ Severely limited mobility	Very severe; disabling ▶ Neglect of basic personal needs ▶ Total anhedonia ▶ Catatonia	Very severe; disabling ▶ Bedbound ▶ Inability to perform daily functions

The schema presented in this table was informed by several research studies^{202–205 336}; however, healthcare professionals should be aware that this specific decision tool has not been clinically tested. No studies have attempted to identify stage four obesity; therefore, the content listed in relation to this stage was identified through expert consensus.

*When cardiopulmonary exercise testing is available, the addition of VO₂ peak/kg may enhance Edmonton Obesity Staging System performance.³³⁷

A1C, hemoglobin A_{1c}; AHA, American Heart Association; ALT, alanine aminotransferase; AST, aspartate aminotransferase; BP, blood pressure; FIB-4, fibrosis-4 score; GAD, generalized anxiety disorder; HDL, high-density lipoprotein; LDL, low-density lipoprotein; PHQ, Patient Health Questionnaire; QoL, quality of life; VO, volume of oxygen.

Additional information about treatment selection with the management plan is available in “Pharmacologic Treatment of Obesity in Adults: Standards of Care in Overweight and Obesity”³⁰ and will be available in future sections of the “Standards of Care in Overweight and Obesity” on lifestyle treatment and metabolic-bariatric procedures.

LONGITUDINAL CARE FOR INDIVIDUALS WITH OBESITY

Recommendations

3.5 For individuals engaged in obesity treatment, follow-up visits should occur regularly at intervals appropriate to the treatment strategy selected **B**; evaluate the efficacy, safety, and tolerability of the treatment plan **B**; monitor anthropometric measures, vital signs, and laboratory values **A**; inquire about barriers to the treatment plan **C** and, if present, engage the individual in problem-solving to address any challenges **B**; and reassess psychosocial and behavioral factors that may affect treatment outcomes **B**.

Obesity is a chronic disease requiring structured and person-centered care over time. Care is optimized when clinicians engage individuals in regular follow-up that applies principles of chronic disease management, including responding to the evolving needs of each

individual and monitoring treatment plan safety and efficacy. This approach reinforces the therapeutic partnership between the individual and the healthcare professional. Table 3 outlines elements of the comprehensive clinical evaluation that should be repeated at follow-up as well as annually. healthcare professionals should refer to the appropriate current and future sections of the “Standards of Care in Overweight and Obesity” for information on managing specific treatment strategies long-term.³⁰

Frequency of Follow-up

Evidence from intensive lifestyle interventions demonstrates that regular, structured follow-up is strongly associated with sustained engagement over time and improved weight loss outcomes.^{214 215} Real-world studies of obesity medicine clinics further support the importance of consistent follow-up to monitor progress and ensure adherence.^{210 216} Routine follow-up provides accountability as well as opportunities to troubleshoot barriers, recalibrate goals, support individual values and preferences, and promote long-term adoption of the treatment plan.

For individuals engaged in obesity treatment, follow-up visits should occur at intervals appropriate to the treatment strategy. For example, weekly follow-up visits may be typical as part of an intensive lifestyle intervention, while monthly follow-up visits are recommended during the first 3 months of treatment with an obesity medication.³⁰ In addition, follow-up visit frequency should be tailored to the individual’s needs relative to their EOSS stage. Individuals with a higher EOSS stage may warrant more frequent follow-up. Clinical practices should consider engaging team members including pharmacists and nurses to support this care, which may include adjusting concomitant medications to prevent adverse events (eg, hypoglycemia in individuals with type two diabetes, hypotension in individuals taking blood pressure-lowering medications). Clinical practices could consider using remote monitoring technology, if appropriate to the population, to support care. Virtual follow-up has been shown to have similar efficacy to in-person follow-up in some clinical trials.^{217–219} Little research to date has compared the efficacy of synchronous and asynchronous follow-up care.

Evaluate response to treatment plan

Each follow-up visit should include assessment of treatment efficacy, safety, tolerability, and adherence. healthcare professionals should be prepared to modify the treatment plan to support individuals in achieving their health goals. Retrospective data from the National Diabetes Prevention Program highlight the need to monitor individualized responses and intervene early when progress deviates from expected trajectories.²²⁰ Treatment intensification to attain goals must be balanced against tolerability of the treatment plan. Assessing efficacy and safety together ensures that the treatment plan

remains both effective and tolerable, which may promote long-term persistence.

Monitor health outcomes

Long-term obesity care requires monitoring of anthropometric measurements, vital signs, and laboratory values at follow-up. Patient-centered goals should also be monitored at follow-up. Robust evidence supports regular assessment of weight, BMI, WC, blood pressure, A1C, lipid profile, and liver function tests. For example, RCTs of obesity medications consistently demonstrate the importance of monitoring these parameters to detect therapeutic cardiometabolic benefits and avoid adverse outcomes.^{221–232} Application of a chronic disease framework acknowledges that obesity treatment requires continual support, reinforcement of behavior change strategies, and alignment of interventions with the individual’s goals. Regular review of anthropometric measures, vital signs, and laboratory values also normalizes fluctuations in outcomes, celebrates achievements, reduces stigma, and strengthens the partnership between the healthcare professional and individual with obesity.

Problem-Solving treatment plan barriers

During follow-up visits, the healthcare professional should assess for any barriers to the treatment plan. Common barriers include changes in treatment access due to insurance benefits coverage, changes in motivation, emotional distress, limited time to implement the treatment plan given competing priorities, body image concerns, and social and internal cues that promote unhealthy eating behaviors.^{135 136 233–236} In addition, many individuals experience increased appetite with weight reduction, which may lead to weight recurrence or binge eating.²³⁶ Problem-solving is an effective approach to helping individuals address barriers. Several studies have demonstrated that providing problem-solving support during obesity treatment leads to greater weight reduction and weight loss maintenance.^{233 237–240} healthcare professionals can use the acronym ADAPT to remember the steps of problem-solving when supporting individuals: normalize the individual’s Attitude and experience with barriers, Define or identify the problem, generate Alternative solutions and set a goal, Predict consequences of each potential solution, and Try out and evaluate a solution.²⁴¹ Using a problem-solving approach during follow-up can help the healthcare professional and the individual recognize when a referral to another care partner may be necessary to address barriers (eg, social work for insurance coverage).

Behavioral and psychosocial factors affecting treatment outcomes

The healthcare professional should reassess an individual’s engagement in health behaviors (eg, nutrition, physical activity, sleep) during each follow-up visit to monitor progress with the treatment plan and determine if any changes are needed. Continued engagement in healthy

eating, physical activity, and improved sleep has been associated with greater weight reduction and weight loss maintenance.^{215 242–244} Behavior change techniques, such as self-monitoring, are also key to continued engagement and treatment success.^{242 244 245} Self-monitoring tools include food diaries, wearables, and smartphone applications that can be used to track progress on behavior changes, and these data can inform topics to address at follow-up. Some individuals may experience improvement in physical components of quality of life (eg, physical functioning)²⁴⁶ and mood²⁴⁷ with weight reduction. However, newly occurring or recurring episodes of mental health concerns (eg, depression, anxiety) and chronic stress can be barriers to treatment success. It is important for clinicians to reassess psychosocial factors periodically during follow-up. Healthcare professionals should engage other care partners in the treatment team, as appropriate, to support the long-term behavioral and psychosocial needs of individuals with obesity.

CLINICAL PRACTICE CONSIDERATIONS FOR OBESITY CARE

Recommendations

- 3.6** Provide healthcare professionals with education on obesity treatment **A** as well as professional and technical support **A**, as appropriate, to ensure they are adequately prepared and resourced to deliver obesity care.
- 3.7** Establish a care process to alert people with overweight or obesity that medical assistance is available for these conditions **A**, as individuals may be unaware of this service in healthcare settings.
- 3.8** Implement clinical practice protocols to allocate adequate time for evaluating, staging, and treating obesity, such as weight-focused visits **A** or referring to an embedded healthcare professional trained in obesity medicine **C**.
- 3.9** Add a diagnosis of obesity to the medical record of adults who meet the diagnostic criteria **C** using nonstigmatizing diagnosis codes.

Clinical practices may need to implement changes to support the screening, diagnosis, evaluation, and staging of obesity, as obesity diagnosis and related counseling have typically occurred infrequently in healthcare settings.^{137 248 249} In fact, research has shown that a minority of clinicians provide the majority of obesity counseling in primary care settings.²⁵⁰ Multiple factors contribute to the lack of obesity care prioritization. While limited time, competing priorities, and inadequate reimbursement for services are often cited,^{137 251 252} there are other contributing factors that may be amenable to clinical practice modifications. Clinical practices should be mindful of how changes may affect the care experience for people with obesity, as weight stigma and bias may occur within the healthcare system. See the article “Weight Stigma and Bias: Standards of Care in Overweight and Obesity—2025” for more information.¹⁷

Healthcare professionals cite lack of education and training on obesity as key factors contributing to their low engagement in obesity care delivery.^{251 253–255} A systematic

review found a paucity of obesity education programs for physicians-in-training globally,⁷⁰ and research has reported gaps in high-quality weight management training among other healthcare professionals as well.²⁵⁶ However, clinicians overwhelmingly support additional training and practice-based changes to help them improve their skills in this area.²⁵³ Studies have found that providing education on obesity increases healthcare professionals’ understanding of the efficacy of obesity treatment options as well as their self-efficacy for delivering obesity care.^{204 257–259}

In addition to education, clinicians benefit from professional and technical support to diagnose, evaluate, and treat obesity. Professional support may include providing clinicians access to colleagues with expertise in obesity medicine as well as access to ongoing education on obesity to support their professional development.^{204 259} Technical support refers to modifications to clinical workflows and protocols as well as the creation of tools to support healthcare professionals’ delivery of obesity care. In particular, technical support should optimize the EHR for chronic disease management, as it capitalizes on the only thing reliably in the room with the healthcare professional and the individual—the computer. EHR-based best practice alerts for elevated BMI consistently improve clinicians’ diagnosis of obesity.^{260–262} Additional EHR-based tools are likely needed to support care delivery. Promising strategies include pre-visit questionnaires that obtain key information from individuals with obesity,^{204 263} prebuilt note templates designed for obesity care,^{204 261 263} and clinical decision support systems that suggest laboratory testing, treatment strategies, and referrals or resources.^{204 260 261 263 264} These tools have demonstrated acceptability to individuals with obesity participating in these visits²⁶¹ and have improved healthcare professionals’ clinical practice habits.^{263 265} When considering EHR-based tools to support obesity care, they need to be easy to use and integrate with existing clinical workflows. Clinicians also need training on using these tools to support their adoption and continued use.²⁶⁶

Clinical practices should consider establishing a care process to alert people with overweight or obesity that medical assistance is available. Some people may be unaware of their BMI or unfamiliar with the degree of excess adiposity, as suggested by BMI or WC, that is associated with health risks.⁴⁶ As a result, these individuals may not seek evaluation or treatment with a healthcare professional. Other people may not be aware that they can receive obesity-related services in a healthcare setting. For example, an analysis of NHANES data found that many individuals with obesity are actively trying to lose weight, but few reported seeking support for this goal from a healthcare professional.²⁶⁷ This situation is further compounded when the healthcare professional does not initiate a discussion about obesity.^{137 268} This may occur due to lack of time, prioritization of other conditions, or preference for the individual with obesity to initiate the discussion. Therefore, it is important for

clinical practices to raise awareness of the obesity care services they offer, if such services are offered, in a manner that is not stigmatizing.^{204 263 265 269}

In addition to education, professional development, and technical support, healthcare professionals may need clinical practice protocols that support their delivery of obesity care. It is critical for clinicians to have adequate time for evaluating, staging, and treating obesity. Research has shown that the primary care setting has challenging time limitations. One simulation study estimated that primary care clinicians would need approximately 27 hours per day to complete all of the work required to provide guideline-recommended preventive, chronic disease, and acute care for individuals on their panels, along with documentation and inbox management.²⁷⁰ A key strategy to address this problem is the creation of weight-focused visits, a specific visit type scheduled where the clinician can focus solely on the evaluation and treatment of obesity.²⁰⁴ This approach allows healthcare professionals the time necessary to evaluate and treat obesity, and it may also reduce weight stigmatization if the individual is aware of the visit focus. Shared medical visits for weight management may also be considered.^{271–273} Given the components of a comprehensive clinical evaluation for obesity outlined in [table 3](#), healthcare professionals clearly need time to complete these assessments comprehensively and provide evidence-based counseling. Some clinical practices may be unable to implement weight-focused visits, and other research has suggested that referring to an embedded healthcare professional trained in obesity medicine is a promising alternative.^{264 274 275} Competency in obesity medicine includes having the knowledge and skills to evaluate, examine, diagnose, and treat individuals for obesity and its related diseases and complications.⁷⁶ Physicians may seek board certification in obesity medicine,²⁷⁶ and certificate and certification programs in obesity medicine are available for nurse practitioners, physician associates, and other healthcare professionals.^{277–280} Studies have shown that board-certified obesity medicine physicians offer comprehensive obesity care,^{77 281 282} and recent research found that most individuals referred to board-certified obesity medicine physicians embedded within primary care were significantly more likely to receive evidence-based obesity treatment and achieve greater weight reduction than matched controls.²⁶⁴

While clinical practices may need to prioritize the actions in Recommendations 3.6–3.8, it is critical to understand that implementing all these recommendations together leads to improved weight outcomes ([figure 4](#)), which was demonstrated in the PATHWEIGH stepped-wedge cluster-randomized trial, testing a novel care process implemented within all adult-serving primary care clinics across a health system.^{204 265 269 283} The intervention consisted of three general components: 1) support from the health system's primary care leadership, 2) an EHR-driven care process to prioritize, facilitate, and expedite weight management, and 3)

strategies to support healthcare professionals' education on obesity treatment and implementation of the PATHWEIGH care process. A key strategy was in-clinic signage alerting individuals that medical weight management was available; in fact, the care process depended on individuals who had established relationships with the practice requesting weight-focused visits with their current primary care clinicians. This approach aimed to increase awareness of obesity care and reduce weight stigmatization. Having the PATHWEIGH care process in place increased the likelihood that adults with BMI ≥ 25 kg/m² received weight-related care,²⁰⁴ and PATHWEIGH is the first intervention to eliminate population-level weight gain.²⁰⁴ When possible, health systems and clinical practices should consider deploying a multicomponent care process strategy to support the evaluation and treatment of obesity.

Finally, adding a diagnosis of obesity may achieve multiple benefits. Research has found that a diagnosis of obesity in the medical record is associated with increased likelihood of treatment^{38 284 285} and reported weight loss success.^{286 287} For example, an observational study of over 680 000 adults with BMI ≥ 30 kg/m² across 15 health systems found that diagnosis of obesity was significantly associated with achieving $\geq 5\%$ wt loss approximately 12 months later.²⁸⁷ In addition, including a diagnosis of obesity when billing for services may improve the quality of healthcare claims data in identifying individuals with obesity. Studies have found that individuals who meet BMI criteria for obesity in the EHR often lack a diagnosis code for this disease.^{288–290} Employers, insurers, and government agencies rely on claims data for profiling clinicians, adjusting payments, and assessing risk²⁹¹; critically, these groups may use claims data to inform and evaluate coverage decisions for obesity treatment, including obesity medications.^{292 293}

healthcare professionals should add a diagnosis of overweight or obesity, as appropriate, to the medical record of adults who meet the diagnostic criteria ([table 1](#)). It is recommended that nonstigmatizing diagnosis codes be used, which are outlined in the article “Weight Stigma and Bias: Standards of Care in Overweight and Obesity—2025”.¹⁷ When making the initial diagnosis, E66.8 “Other obesity” or E66.9 “Obesity, unspecified” may be used for any adult meeting the diagnostic criteria for obesity, and E66.3 “Overweight” may be used for any adult meeting the diagnostic criteria for overweight. healthcare professionals may alternatively use E66.811 (Obesity, class 1) for adults with BMI 30–34.9 kg/m², E66.812 (Obesity, class 2) for adults with BMI 35–39.9 kg/m², and E66.813 (Obesity, class 3) for adults with BMI ≥ 40 kg/m². healthcare professionals should also include the appropriate Z-code to identify the individual's BMI at time of initial diagnosis (Z68) as well as diagnosis codes for any obesity-related diseases or complications ([table 5](#)). This approach is needed because the current codes for obesity in ICD-10 do not capture the complexity of obesity within a single code, as is available for other chronic conditions, like type

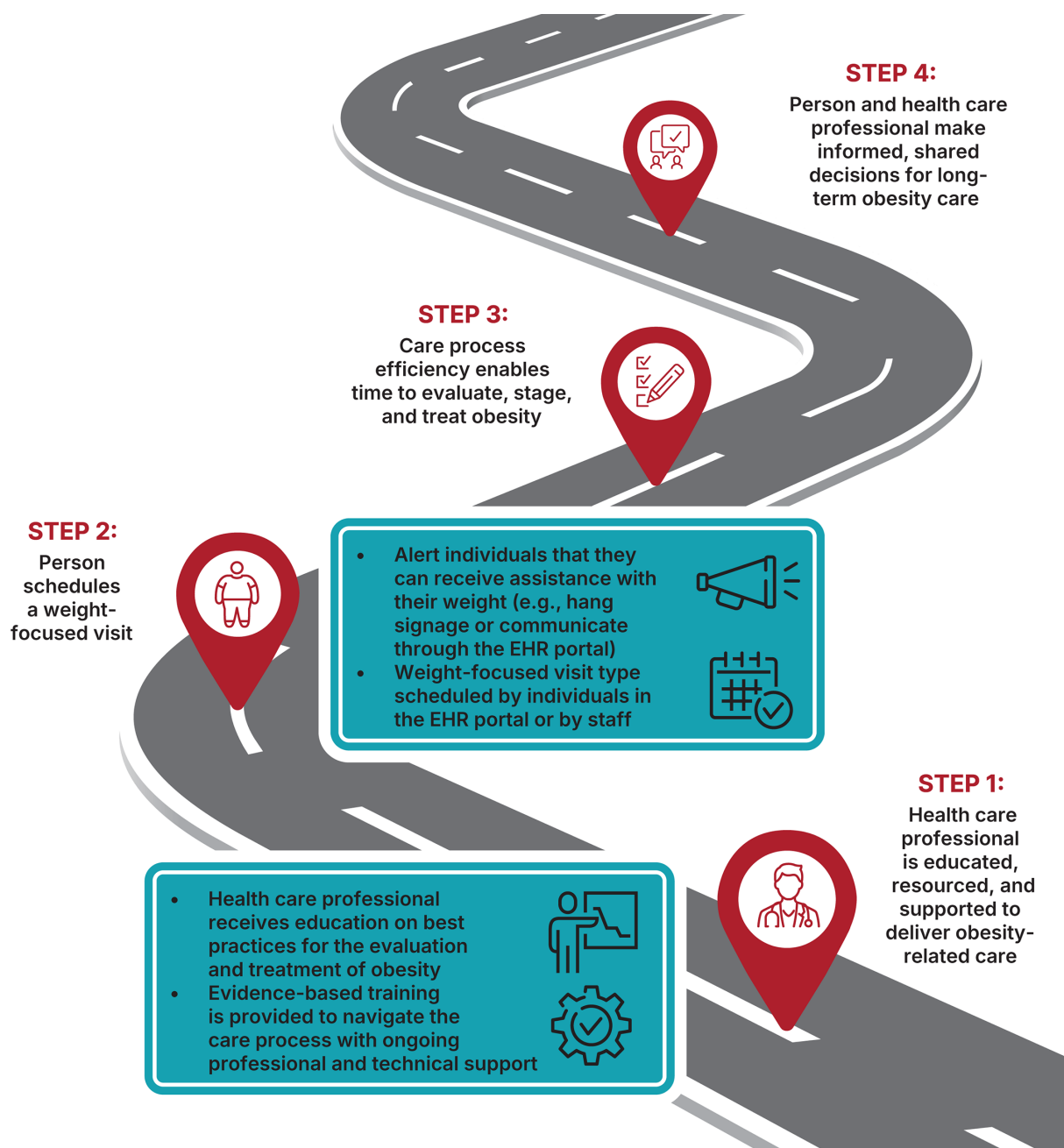


Figure 4 Evidence-based care process for the evaluation and treatment of obesity in ambulatory settings. EHR, electronic health record.

two diabetes (eg, obesity with metabolic complications, obesity with cardiovascular complications). Conversely, ICD-10 codes are needed when obesity is “controlled” or in “weight maintenance.” ICD-10 codes also do not reflect the recommendations made in this article for diagnosing obesity, which may cause uncertainty among healthcare professionals as well as billing and coding professionals on how to best use ICD-10 codes to identify obesity at this time. Given that obesity is a chronic disease, the diagnosis of obesity using an appropriate E66 code should remain over time, while the clinician can modify the BMI Z-code to reflect changes that may occur in response to obesity treatment. For example, an adult with BMI 35 kg/m² at initial diagnosis should receive diagnosis codes

of E66.812 and Z68.35 (Obesity, class 2, and adult BMI 35.0–35.9, respectively). If this individual engages in an obesity treatment plan that reduces their BMI to 28 kg/m², then diagnosis codes applied at follow-up care would be E66.812 and Z68.28 (Obesity, class 2, and adult BMI 28–28.9, respectively). This strategy reflects the general approach used in other chronic diseases: a diagnosis of type two diabetes remains in the medical record when A1C decreases with treatment, and a diagnosis of hypertension remains when blood pressure decreases with treatment. healthcare professionals may need to engage their billing and coding staff to implement best practices that reflect application of the chronic disease model to obesity.

CONCLUSIONS

Stakeholders, including individuals with obesity, health-care professionals, policymakers, insurers, and employers, recognize the importance of screening, diagnosis, evaluation, and staging of obesity. The Obesity Association of the ADA encourages clinicians and clinical practices to adopt and implement the present recommendations as part of comprehensive obesity care for adults. Healthcare professionals may use comprehensive clinical evaluation to inform risk assessments as well as tailor management strategies and treatment plans for each individual.

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