



OBEISY MANAGEMENT IN PRIMARY CARE TRAINING AND CERTIFICATE PROGRAM



Screening and Diagnosis

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Faculty and Disclosure Statement

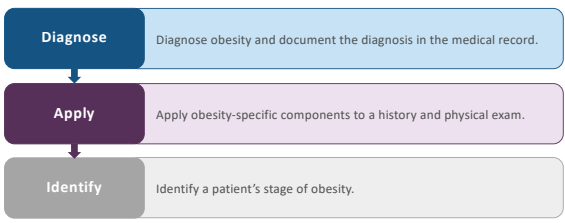
- Amy is a nationally respected obesity medicine PA. She has received the highest level of training in obesity medicine for PAs, receiving the Advanced Education of Obesity Medicine from the Obesity Medical Association. This distinction demonstrates her extensive knowledge of evidence-based obesity treatment approaches and an ongoing commitment to patient's health
- Beyond the office, Amy is immersed in helping to advocate and expand the understanding and complexity of obesity as a chronic disease. She is founder of PAs in Obesity Medicine special interest group, as well as president and founder of Arizona Obesity Organization. She is a guest lecturer at Yale School of Medicine Online PA Program on obesity medicine. More than anything, she appreciates being able to help educate other healthcare providers on how to provide optimal evidence-based care for individuals with pre-obesity and obesity.

NovoNordisk: speakers' bureau for type 2 diabetes and obesity

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Objectives



- Diagnose** Diagnose obesity and document the diagnosis in the medical record.
- Apply** Apply obesity-specific components to a history and physical exam.
- Identify** Identify a patient's stage of obesity.

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Diagnose Obesity and Document the Diagnosis in the Medical Record

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The Importance of Screening For and Diagnosing Obesity

- The first step to addressing a disease is recognizing and diagnosing it
- The lack of a formal obesity diagnosis, as well as the lack of clarity when obesity is discussed or diagnosed, is a barrier to obesity management

Healthcare Professionals Recording "Overweight" or "Obesity" Diagnosis in Medical Records

Of the 31% of healthcare professionals who did not say always or most of the time, 43% reported providing a verbal diagnosis to their patients

Kaplan LM, et al. Obesity (Silver Spring). 2008;16(1):63-69.
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Obesity Classification (BMI; kg/m²)¹

Overweight	Class 1	Class 2	Class 3
25.0-29.9	30.0-34.9	35.0-39.9	≥ 40.0
Asian ² 23.0-26.9	Asian ² 27.0-higher		

BMI, body mass index.
1. World Health Organization. <http://www.who.int/mediacenter/factsheets/fs304/en/>. Accessed December 9, 2020. 2. Joslin Diabetes Center. <https://diabetes.joslin.edu/obesity/obesity-diagnosis/>. Accessed December 30, 2020.
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What is the recommended ICD-10 code to minimize bias and stigma for obesity?

- A. E66.01 Severe obesity due to excess calories
- B. E66.09 Other obesity due to excess calories
- C. E66.8 Other obesity
- D. All codes are appropriate

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ICD-10 Coding: Obesity Management Codes

When coding for obesity, code for both the obesity diagnosis as well as BMI

- E66.0 Obesity due to excess calories
 - E66.01 Severe obesity due to excess calories
 - E66.09 Other obesity due to excess calories

} These codes are stigmatizing and should be avoided if possible

Obesity codes:

- E66.1 Drug-induced obesity
- E66.2 Severe obesity with alveolar hypoventilation
- E66.3 Overweight
- E66.8 **Other obesity** Recommended code
- E66.9 Obesity, unspecified

BMI, body mass index. See handbook for further ICD-10 codes.

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ICD-10 BMI Codes

- Z68.2 Body mass index (BMI) 20-29, adult
 - Z68.25-29.9 Body mass index (BMI) 25.0-29.9, adult
- Z68.3 Body mass index (BMI) 30-39, adult
 - Z68.30-39.9 Body mass index (BMI) 30.0-39.9, adult
- Z68.4 Body mass index (BMI) 40 or greater, adult
 - Z68.41 Body mass index (BMI) 40.0-44.9, adult
 - Z68.42 Body mass index (BMI) 45.0-49.9, adult
 - Z68.43 Body mass index (BMI) 50-59.9, adult
 - Z68.44 Body mass index (BMI) 60.0-69.9, adult
 - Z68.45 Body mass index (BMI) 70 or greater, adult

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Limitations of BMI

BMI is a height/weight ratio that is helpful for measuring risk in populations, but not in individuals

- Doesn't assess physical, mental, or functional health
- Doesn't provide information about how aggressive treatment should be

Sharma AM, Kushner RF. Int J Obes. 2009;33(3):289-295. Copyright © 2007 AAPA, TOS, NACE. All rights reserved.

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Beyond BMI: Impact of Excess Adiposity

Excess adipose disease: Increase in adiposity results in abnormal and pathologic physical forces

These forces can cause:

- Immobility
- Stress on weight-bearing joints
- Tissue compression and friction
- And much, much more...

Adapted from Baiy H, et al. 2020. <https://obesitymedicine.org/obesity-algorithm/>. Accessed December 1, 2020. Copyright © 2022 AAPA, TOS, NACE. All rights reserved.

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Beyond BMI: Impact of Excess Adiposity

Adiposopathy (sick adipose disease)

Metabolic distress with:

- Elevated blood pressure
- Dyslipidemia
- Elevated insulin levels
- Elevated blood sugar
- Increased oxidative stress
- And much, much more....

Adapted from Baiy H, et al. 2020. <https://obesitymedicine.org/obesity-algorithm/>. Accessed December 1, 2020. Copyright © 2022 AAPA, TOS, NACE. All rights reserved.

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Waist Circumference

Abdominal Obesity, Women: ≥35 inches ≥88 centimeters	Abdominal Obesity, Men: ≥40 inches ≥102 centimeters
Abdominal Obesity, Asian Women: ≥31.5 inches ≥80 centimeters	Abdominal Obesity, Asian Men: ≥35.5 inches ≥90 centimeters

Joshii Diabetes Center. <https://aad.joslin.org/en/jam-lat-mla/Asian-Imi-calculator>. Accessed December 1, 2020.
National Heart, Lung, and Blood Institute. http://www.nhlbi.nih.gov/health/educational/lose_wa/BMI/Imi_03.htm. Accessed December 1, 2020.
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Apply Obesity-specific Components to a History and Physical Exam

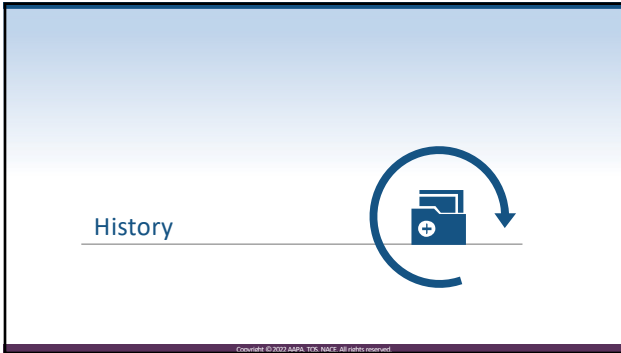
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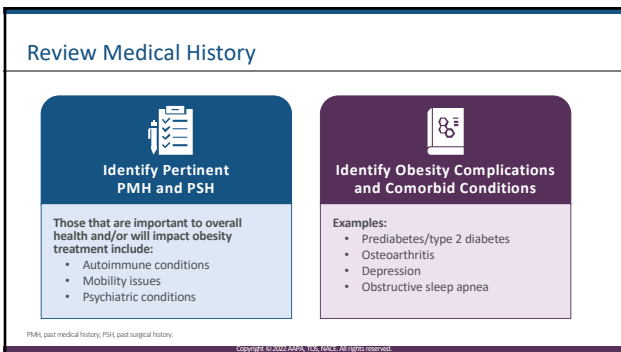
A Thorough Assessment Is the Foundation of Effective Treatment

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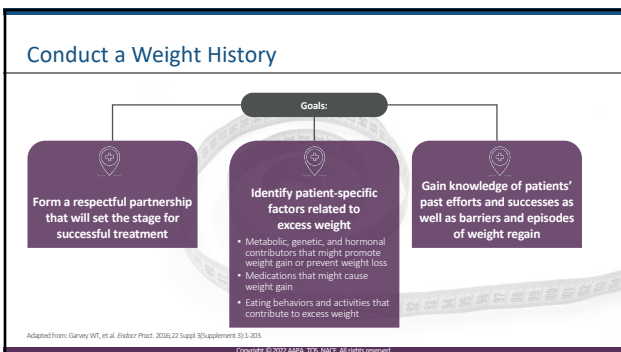
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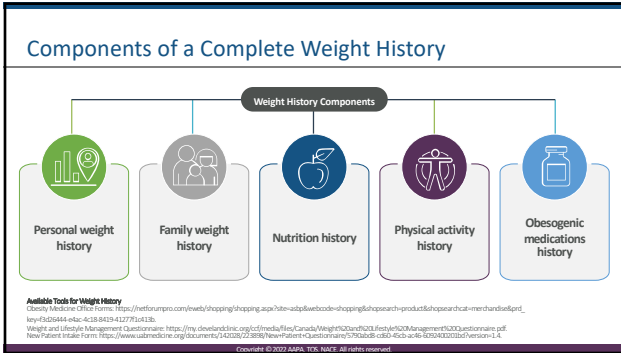
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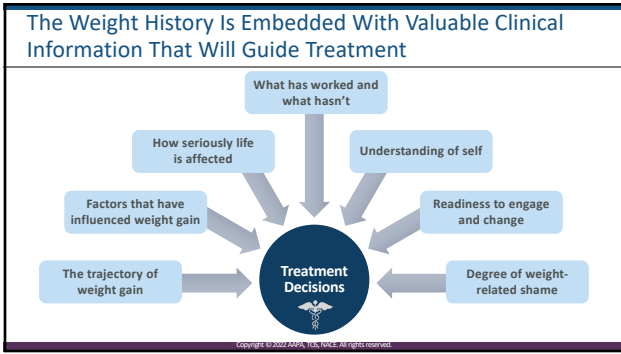
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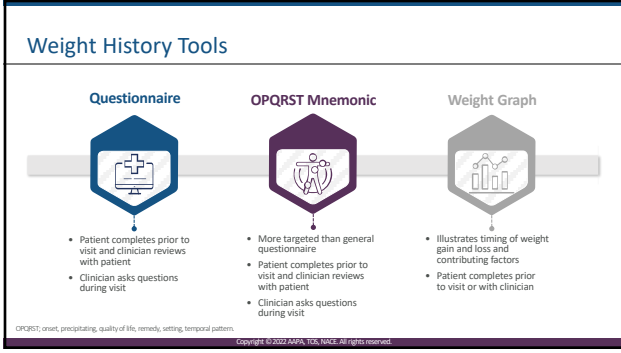
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Intake Form

WEIGHT HISTORY

At what age did you start struggling with your weight? _____
 Weight at age 21: _____ Highest Weight: _____ Current Weight: _____

Weight has increased:
 GRADUALLY OVER THE YEARS SUDDENLY OVER CERTAIN PERIODS OF TIME

What was going on during that/those that time(s)? _____

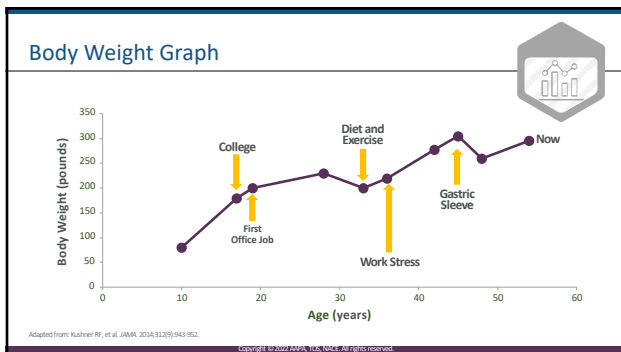
What behaviors and circumstances contributed to your weight gain?

List your previous attempts to lose weight. What specific aspects of these attempts worked/did not work for you?

Have you ever been able to lose weight and keep it off, or do you typically regain your weight after losing?

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Medication History

Fill in information for any weight loss medications you have used in the past.

Drug Name	How long did you take it?	Was it effective?	What, if any, side effects did you experience?
Phentermine			
Phentermine/topiramate ER			
Liraglutide			
Naltrexone/bupropion			
Other:			

ER, extended release. Copyright © 2007 AAPA, TOS, NACE. All rights reserved.

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Bariatric Procedures History

List any bariatric procedures you have had in the past (ie, gastric sleeve, gastric bypass, lap band).

Procedure	Date	Weight Prior to Procedure	Lowest Weight After Procedure

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Eating Patterns

Do you struggle with cravings? YES / NO

Do you struggle with feelings of fullness? YES / NO

Is there a time of day when it is more difficult to avoid overeating or to avoid less optimal food choices? YES / NO

If YES, when? _____

Is food volume a problem? YES / NO

Do you go back for seconds? YES / NO

Are your portions large? YES / NO

Who cooks most in your household? _____

Who shops for groceries in your household? _____

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Food Recall

Which meals do you eat nearly every day? Give times and typical contents of each meal.

Breakfast _____

Mid-morning Snack _____

Lunch _____

Mid-afternoon Snack _____


Dinner _____

Evening Snack _____

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Psychosocial



Do you ever eat more than what most people would consume in a short period of time? **SOMETIMES / OFTEN / NO**

Do you feel out of control when you do so? **SOMETIMES / OFTEN / NO**

Do you eat food in secret or hide the fact that you're eating? **SOMETIMES / OFTEN / NO**

Do you use vomiting, laxatives, diuretics, or excessive exercise to compensate for overeating? **SOMETIMES / OFTEN / NO**


Do you have a trigger weight? This would be a weight at which you start to get nervous because of unwanted attention. **YES / NO**

- If yes, what is that weight? _____

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Pertinent Medical History



History of pancreatitis? **YES / NO / UNSURE**

History of seizures? **YES / NO / UNSURE**

History of liver disease? **YES / NO / UNSURE**

History of gout? **YES / NO / UNSURE**

If YES, when was last flare: _____

Currently on medication for gout? **YES / NO**

Personal or family history of medullary thyroid cancer? **YES / NO / UNSURE**

FEMALES ONLY – is there any chance of pregnancy? **YES / NO / UNSURE**

Pregnancy prevention method (birth control, tubal ligation, etc.) _____

Currently taking any narcotics for pain control? **YES / NO**

History of kidney stones? **YES / NO / UNSURE**


History of kidney disease? **YES / NO / UNSURE**

History of Glaucoma? **YES / NO / UNSURE**

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Family History



Check all that apply for your family history (if known)

<input type="checkbox"/> Heart attack	<input type="checkbox"/> Stroke
<input type="checkbox"/> Diabetes	<input type="checkbox"/> Gout
<input type="checkbox"/> High blood pressure	<input type="checkbox"/> Polycystic ovarian disease
<input type="checkbox"/> High cholesterol	<input type="checkbox"/> Obesity/weight issues
<input type="checkbox"/> Other _____	<input type="checkbox"/> Family history unknown



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Life Stressors

Please circle any major life stressors in the last 12 months

- Serious injury
- Death of close friend/family member
- Divorce/separation
- Other _____
- Gain of new family member
- Major illness in the family
- Job change

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Readiness for Change

How serious is your weight problem? Circle the level that fits

- Not serious at all 0—1—2—3—4—5—6—7—8—9—10 Very serious/life threatening

At this time, how important is it for you to lose weight and keep it off?

- I want to lose weight 0—1—2—3—4—5—6—7—8—9—10 Most important issue if it isn't too hard in my life

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Readiness for Change


If it means you will reduce weight and keep it off, how willing are you to:

- Change your eating habits
Not at all willing 0—1—2—3—4—5—6—7—8—9—10 very willing
- Change your exercise habits
Not at all willing 0—1—2—3—4—5—6—7—8—9—10 very willing
- Rearrange your schedule
Not at all willing 0—1—2—3—4—5—6—7—8—9—10 very willing
- Log food and exercise daily
Not at all willing 0—1—2—3—4—5—6—7—8—9—10 very willing

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Intake Form



Is there one thing that you could do that would make a large difference in your weight situation? YES / NO

If "YES", what is it? _____

Why do you think you don't make that change? _____


What do you foresee as my role in helping you in your efforts to lose and maintain your weight? _____

What is your motivation? _____

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Perform Obesity-specific Physical Exam



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Use Appropriate-sized Equipment

- Have large gowns available
- Use appropriately-sized blood pressure cuffs
- Have measuring tapes that are large enough to measure with ease

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Which of the following can be used as a tool to monitor the efficacy of obesity management beyond the scale?

- A. Edmonton obesity staging
- B. Waist circumference
- C. AACE obesity staging
- D. All of the above

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Waist Circumference (WC)

Recommendation is that WC be measured as part of the initial assessment and be used to monitor the efficacy of obesity management in individuals with preobesity (overweight) and obesity with a BMI <35 kg/m²

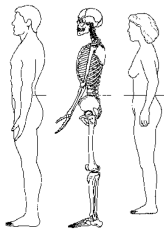
WC can be a good tracking tool beyond the scale for all individuals with obesity

Klein S, et al. Am J Clin Nutr. 2007;85(5):1187-1202.
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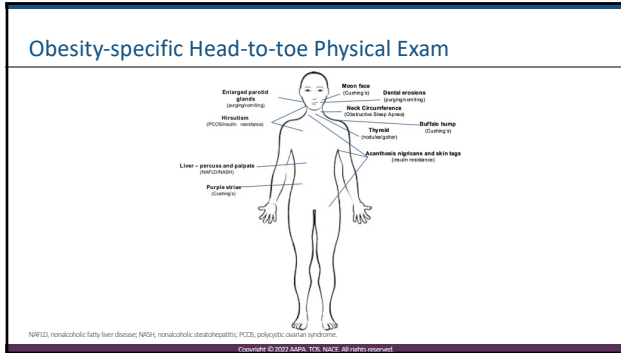
How to Perform Waist Circumference Measurement

- Patient should be standing with arms hanging at his/her sides
- Place tape measure on bare skin with measuring tape that doesn't easily stretch
- Locate upper hip bone and top of the right iliac crest
- Place tape parallel to floor around abdomen through top of left iliac crest
- Keep tape snug, but not tight
- Measure at end of expiration

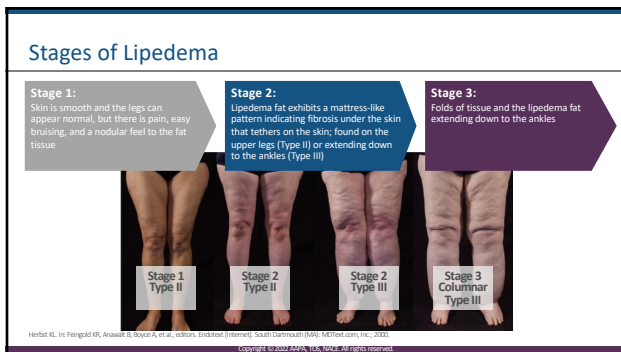


Centers for Disease Control and Prevention. <https://www.cdc.gov/nchs/data/ntats/manuals/anthro.pdf>. Accessed December 1, 2020.
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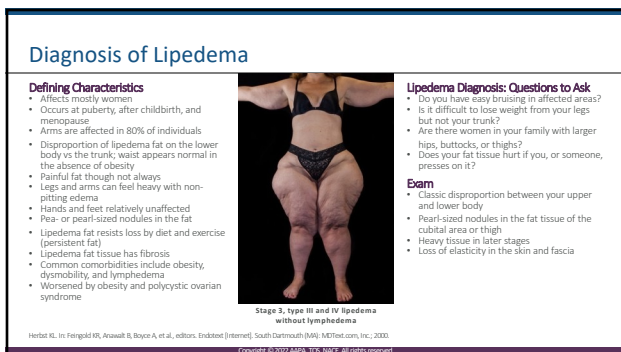
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Perform Adiposity-related Laboratory Evaluation



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Obesity-specific Lab Orders



Adiposity-relevant Blood Testing

- CMP
- Hemoglobin A1c
- Lipid Panel
- Uric acid
- Thyroid stimulating hormone (TSH)
- Vitamin D 25 OH

CMP, complete metabolic panel.




General Laboratory Testing

- Complete blood count
- Urinalysis
- Urine for microalbumin

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Individualized Blood Testing



- Fasting insulin, C-peptide, HOMA-IR score
- One milligram (mg) overnight dexamethasone cortisol suppression test
- Testosterone free and total + FSH/LH for men with impotence or physical findings of hypogonadism

FSH, follicle-stimulating hormone; HOMA-IR, homeostatic model assessment of insulin resistance; LH, luteinizing hormone.

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Referrals

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Potential Referrals

- Sleep specialist
- Endocrinologist
- Physical therapist
- Exercise physiologist
- Psychologist
- Psychiatrist
- Obesity medicine specialist
- Etc....

• These are being driven by your thorough history and physical!

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Other Potential Screening Tools

These can help to determine if further referrals are needed:

- Adverse Childhood Event (ACE)
- Bipolar screening: Mood Disorder Questionnaire
- Depression screening: PHQ9
- Binge eating screening: BED7
- Sleep apnea screening: Epworth/STOP BANG

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Identify a Patient's Stage of Obesity

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Staging Systems

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Staging Systems

Edmonton Obesity Staging System (EOSS)
Designates five obesity stages (0-4)

AACE Obesity Staging System
Four stages (0-4): Complication specific

Sharma AM, Kushner RF. Int J Obes. 2009;33(3):289-295. Garvey WT, et al. Endocr Pract. 2016;22 Suppl 30(Supplement 3):1-203.

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AACE Staging System

Diagnosis in medical record:

- Obesity
- BMI
- Obesity-related complications (ORC)

ICD-10 Code	ICD-10 Description	ICD-10 Clinical Component	Disease Stage	Chronic Disease Phase of Presentation	Suggested Therapy (Based on clinical judgment)
E66	Obesity		Normal weight (BMI < 25)	Primary	Healthy lifestyle: healthy diet, regular physical activity
E66.0	Overweight	Evaluates for presence or absence of obesity-related complications	Overweight (BMI 25-29.9)	Secondary	Lifestyle therapy: healthy diet, regular physical activity, behavioral interventions
E66.1	Obesity stage 1	Metabolic syndrome, Type 2 diabetes, Hypertension, Dyslipidemia, Cardiovascular disease	Obesity stage 1 (BMI 30-34.9)	Secondary	Lifestyle therapy: healthy diet, regular physical activity, behavioral interventions; Weight loss medications; Orlistat; Prescription weight loss; Prescription appetite suppressants
E66.2	Obesity stage 2	Nonalcoholic fatty liver disease, Polycystic ovary syndrome, Insulin resistance, Osteoarthritis, Obstructive sleep apnea, Cardiovascular disease, Chronic kidney disease	Obesity stage 2 (BMI 35-39.9)	Tertiary	Lifestyle therapy: healthy diet, regular physical activity, behavioral interventions; Weight loss medications; Orlistat; Prescription weight loss; Prescription appetite suppressants; Bariatric surgery
E66.3	Obesity stage 3	Nonalcoholic fatty liver disease, Polycystic ovary syndrome, Insulin resistance, Osteoarthritis, Obstructive sleep apnea, Cardiovascular disease, Chronic kidney disease, Type 2 diabetes, Hypertension, Dyslipidemia	Obesity stage 3 (BMI ≥ 40)	Tertiary	Lifestyle therapy: healthy diet, regular physical activity, behavioral interventions; Weight loss medications; Orlistat; Prescription weight loss; Prescription appetite suppressants; Bariatric surgery

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Edmonton Obesity Staging System

- Designates five obesity stages (0-4)
- Utilizes a staging tool

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Obesity Stages

Stage 0:	Stage 1:
<p>No sign of obesity-related risk factors</p> <ul style="list-style-type: none"> No physical symptoms No psychological symptoms No functional limitations 	<p>Mild health impairment</p> <ul style="list-style-type: none"> Subclinical risk factors: <ul style="list-style-type: none"> Impaired fasting glucose Prediabesity Prehypertension Elevated liver enzymes Mild psychological symptoms: <ul style="list-style-type: none"> E.g.: Mild distress about weight and/or size Quality of life mildly impacted: <ul style="list-style-type: none"> Mild functional limitations Dyspnea on moderate exertion Well-being mildly impaired Minor aches & pains

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Obesity Stages

Stage 2:

Established obesity-related complications & comorbidities

- Hypertension
- Type 2 diabetes
- OSA
- Osteoarthritis
- GERD
- Depression
- Eating disorders
- Anxiety
- Moderate isolation due to weight & health
- Moderate impairment of daily activities
- Knee, hip, back pain
- Fatigue

Stage 3:

Significant health impairment

<p>End-organ damage</p> <ul style="list-style-type: none"> Diabetic complications MI Heart failure Incapacitating osteoarthritis 	<p>Psychopathology</p> <ul style="list-style-type: none"> Major depression Suicidal ideation 	<p>Significantly impaired well-being:</p> <ul style="list-style-type: none"> Limited mobility Considerable difficulty with daily activities Unable to work due to disability
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©2012, gastroenterological reflux disease, CSA, obstructive sleep apnea, MI, myocardial infarction. Sharma AM, Kushner RF. Int J Obes. 2005;33(3):289-295. Copyright © 2007 AAPA, TOS, NACE. All rights reserved.

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Stage 4


Stage 4: Severe health impairment

 End-stage disease & disability	 Severe disabling psychopathology	 Severe functional limitations Severely impaired well-being
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Determining EOSS Stage



- Identify all obesity-related physical and psychological impacts, complications, and comorbidities
- Assess functional limitations
- Use the staging tool to identify the highest level in any of the three areas of health:
 - Physical
 - Mental
 - Functional

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Summary

Diagnose obesity and document in medical record

Complete a comprehensive, stepwise assessment that includes history, physical exam, and labs

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Thank you!

Remember to complete the post-test and evaluation to receive credit and your certificate.

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