Today's Agenda

- Welcome
- Overview of Technology and Reminders
- Diagnosing Obesity
- Case Presentation

Technology: Your Zoom Window

Sound
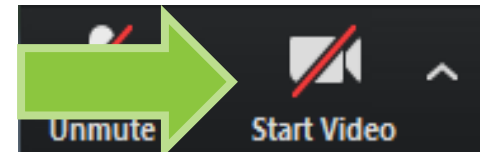- Muting/Unmuting
- Press *6 to unmute phone audio

Webcam
- Please share!

Chat
- Questions
- Sharing resources/ideas
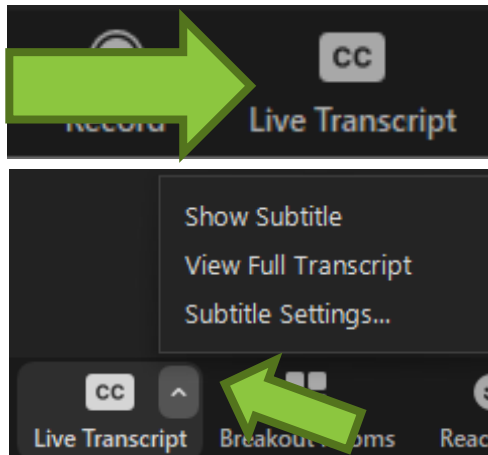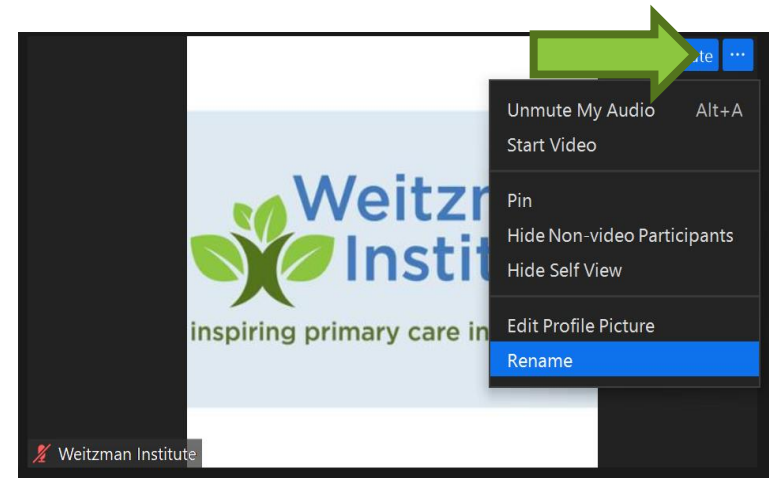
Technology: Your Zoom Window

Closed Captioning and Live Transcript

- Click on the caret or icon

- Select 'Show Subtitles' for closed captioning on screen

- Select 'View Full Transcript' for live transcript pop-out window

Change Your Name

- Click on the three dots

- Click 'Rename'

- Type in your name

- **Please change your name to "First Last–Healthcare Center"**

Important Program Logistics

Submitting a Case

- **What:** Any patient or client case related to *obesity or weight management* that you find educational, challenging, or interesting!

- **When**: Schedule ahead of time with Humyra, hali@mwhs1.com

- **How:** Virtual Case Form sent to you via email

- Do <u>NOT</u> include patient identifying information

Continuing Education Credits

In support of improving patient care, this activity has been planned and implemented by The France Foundation and Moses/Weitzman Health System, Inc. and its Weitzman Institute. The activity is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

This series is intended for clinical leadership, primary care providers, behavioral health providers, dietitians, nurses, QI/Technical teams, and other members of the care team.

Please complete the post-session survey and claim your CE certificate on the WeP after today's session.

Program Logistics Post-Session:

Completing the Session Evaluation and Claiming Your CME/CE Credit

After the live session has ended:

- Select the **Next** button

  - OR

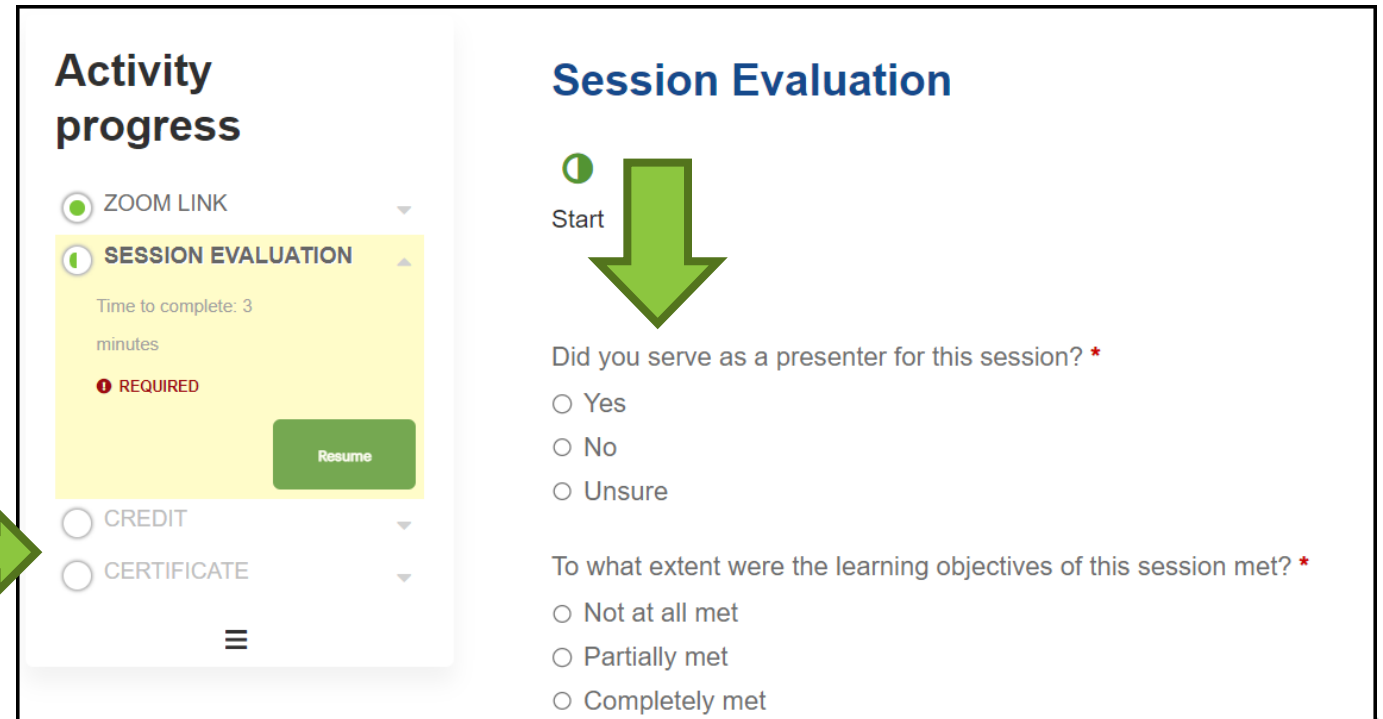- Select **Session Evaluation** in the left-hand navigation bar

Program Logistics Post-Session:

Completing the Session Evaluation and Claiming Your CME/CE Credit

- Complete the questions in the session evaluation

- Select the **Submit** button at the bottom of the evaluation

- View your credits awarded and download your certificate by selecting them in the left-hand navigation bar

Program Logistics: Session Recordings and Materials

All session recordings and materials shared during the session will be available on the Weitzman Education Platform <u>within one week</u> of each session

- Return to the **Overview** tab of the ECHO session, *Weitzman ECHO Weight Management in Community Health (October 10, 2024)*
- Scroll down to the **Session Recording** and **Session Resources** headers

You will then be able to click on **Session Recording** and **Session Resources** listed below the headers to access the resources.

Instructions will be shared with you after this session.

Overview   Schedule   Faculty   Accreditation   Continue

Program Information

In collaboration with The France Foundation, the Weitzman Institute is offering Weitzman ECHO Weight Management in Community Health. This ECHO series is a no-cost, 10-session continuing education series for clinicians who face significant challenges in community health care concerning the formal diagnosis and management of obesity. This learning series connects primary care medical providers and care team members to a community of peers and subject-matter experts to improve providers' weight management with patients. At each session, subject-matter experts provide guidance from a multidisciplinary team approach to address patients; complex health needs related to obesity to better assess, treat, and care for patients. The Weitzman ECHO Weight Management in Community Health will meet for 1-hour virtually every 2nd Thursday monthly beginning July 11th.

This ECHO series is now enrolling primary care medical providers, behavioral health providers, and other care team members including dietitians and pharmacists. All providers working in primary care settings are encouraged to join and participate. CME, CNE, CPE, and CEU credits will be provided for physicians, nurse practitioners, physician assistants, nurses, and registered dietitians, among others, by Moses/Weitzman Health System Inc., an accredited provider through Joint Accreditation for Interprofessional Continuing Education.

This activity meets the 2nd Thursday of every month from 1-2pm ET.

To access the Zoom link for this live session, select the Continue tab.

Agenda

The Agenda will be posted within 2 days of the ECHO session

Presentation Slides

The slide deck is available at the bottom of this page.

Session Recording

The recording link will be available here within 1 week after the live session.

Session Resources

Any resources that were shared during the live session will be made available at the bottom of the page.

Disclosure

- With respect to the following presentation, there has been no relevant (direct or indirect) financial relationship between the faculty listed above or other activity planners and any ineligible company in the past 24 months which would be considered a relevant financial relationship.

- The views expressed in this presentation are those of the faculty and may not reflect official policy of Moses Weitzman Health System.

- We are obligated to disclose any products which are off-label, unlabeled, experimental, and/or under investigation (not FDA approved) and any limitations on the information that are presented, such as data that are preliminary or that represent ongoing research, interim analyses, and/or unsupported opinion.

Acknowledgements

The Weitzman Institute is Committed to Justice, Equity, Diversity & Inclusion

At the Weitzman Institute, we value a culture of equity, inclusiveness, diversity, and mutually respectful dialogue. We want to ensure that all feel welcome.

If there is anything said in our program that makes you feel uncomfortable, please let us know.

Series Learning Objectives

- Outline factors that impact obesity risk and outcomes

- Identify strategies to address barriers to initiating discussions of weight with patients with obesity in the community health setting

- Utilize evidence-based interventions to diagnose patients with obesity in the community health setting

- Identify effective multi- and interdisciplinary strategies to manage the care of patients with obesity in the community health setting

Session Learning Objectives

- Utilize evidence-based interventions to diagnose patients with obesity in the community health setting

- Evaluate various screening tools for obesity and determine their appropriateness in different clinical scenarios

Unmet Diagnostic Needs

Only 55% of people with obesity receive a formal diagnosis, and even fewer receive long-term obesity care...

People with obesity, variable base sizes

100%	71%	55%	24%
Total people with obesity	Discussed weight in the past 5 years	Diagnosed with obesity	Scheduled follow-up appointment to discuss weight
(n=3,008)	(n=3,008)*	(n=2,185)†	(n=2,185)†
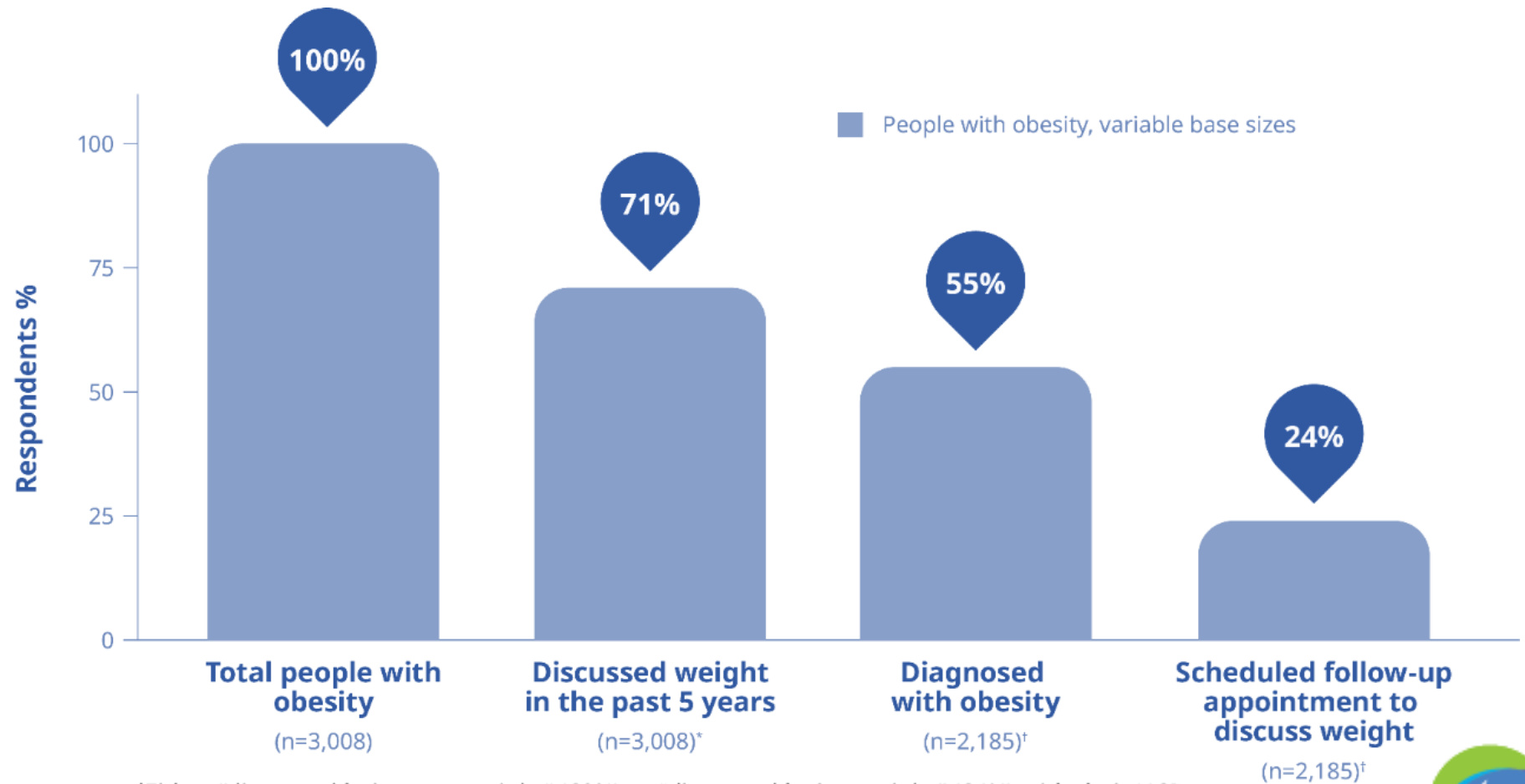
*Either "discussed being overweight" (68%) or "discussed losing weight" (64%) with their HCP.
†Among the 71% who have had a conversation with their HCP about obesity in the past 5 years.

Kaplan LM, et al. *Obesity (Silver Spring).* 2018;26(1):61-69.

Guideline Recommendations

USPSTF:

- Recommends screening all adults for obesity
- Clinicians should offer or refer patients with a body mass index (BMI) of 30 kg/m^2 or higher to intensive, multicomponent behavioral interventions
- The USPSTF found inadequate evidence on optimal screening intervals, but annual screening is commonly recommended

ACC/AHA:

- Annual screening of all adults for obesity using BMI measurement and waist circumference
- Consider using the Edmonton Obesity Staging System

ACA = American College of Cardiology; AHA = American Heart Association; USPSTF = US Preventative Services Task Force

Yao A. *Ann Med Surg (Lond)*. 2012;2(1):18-21; Wharton S, et al. *CMAJ*. 2020;192(31):E875-E891.

Edmonton Obesity Staging System

- Assesses the impact of adiposity-related comorbidities on individuals regardless of weight

- Considers metabolic, physical, and psychological considerations to determine optimal treatment

Canning KL, et al. *J Obes*. 2015;2015:619734.
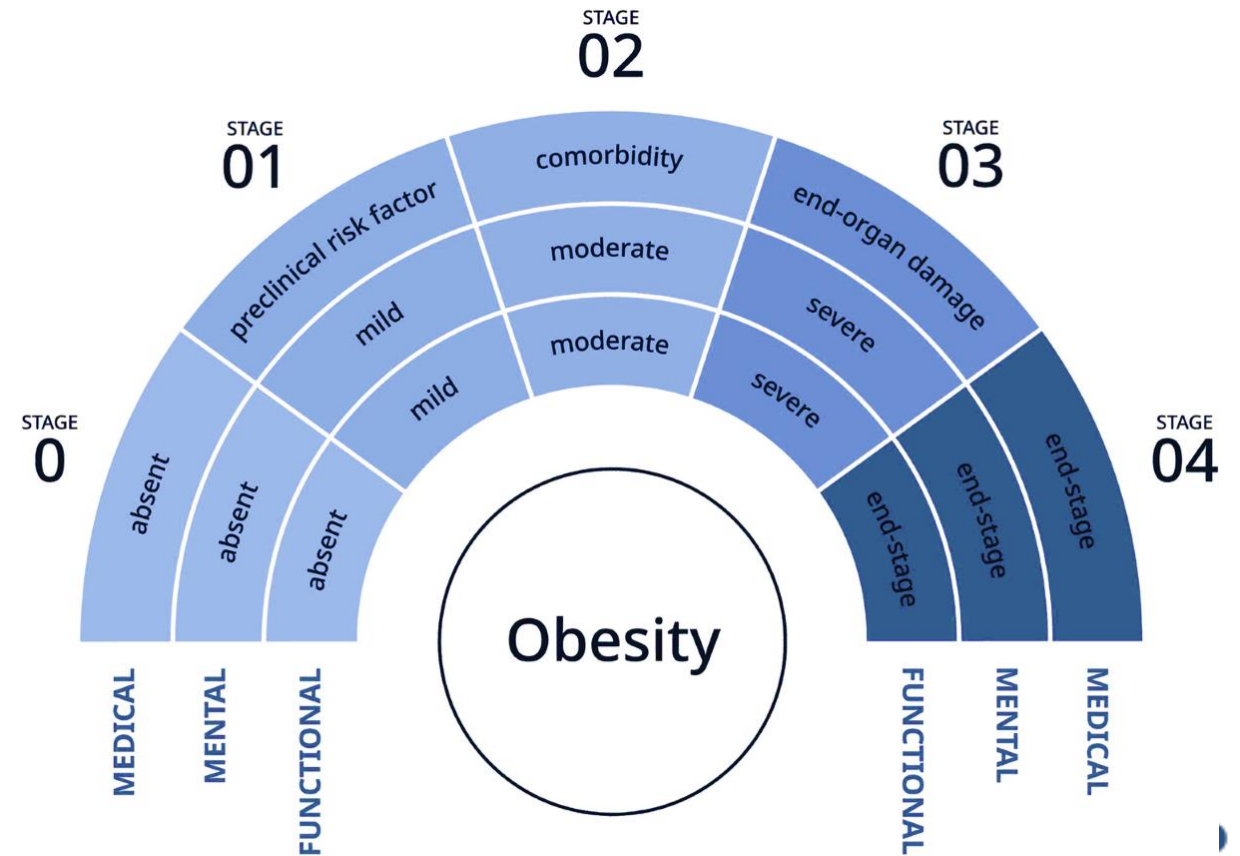
AACE/ACA Screening Algorithm

Garvey WT, et al. *Endocr Pract*. 2016;22 Suppl 3:1-203.
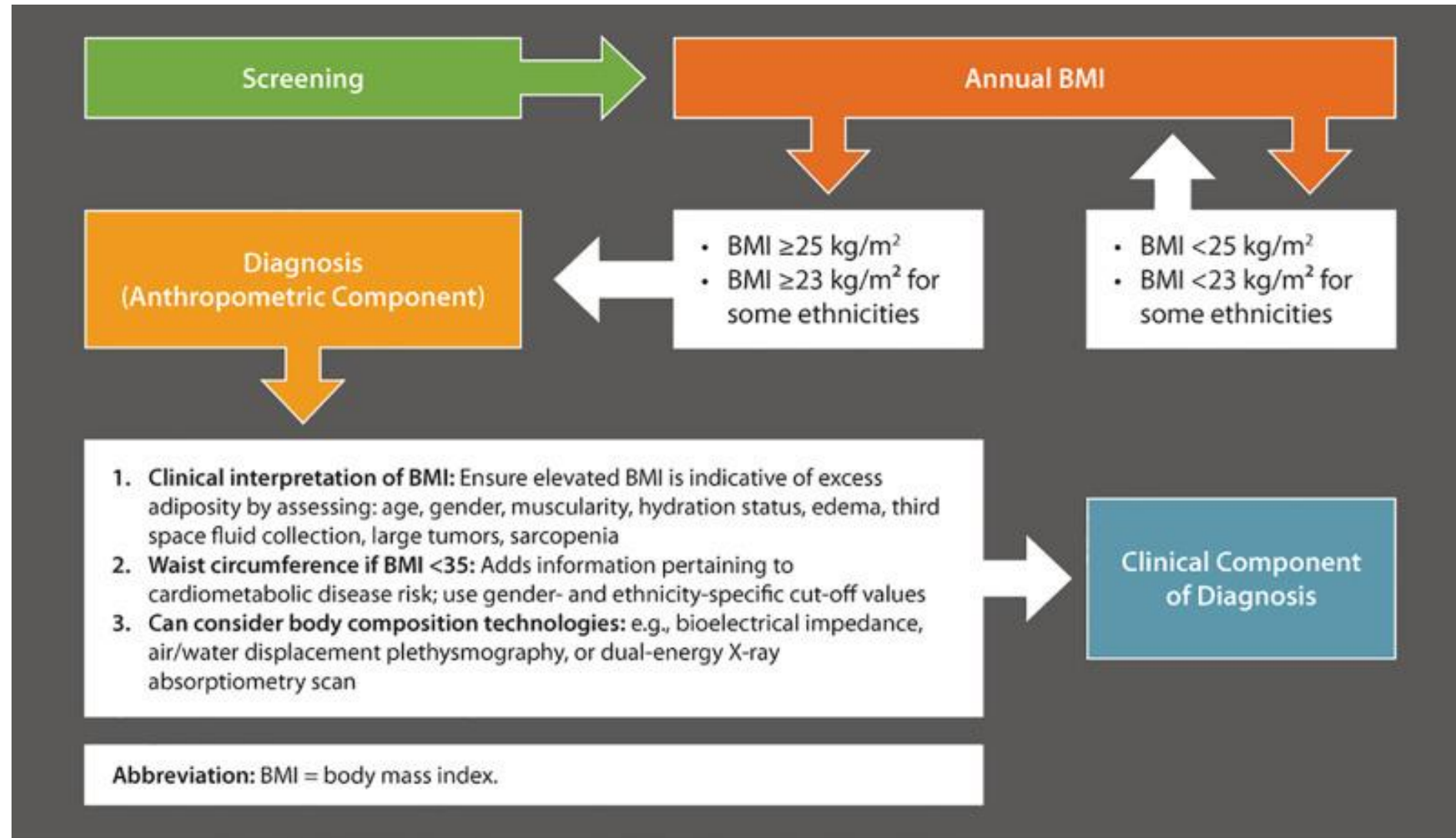
Screening Tools

- BMI

- Waist circumference

- Waist-to-hip ratio

- Skinfold measurements

- Bioelectrical impedance analysis (BIA)

MedlinePlus. Accessed May 21, 2024. https://medlineplus.gov/lab-tests/obesity-screening/; Hu F. In: Hu F, ed. Obesity Epidemiology. New York City: Oxford University Press, 2008; 53–83.

Doctor Appointment Overview

- Obesity screenings typically occur as part of routine checkups that include physical exams

- Clinicians will review:
  - Medical history
    - » Family history
    - » Comorbidities
  - Current medications
  - Personal habits
    - » Diet, stress, exercise, sleep quality

- Ordering tests
  - HDL/LDL, triglycerides, HbA1c, TSA

MedlinePlus. Accessed May 21, 2024. https://medlineplus.gov/lab-tests/obesity-screening/

Body Mass Index (BMI)

BMI is generally accepted as the 1st step to determine the degree of overweight and obesity

It is a practical and useful determinant for increased risk of morbidity and mortality on the population level

...but less so on the individual level

Body mass index (BMI) is the ratio of weight (kg) to height (m^2).
If using lbs and inches, multiply by 703.

SEVERE THINNESS	MODERATE THINNESS	MILD THINNESS	NORMAL	OVERWEIGHT	OBESE CLASS I	OBESE CLASS II	OBESE CLASS III
< 16	16 - 17	17 - 18.5	18.5 - 25	25 - 30	30 - 35	35 - 40	> 40

Global BMI Mortality Collaboration, et al. *Lancet.* 2016;388(10046):776-786.
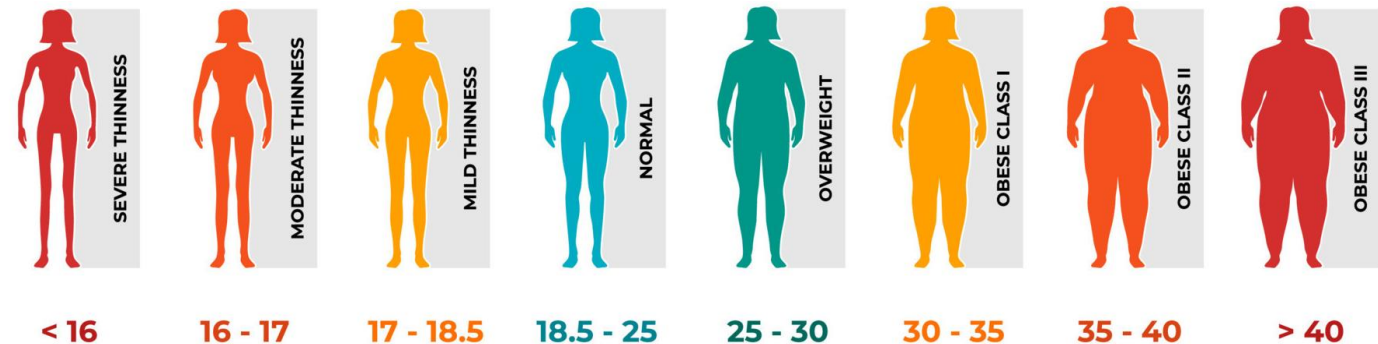
Diagnostic Categories Based on BMI

No Obesity

Normal

Patients who present with overweight (BMI 25 kg/m^2–29.9 kg/m^2) with NO complications

Stage 0 Overweight

Patients who present with obesity (BMI ≥ 30 kg/m^2) with NO complications

Stage 0 Obesity

Patients with a BMI ≥ 25 kg/m^2, with one or more mild-to-moderate complication or who are being treated effectively, with moderate weight loss

Stage 1 Obesity

Patients with a BMI ≥ 25 kg/m^2, who have at least one severe complication or who require more significant weight loss for effective treatment

Stage 2 Obesity

Weir CB, Jan A. BMI Classification Percentile And Cut Off Points. [Updated 2023 Jun 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK541070/

What BMI Doesn't Take Into Consideration

Bone

Muscle mass

Diet and exercise

Pace

Body fat

Genetics & race
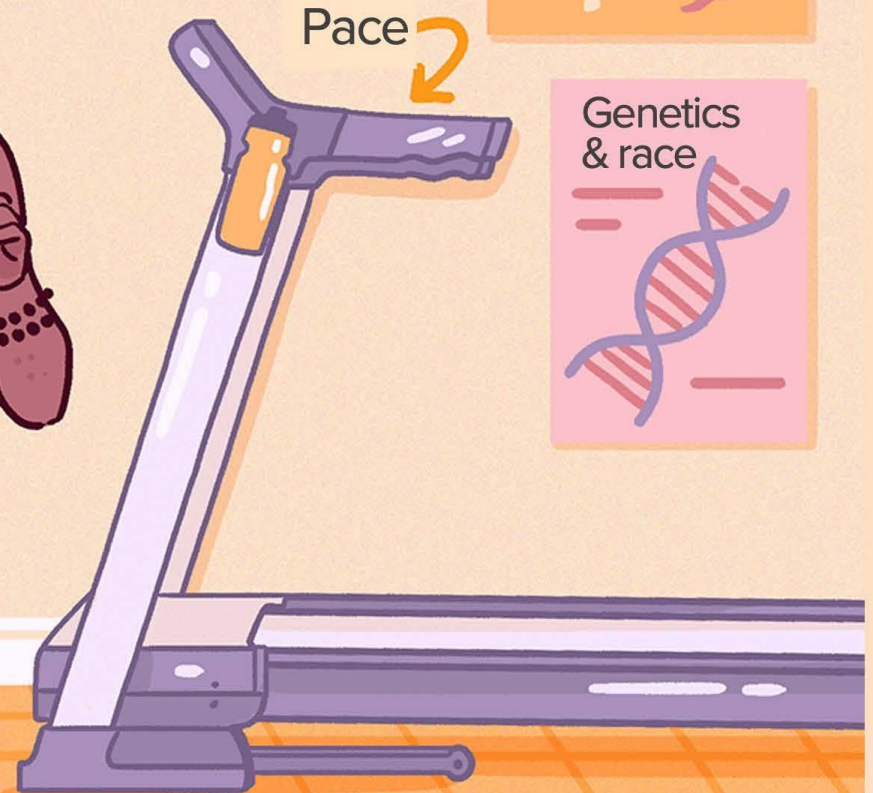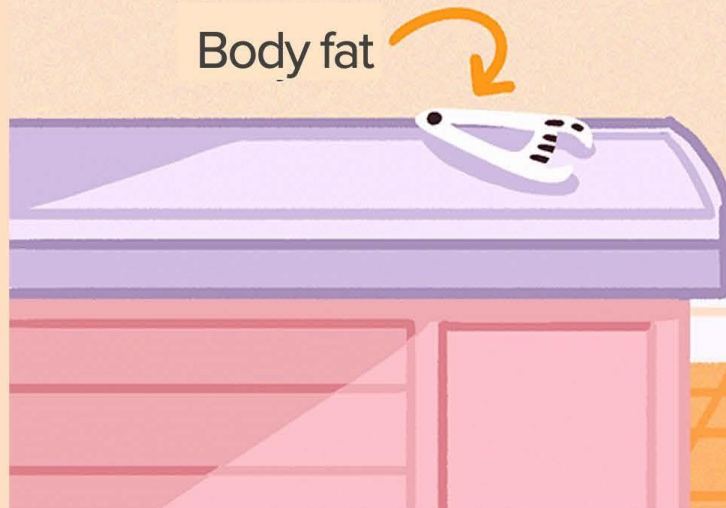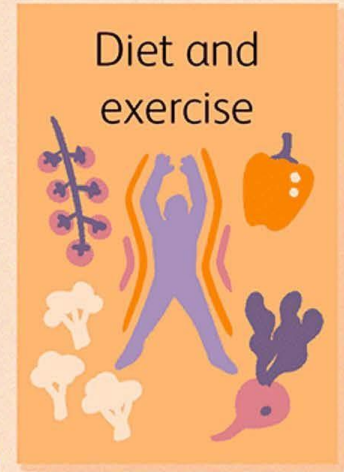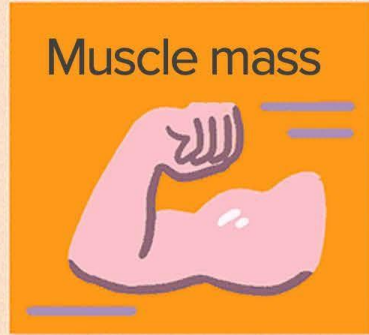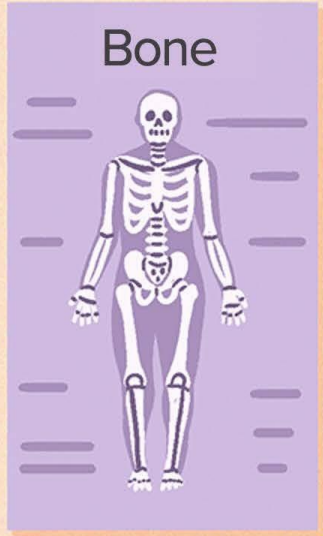
Hazard Ratios for Waist Circumference and All-Cause Mortality*
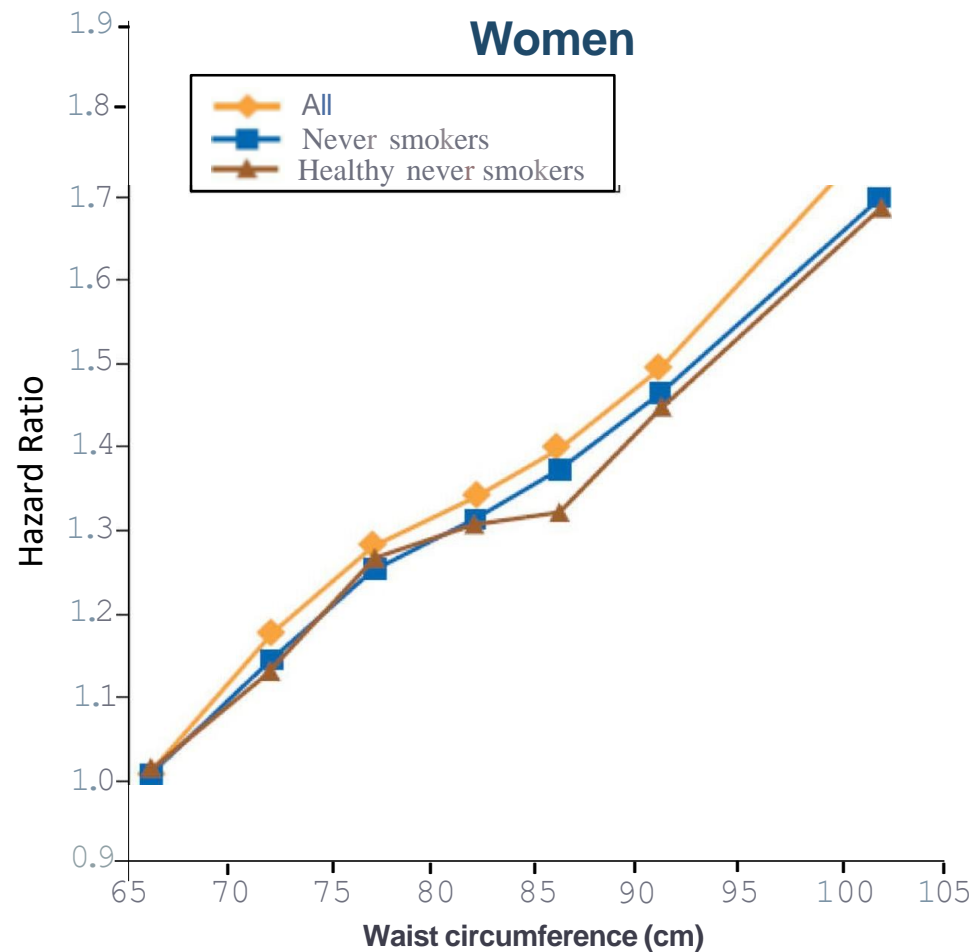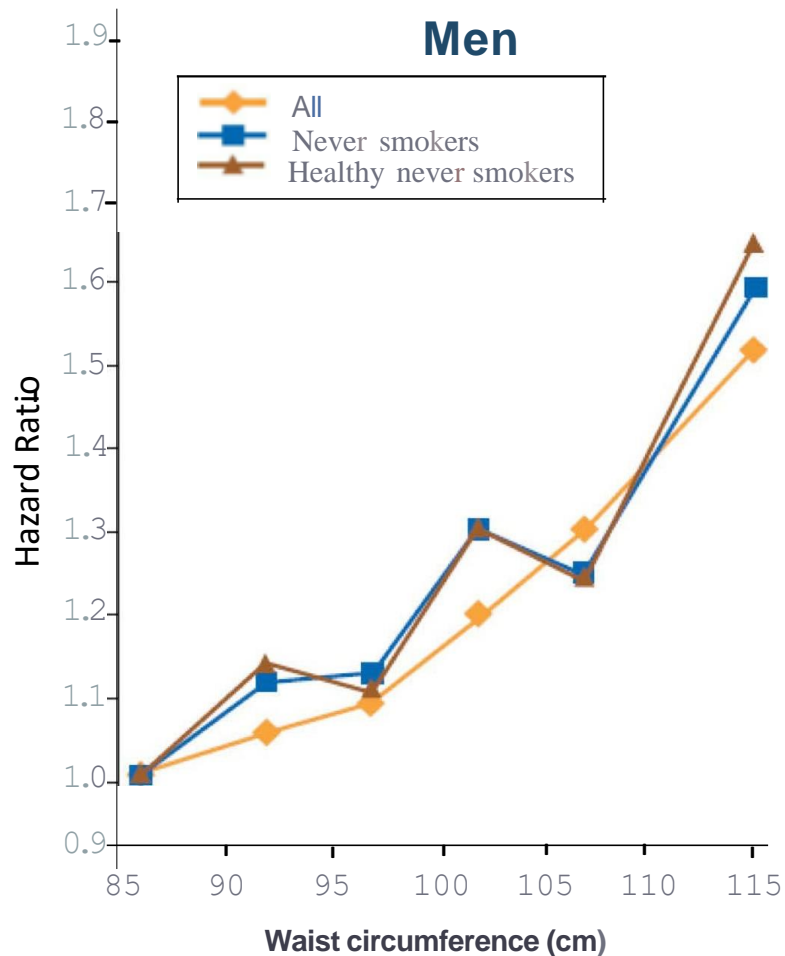
*Ratios based on lowest circumference as reference group (<90 for men, <70 for women) and adjusted for smoking status, physical activity, and BMI
Cerhan JR, et al. *Mayo Clin Proc*. 2014.

How to Measure Waist Circumference

- Locate upper hip bone and top of right iliac crest

- Place measuring tape in horizontal plane around abdomen at iliac crest

- Ensure tape is snug, but does not compress the skin

- Tape should be parallel to the floor

- Record measurement at the end of a normal expiration

NHLBI Obesity Education Initiative. *NIH.* 2000.

Women >35 inches increased risk*   Men >40 inches increased risk*
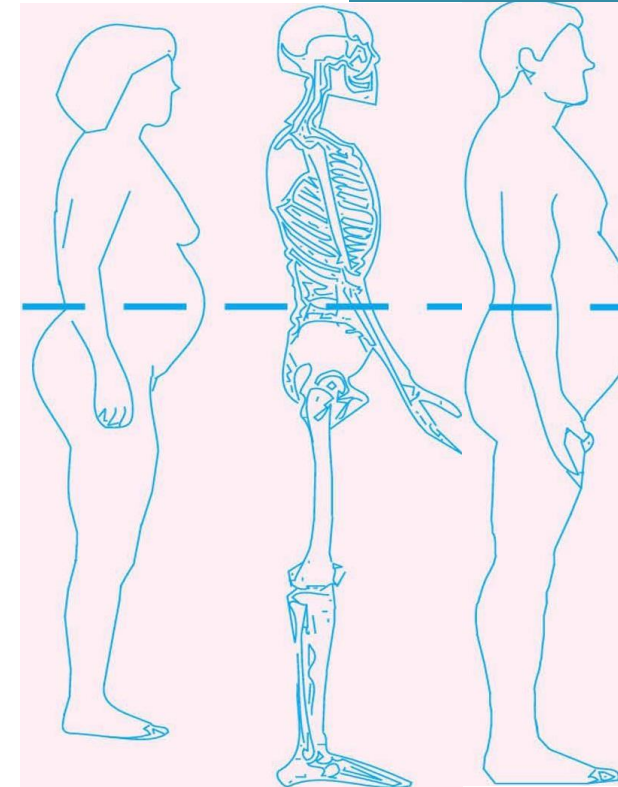
Measuring-Tape Position for Waist (Abdominal) Circumference in Adults

*Ethnic/age-related differences affect predictive validity of WC as surrogate for abdominal fat

Strengths and Limitations: Waist Circumference

Strengths:

- Easy and inexpensive

- Strongly correlates with body fat in adults

- Predicts disease and death, as shown by studies

Limitations:

- Measurement accuracy is operator-dependent and may vary

- Lacks comparison standards for children

- Less accurate for individuals with a BMI of 35 or higher

MedlinePlus. Accessed May 21, 2024. https://medlineplus.gov/lab-tests/obesity-screening/; Hu F. In: Hu F, ed. Obesity Epidemiology. New York City: Oxford University Press, 2008; 53–83.

Disease Risk Relative to Normal Weight and Waist Circumference

Weight	BMI (kg/m²)	Obesity Class	Disease Risk by Waist Size	
			Men ≤102 cm (≤40 in.) Women ≤88 cm (≤35 in.)	Men >102 cm (>40 in.) Women >88 cm (>35 in.)
Underweight	<18.5			
Normal	18.5–24.9			
Overweight	25.0–29.9		Increased	High
Obesity	30.0–34.9	I	High	Very high
	35.0–39.9	II	Very high	Very high
Extreme obesity	>40	III	Extremely high	Extremely high

BMI=body mass index.

On Exam (Patient Example)

Weight: 234 lbs

Height: 70"

WC: 45"

BMI: 34

Patient above has a BMI of 34 and waist circumference of 114.3 cm (45 inches)

Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults-The Evidence Report. *Obes Res.* 1998;6(suppl 2).

Waist-to-Hip Ratio

- Like waist circumference, the waist-to-hip ratio (WHR) is used to measure abdominal obesity
- To calculate WHR, measure the waist and the hips (at the widest part of the buttocks), then divide the waist measurement by the hip measurement

Health risk	Men	Women
Low	0.95 or lower	0.80 or lower
Moderate	0.96-1.0	0.81-0.85
High	1.0 or higher	0.86 or higher

MedlinePlus. Accessed May 21, 2024. https://medlineplus.gov/lab-tests/obesity-screening/; Hu F. In: Hu F, ed. Obesity Epidemiology. New York City: Oxford University Press, 2008; 53–83.

Strengths and Limitations: Waist-to-Hip Ratio

Strengths:

- Correlates well with body fat measured by accurate methods
- Inexpensive

Limitations:

- Prone to measurement error due to requiring two measurements
- Harder to measure hips than waist
- Complex interpretation, as increased ratio can stem from abdominal fat or reduced muscle mass
- Less accurate in individuals with BMI of 35 or higher

MedlinePlus. Accessed May 21, 2024. https://medlineplus.gov/lab-tests/obesity-screening/; Hu F. In: Hu F, ed. Obesity Epidemiology. New York City: Oxford University Press, 2008; 53–83.

Skin-Fold Measurements

- Uses a special caliper to measure the thickness of a "pinch" of skin and the fat beneath it at specific body areas (trunk, thighs, front and back of the upper arm, and under the shoulder blade)

- Equations are then used to estimate body fat percentage based on these measurements

Category	Males (% body fat)	Females (% body fat)
Essential Fat	2%-5%	10%-13%
Athlete	6%-13%	14%-20%
Fitness	14%-17%	21%-24%
Acceptable	18%-24%	25%-31%
Obesity	> 25%	> 32%

MedlinePlus. Accessed May 21, 2024. https://medlineplus.gov/lab-tests/obesity-screening/; Hu F. In: Hu F, ed. Obesity Epidemiology. New York City: Oxford University Press, 2008; 53–83.

Strengths and Limitations: Skin-Fold Measurements
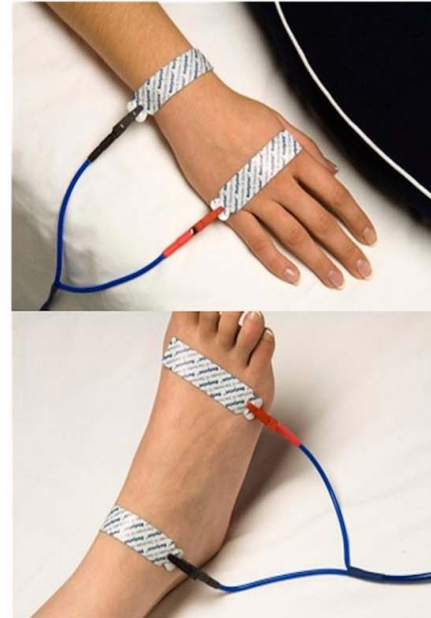
Strengths:

- Convenient
- Safe
- Inexpensive
- Portable

Limitations:

- Not as accurate or reproducible as other methods
- Very difficult to measure in individuals with a BMI of 35 or higher

MedlinePlus. Accessed May 21, 2024. https://medlineplus.gov/lab-tests/obesity-screening/; Hu F. In: Hu F, ed. Obesity Epidemiology. New York City: Oxford University Press, 2008; 53–83.

Bioelectrical Impedance Analysis

- Lean body mass conducts electricity better than fat mass due to higher water content

- BIA devices calculate body fat percentage by analyzing impedance alongside factors like height, weight, age, and gender

Coppini LZ, et al. *Curr Opin Clin Nutr Metab Care*. 2005;8(3):329-332; Hu F. In: Hu F, ed. Obesity Epidemiology. New York City: Oxford University Press, 2008; 53–83.

Strengths and Limitations: BIA

Strengths:

- Convenient
- Noninvasive
- Safe
- Relatively inexpensive

Limitations:

- Accuracy is affected by factors like hydration status, recent food/fluid intake, and body position during measurement
- Less accurate in individuals with BMI of 35 or higher

Coppini LZ, et al. *Curr Opin Clin Nutr Metab Care*. 2005;8(3):329-332; Hu F. In: Hu F, ed. Obesity Epidemiology. New York City: Oxford University Press, 2008; 53–83.

Imaging Methods

MRI:

- Considered the reference standard for assessing total and regional adipose tissue distribution
  - Strengths: No ionizing radiation, excellent soft tissue contrast, quantifies ectopic fat
  - Limitations: Expensive, longer scan times, limited ability to accommodate severe obesity

DEXA:

- Dual energy X-ray absorptiometry
- Utilizes two low-dose X-ray beams to estimate fat mass, lean mass, and bone mineral density
  - Strengths: Accurate, distinguishes fat and lean tissue
  - Limitations: Cannot differentiate subcutaneous and visceral fat, limited ability to accommodate severe obesity, radiation exposure

CT:

- Allows measurement of specific fat depots like visceral and subcutaneous abdominal fat
  - Strengths: High spatial resolution, quantification of ectopic fat
  - Limitations: Radiation exposure, limited ability in severe obesity

Hu F. In: Hu F, ed. Obesity Epidemiology. New York City: Oxford University Press, 2008; 53–83; Pereira et al. *Sci Rep*. 2023;13(1):11147; Silver HJ, et al. *Diabetes Metab Syndr Obes*. 2010;3:337-347.

Key Takeaways

- Actively identify and address the presence of abnormal BMI in your clinical thought process at each visit

- Understand the clinical implications and limitations of BMI and other measurements of obesity

- Classification and identification of obesity should be the initial step to further understand metabolic disease risk in each individual patient

Patient Information: Male, 38 Years Old

Main Question: What are recommendations for a patient with class III obesity who hasn't lost weight despite lifestyle changes and GLP-1 therapy?

Medical Background:

Pertinent Medical History/Diagnoses:
- Hypertension
- History of depression and anxiety
- Patient has high functioning intellectual disability
- DM type II
- Obesity class III, BMI 59.9
- Initial weight: 394 lbs (June 2024)

Medications:
- Amlodipine 10 mg daily
- Aripiprazole 30 mg daily
- Dapagliflozin 10 mg daily
- Fluoxetine 80 mg daily
- Insulin lispro 15 U TID
- Insulin glargine 45 U HS
- Metformin ER 1000 mg BID
- Tirzepeptide 15 mg weekly
- Trazodone 50 mg HS

Family Medical History:
- Maternal hypertension and diabetes

Physical Examination:
- UACR: 122
- Cholesterol: 78
- Triglycerides: 123
- HDL: 39
- LDL: 17
- CMP: WNL
- Hb A1c: 8.1
- Current weight: 394 (October 2024)

Lifestyle History:
- Patient lives alone in an apartment and enjoys playing videos games and watching TV
- Very little physical activity but has a membership at the YMCA
- Relies heavily on fast food and meal delivery services
- Very spiritual and reports a close connection to God
- His mother died several years ago and it has impacted him significantly

Social/Cultural Factors:

Social Determinants of Health:
- Patient has worked with community health care workers to address SDOH
- Receives food assistance
- Has consistent access to healthcare
- He has stable housing and utilities

Current Treatment Plan/Regimen:
- Patient being seen by RD, MD and PharmD for weight management
- Currently he is primarily seen by RD for lifestyle coaching on a bi-weekly basis
- He sees behavioral health providers consistently
- Plans to continue tirzepeptide for A1c control and weight loss
- Patient will be evaluated in February 2025 by PCP team to determine progress and if patient has not achieved a 10% weight loss from baseline will be referred to bariatric surgery for consultation.

Questions?

- Please feel free to come off mute or type your questions in the chat!
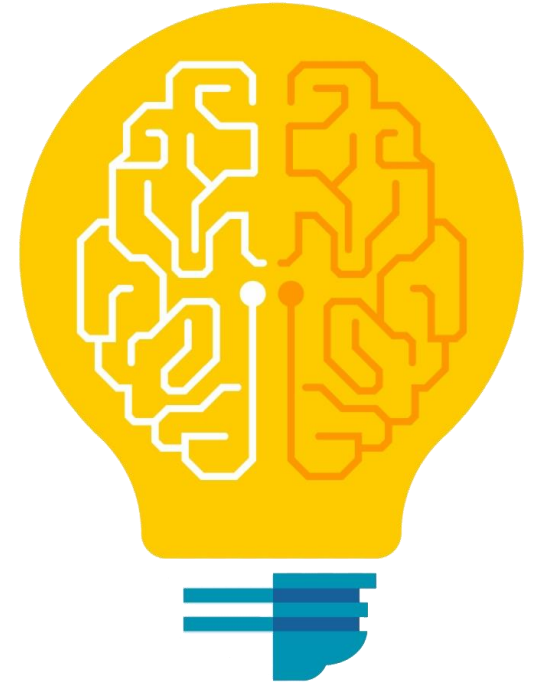
Thank You

- ECHO Session 5 takes place on: Thursday, November 14th at 1:00 PM EST/10:00 AM PST

- Please complete your session evaluation to claim your CME credit