OBESITY MANAGEMENT IN PRIMARY CARE TRAINING AND CERTIFICATE PROGRAM

Module 3 - PEARLS: Applying History and Physical Exam to Practice

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Goal of This Session

Goal is to help you:
- Utilize learning to integrate diagnostics into clinical practice

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PEARLS From the Module 3 Clinical Webinar

1. Diagnosing obesity is an important first step to recognizing and addressing obesity in a clinical setting
   - You can't treat what you don't diagnose
2. A thorough assessment is the foundation of effective treatment
3. Your history, physical exam, and laboratory findings will help to guide individualized treatment

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PEARLS From the Module 3 Clinical Webinar

4. Use the readiness to change and respect if a patient is not ready to engage

5. Staging an individual's obesity will:
   - Help to understand the extent of the disease
   - Specify how quality of life and functional ability are being impacted (if using EOSS)
   - Help to guide how aggressive treatment should be

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Application to Practice: Insulin Resistance

- Insulin resistance sets off a host of metabolic processes
  - Formation of excess adiposity and inflammation throughout the body
  - As IR continues
    - Excess adipose is accumulated and insulin resistance rises
    - Weight gain occurs more easily
    - More difficult time losing weight
    - Worsens insulin resistance

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Application to Practice: Insulin Resistance

HOMA-IR **(Homeostatic Model Assessment for Insulin Resistance)** score can help to calculate insulin resistance

- Designed for research—now often used in clinical practice
- Several studies suggest a cutoff of >2 for any insulin resistance
- MD Calc has a tool for **HOMA-IR**
  - https://www.mdcalc.com/homa-ir-homeostatic-model-assessment-insulin-resistance

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Application to Practice: Insulin Resistance

HOMA-IR2

- Several studies suggest a cutoff of >1 for any insulin resistance
- Provides additional information including beta cell function
  - degree of insulin sensitivity (HOMA %S)
  - level of beta cell function (HOMA %B)
- Downloaded to computer as an application
  - https://www.dtu.ox.ac.uk/homacalculator/download.php

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HOMA-IR Score

HOMA-IR Scores for these two patients

1. **Go to:** https://www.mdcalc.com/homa-ir-homeostatic-model-assessment-insulin-resistance
2. **Calculate results** for:
   - Patient 1: Fasting Insulin 11, Glucose 88
     - HOMA-IR 2.4

			HOMA-IR 2 1.41 %B 126.9 %S 70.8
Insulin	11	µU/L µg	Plasma glucose : 88 mmol/l ◉ mg/dl
Glucose	88	mg/dL µg	Insulin ▢ 11 pmol/l ◉ µU/ml
2.4			%B : 126.9 %S : 70.8 IR : 1.41

   - Patient 2: Fasting Insulin 7, Glucose 84

			HOMA-IR 2 0.89 %B 102.7 %S 111.9
Insulin	7	µU/L µg	Plasma glucose : 84 mmol/l ◉ mg/dl
Glucose	84	mg/dL µg	Insulin ▢ 7 pmol/l ◉ µU/ml
1.4			%B : 102.7 %S : 111.9 IR : 0.89

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Application to Practice—Staging

- 64-year-old female: BMI 37.3 PMH: diabetes, HTN, osteoarthritis, anxiety, walks 2 miles a day

- Class 2 (WHO staging is based on BMI)

- Staging
  - AACE

  - EOSS

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Application to Practice—Staging

- 64-year-old female: BMI 37.3 PMH: diabetes, HTN, osteoarthritis, anxiety, walks 2 miles a day

Class	BMI
1	25 to 29.9 kg/m²
2	30 to 39.9 kg/m²
3	BMI ≥ 40 kg/m²

- Class 2 (WHO staging is based on BMI)
- Staging
  - AACE
    - Stage 2 d/t DM or HTN
  - EOSS
    - Stage 2

Stage	BMI	Complications
0	25 kg/m² to 29.9 kg/m² (preclinical or overweight) or BMI ≥ 30 kg/m²	no identified complications
1	≥ 25 kg/m²	has one or more mild to moderate complications that can be treated effectively by treating obesity
2	≥ 25 kg/m²	at least one severe complication and may require more aggressive treatment

Stage	Obesity Related risk factor	Physical symptoms	Psychological symptoms	Functional limitations
0	None	None	None	None
1	Subclinical risk factors	Mild – no medical treatment needed	Mild	Quality of life not impacted
2	Established ORC with medical intervention	Moderate	Moderate psychological sx (depression, anxiety, eating disorder)	Moderate – QoL is being impacted
3	Significant ORC with end organ damage (MI, heart failure, diabetes with complications)	Significant (incapacitating OA)	Significant (reduced mobility, unable to work or complete ADLs)	Significant – QoL is significantly impacted
4	Severe	or Severe	or Severe	or Severe

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Staging

- 38-year-old male: BMI 41 PMH: osteoarthritis, depression, NAFLD, using a cane

- Class (WHO staging is based on BMI)

- Staging
  - AACE

  - EOSS

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Staging

- 38-year-old male: BMI 41 PMH: osteoarthritis, depression, NAFLD, using a cane

Class	BMI
1	25 to 29.9 kg/m²
2	30 to 39.9 kg/m²
3	BMI ≥ 40 kg/m²

- Class 3 (WHO staging is based on BMI)

- Staging
  - AACE
    - Stage 2 d/t DM or HTN
  - EOSS
    - Stage 3

Stage	BMI	Complications
0	25 kg/m² to 29.9 kg/m² (preclinical or overweight) or BMI ≥ 30 kg/m²	no identified complications
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Staging

- 26-year-old female: BMI 26 PMH: IR by HOMA-IR 2.4, medication metformin

- Class (WHO staging is based on BMI)

- Staging
  - AACE
  - EOSS

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Staging

- 26-year-old female: BMI 26 PMH: IR by HOMA-IR 2.4, medication metformin

- Class 1 (WHO staging is based on BMI)

Class	BMI
1	25 to 29.9 kg/m²
2	30 to 39.9 kg/m²
3	BMI ≥ 40 kg/m²

- Staging
  - AACE
    - Stage 2 d/t DM or HTN
  - EOSS
    - Stage 1

Stage	BMI	Complications
0	25 kg/m² to 29.9 kg/m² (preobesity or overweight) or BMI ≥ 30 kg/m²	no identified complications
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4	Severe	or Severe	or Severe	or Severe

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Thank you!

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