



WELCOME to the Obesity Care in All Ages ECHO

Session 1, Why Obesity is a Disease, May 13, 2025



Series Learning Objectives

- Describe obesity as a chronic disease, including evidence-based methods for evaluation and treatment
- Effectively communicate with patients about the health implications of obesity and its available treatment options
- Cultivate skills to effectively assess and treat patients with obesity in various care settings
- Identify when and how to refer patients to appropriate specialized obesity care services



Series Sessions

Date	Session Title
5/13/2025	Why Obesity is a Disease
6/10/2025	Approach to the Patient with Obesity
7/8/2025	Optimizing the Use of Lifestyle-based Obesity Care
8/12/2025	How to Use Anti-Obesity Medications Effectively (GLP-1 agonist)
9/9/2025	How to Use Anti-Obesity Medications Effectively (Non GLP-1 agonist)
9/23/2025	Approach to the Pediatric Patient with Obesity – AAP Clinical Practice Guidelines
10/7/2025	How to Use Endoscopic Therapy Effectively
10/21/2025	Pediatric Anti-Obesity Medications and Bariatric Surgery
11/4/2025	Metabolic-Bariatric Surgery: Who, When, Why, and Which One
11/18/2025	Improving Equitable Access to Obesity Care



Project ECHO (Extension for Community Healthcare Outcomes)

- All teach, all learn.
- ECHO is a telementoring model that uses virtual technology to support casebased learning and to engage the wisdom and experience of all attending.
- Highly Interactive.

Components of ECHO:





Today's Program

- Brief housekeeping
- Didactic: Why Obesity is a Disease Elizabeth Honigsberg, MD, MPH
- Role Play: Sarah Finn, MD and Abbey Berge-Clogston
- Discussion
- Summary
- Up Next



Housekeeping Notes

- Pre course survey: https://redcap.hitchcock.org/redcap/surveys/?s=EA47L8LEDJ43JTDN
- Raise virtual hand or enter comments in chat at any time. We will call on you when it works. Please mute otherwise.
- To protect individual privacy, please use non-identifying information when discussing cases.
- We will be recording the didactic part of these sessions. *Participating in these session is understood as consent to be recorded. Thank you!*
- Closed Captioning will be enabled during sessions
- Questions to ECHO Tech Support thru personal CHAT or <u>ECHO@hitchcock.org</u>



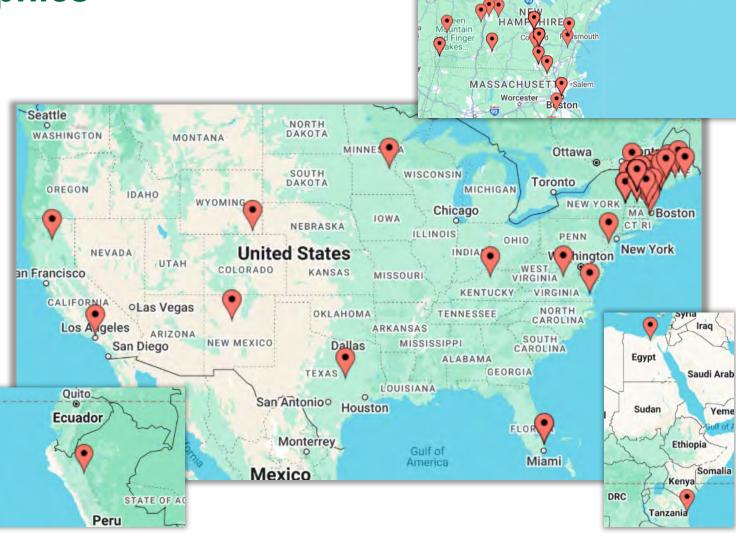
CME/CNE

- One hour of free CME/CNE is available for every session attended, up to 10 sessions.
- Track participation via <u>DH iECHO site</u>
- A link will be provided at the end of the course to submit your attendance and claim your CME/CNE



ECHO Participant Demographics Total Registrants: 130

Professional Identities		
Nurse		
Physician		
Dietitians and Nutritionists		
Administrator		
Behavioral Health Professional		
Physician Assistant/Medical Assistant		
Other healthcare professional		
Pharmacist		
Patient navigator/healthcare educator		
Child Development		



VERMONT

MAIN

Bar Harb



Core Panel

- Abigail Berge-Clogston Program Manager
- Amanda Boyd, MPH Health Coach, Certified Personal Trainer
- Auden McClure, MD, MPH Staff Physician, Pediatric Weight Center
- Charles Brackett, MD, MPH Staff Physician, General Internal Medicine
- Elaine Banerjee, MD, MPH Staff Physician, DH Weight Center
- Elizabeth Honigsberg, MD, MPH Staff Physician, DH Weight Center
- Hannah Brilling, RDN, LD Clinical Dietician
- Kimberly Dovin, MD Staff Physician, DH Weight Center
- Kristin Wheeler, RN Nurse, Weight Center
- Sarah Finn, MD Interim Section Chief, DH Weight Center



Echo Session 1 Why Obesity is a Disease.

Elizabeth Honigsberg MD MPH FACS DABOM May 13th, 2025



I have no financial interests or relationships to disclose.



There are four main objectives for today's discussion.

ASSESS	The current state of the obesity pandemic worldwide
UNDERSTAND	Obesity as a neurobiological/neuroendocrine disease
APPRECIATE	The multitude of factors that lead to the development of obesity
REVIEW	The various criteria for diagnosing the disease of obesity

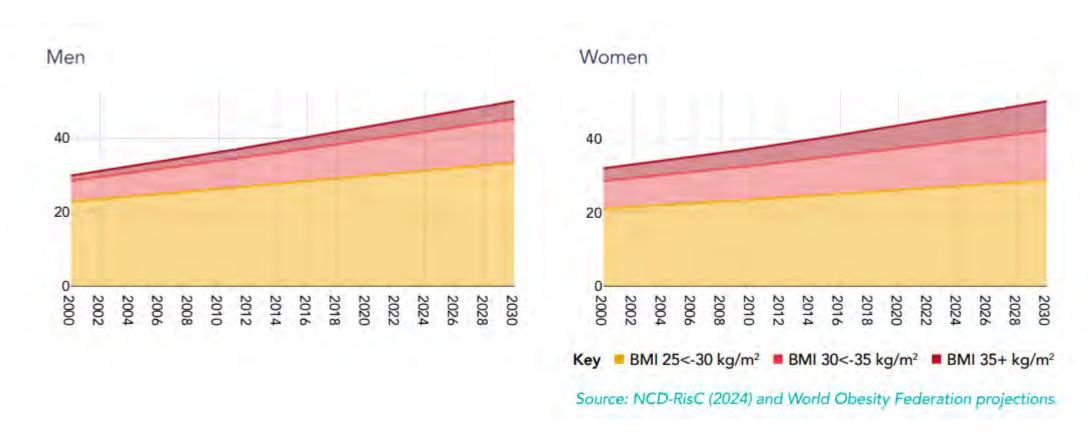


The current state of obesity worldwide.





Rates of men and women (20 years +) living with "high BMI" are increasing worldwide.





By 2030, THREE BILLION adults will have "high BMI", with 17% of men and 22% of women estimated to have BMI > 30 kg/m² (and the world is NOT prepared).

Yearly: 5
million/41
million adult
deaths
due to NCDs
related to high
BMIs

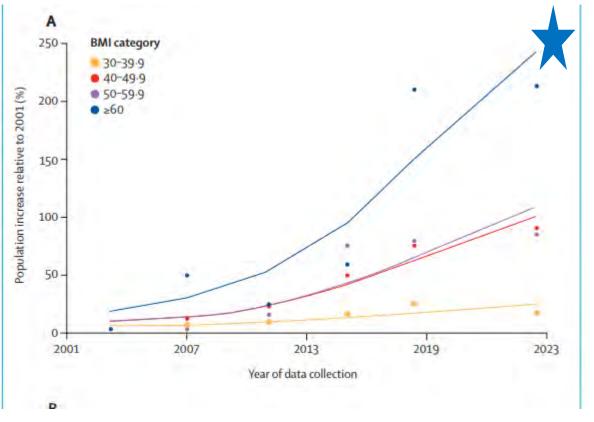
4 million deaths from T2DM, CVA, CAD, CA.



Obesity rates are doubling across the globe, TRIPLING in low-income countries.



In the United States, the prevalence of "normal" weight and overweight has declined since 2001, while all obesity categories have increased over this timeframe.



The largest relative increase of > 200%!



This global systemic failure to slow the obesity pandemic must end.



To do so, we must end:
 The misunderstanding
 The underinvestment
 The fragmentation
 The stigmatization



There is a fundamental misunderstanding about obesity...





THIS DOES <u>NOT</u> CAUSE OBESITY



THIS DOES <u>NOT</u> TREAT OBESITY





Both food intake and fat mass/set point are highly regulated by the brain.







Strikes (environmental factors, gene mutations, etc.) disrupt the regulation of energy balance in brain.



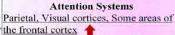
Energetic Homeostasis

Hypothalamus Neurons express the orexigenic neuropeptides: AgRP, NPY

Neurons express anorexigenic peptides: POMC, CART -



Cross- talks between systems



Increase food in-take: increased activation to food cues during fed status.

Obesity

Reward Systems VTA and SN in the midbrain, Nucleus

adiponectin, irisin, et al.

Hormones Ghrelin, GLP-1, insulin, leptin,

accumbens, Striatum, OFC 1

- Hyper-responsivity to food cues
- Lower availability of D2 receptors

Cognitive control

Mostly in the prefrontal cortex, particularly: Cingulate cortex, Inferior frontal cortex, Pre-SMA, DLPFC

- Inhibitory control
- Food motivation

BBB function

Inflammation

in brain

Emotion systems

joy, anger, stress, etc.

Amygdala 🁚

Increase appetite: depress, anxiety,

Decrease appetite: fear, sadness,

Memory Systems

Hippocampus, Parahippocampal gyrus

Increase food in-take: hippocampus 🎩

lesions or inflammation.

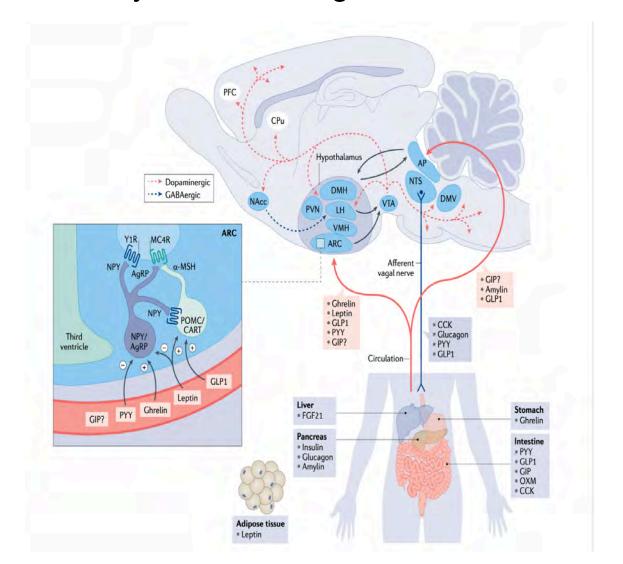








Various hunger and satiety hormones signal to the brain to affect food intake.





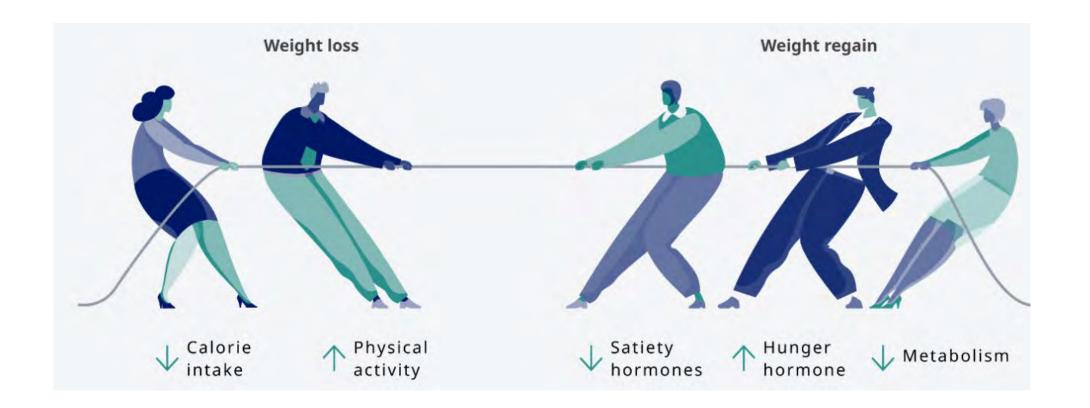
The brain sets AND defends a fat mass (set point) for everyone.



In obesity, that fat mass/set point is abnormally high.



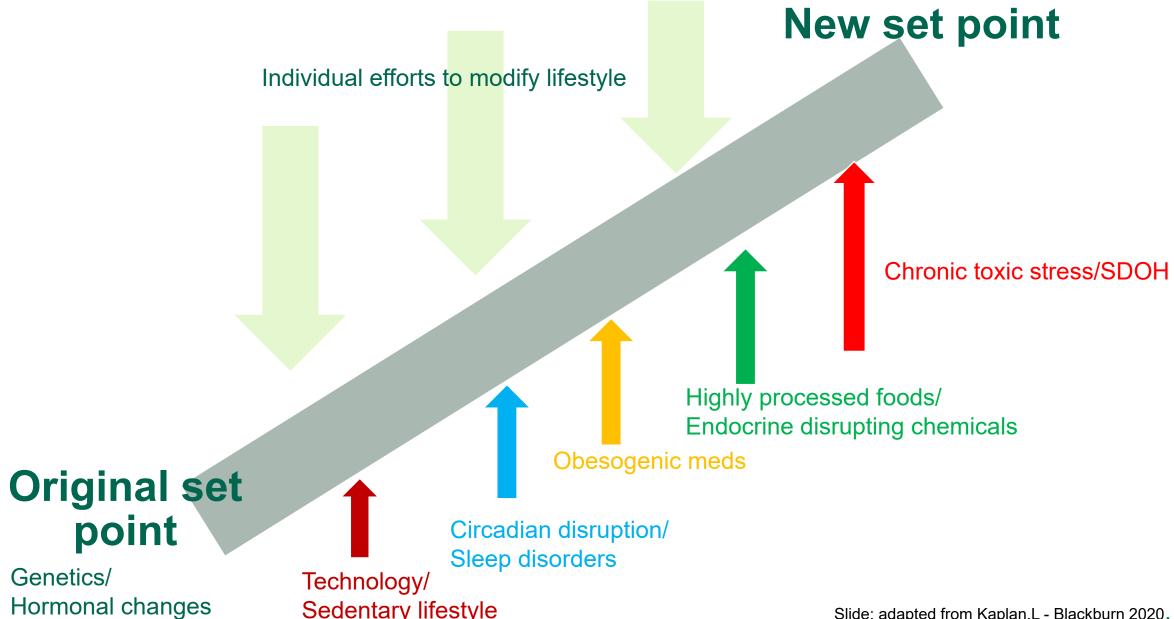
We have metabolically adapted to defend our fat mass.





What drives the development of obesity?





Slide: adapted from Kaplan, L - Blackburn 2020.

Sedentary lifestyle



The definition of obesity is evolving as is the diagnostic criteria.



WHO: abnormal or excessive fat accumulation that presents a risk to health.

CDC: BMI $> 30 \text{ kg/m}^2$

Obesity Medicine Association: A chronic, relapsing multi-factorial, neurobehavioral disease, wherein an increase in body fat promotes adipose tissue dysfunction and abnormal fat mass physical forces, resulting in adverse metabolic, biomechanical, and psychosocial health consequences.

The Lancet Commission 2025: provided explicit characterization of the illness intrinsically caused by excess adiposity and establish objective criteria for diagnosis.



OBESITY

Excess fat mass +/- abnormal distribution or function



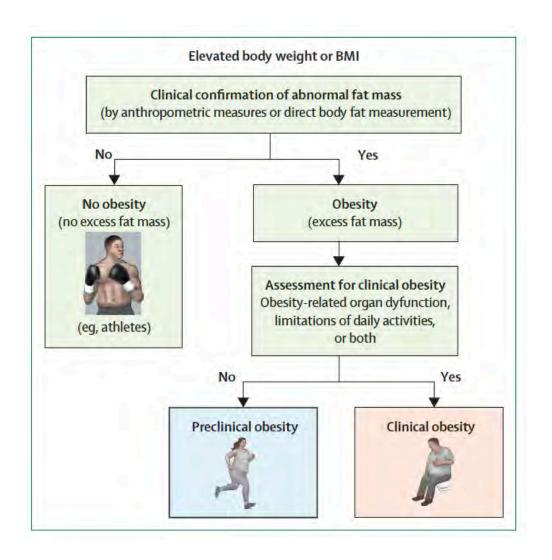
PRECLINICAL OBESITY

At increased risk of developing obesity related organ dysfunction, limitation of daily activities, or both



CLINCAL OBESITY

Chronic systemic illness with dysfunction of the tissues, organs, the entire individual





The objectives for today's session.

ASSESS	The worldwide pandemic of obesity continues to worsen and low and middle income countries are least prepared.
UNDERSTAND	Obesity is a chronic, relapsing neurobiological and neurohormal disease whereby the affected individual CANNOT lower the set point with diet and exercise alone.
APPRECIATE	Both internal and external factors contribute to the development of obesity
REVIEW	Diagnosis still largely relies on BMI, however criteria is changing to reflect the greater importance of metabolic/orthopedic/psychosocial health than BMI alone.



THANK YOU!



Role Play





WELCOME to the Obesity Care in All Ages ECHO

Session 2, Approach to the Patient with Obesity, June 10th, 2025



Today's Program

- Brief housekeeping
- Didactic: Approach to the Patient with Obesity Kimberly Dovin, MD
- Case Discussion
- Summary
- Up Next





APPROACH TO THE PATIENT WITH OBESITY

Kimberly Dovin, MD

Echo Series: Obesity Care in All Ages

Session #2

June 10, 2025



Goals

How to talk to patients about weight

Learn to take an obesity specific history

Understand the evaluation of obesity to identify complications

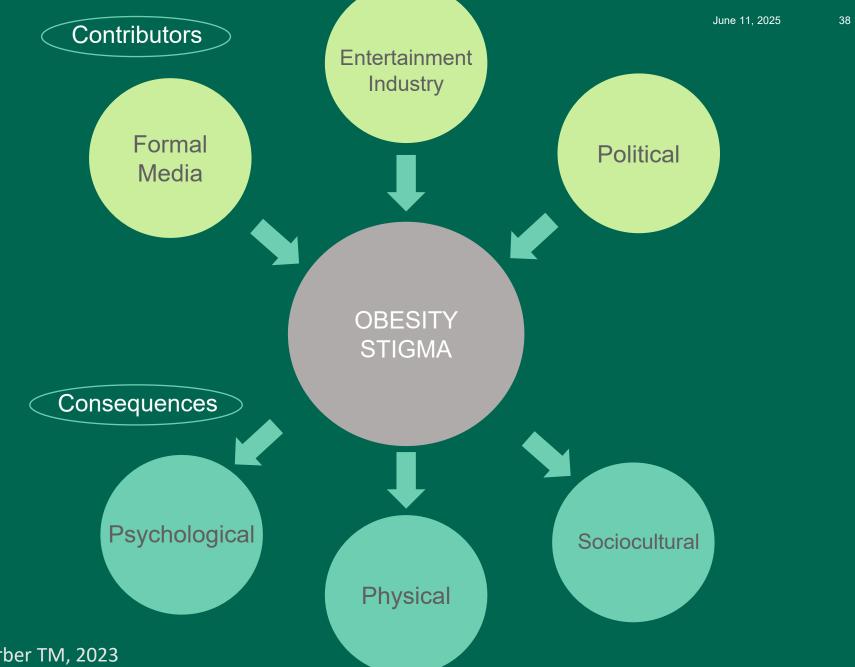
Obesity Stigma and Bias

"Society regularly regards [persons with obesity] not as innocent victims, but as architects of their own ill health, personally responsible for their weight problems because of laziness and overeating."

-Rebecca Puhl and Chelsea Heuer







Westbury S, Oyebode O, van Rens T, Barber TM, 2023





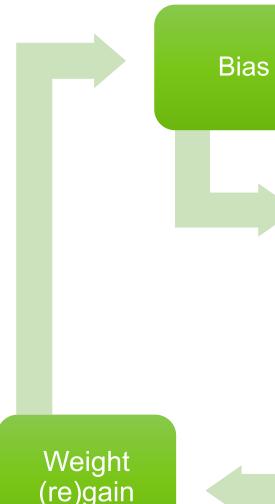
Obesity Stigma - Medicine



- 2nd only to family in perceived bias
- Less time/discussion
- Less evaluation/screening









- Lack of willpower
- Laziness
- Lack of motivation

Externalized Stigma

- Accusatory language
- Dismissiveness
- Gaps in healthcare

Internalized Stigma

- Disordered eating
- Avoidance of physical activity
- Depression/Anxiety
- Stress response

(re)gain



Evaluation

- **Starting the Conversation**

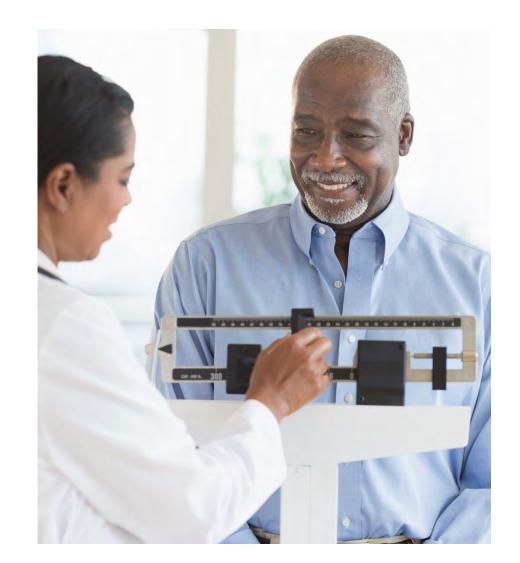
Weight & Wellness Center, Heater Road

- Take a weight history

Assess symptoms and signs

Set Goals

(Re-)educate







Weight History

- "What is the story of your weight"
 - Did they have early childhood obesity (<5yo)
 - Stable adult weight?
 - Did they have any large gains and what might have been happening at that time?
 - Has it been gradual through adulthood?
 - How has excess weight impacted their life?





Symptoms of Obesity

- Pervasive thoughts of food
- Excess or no hunger
- Abnormal satiation/satiety
- Craving
- Pain or discomfort
- Difficulty with daily activities due to size
- Fatigue
- SOB
- Low body image







Evaluation

Physical Exam

- Gen: central, gynecoid, generalized adiposity.
- VS, Waist and Neck circumference
- HEENT: Mallampati? Moon facies?
- Neck: buffalo hump,thyroid?
- CV: evidence of arrythmia?
- Abd: hepatomegaly?

- Ext: edema, cuffing?
- Gait: antalgic?
- Skin: acanthosis, hidradenitis, acne, hirsutism, abdominal striae, tender subcutaneous nodules, intertrigo



Evaluation (continued)

Laboratory evaluation

- CBC, CMP
- TSH
- Lipid panel
- FBS, A1c
- Vitamin D

Complications

- Obesogenic medications
- MASLD/MASH Fib4 calculation
- OSA
- Eating disorders
- Contraindications to AOMs







Lipedema

Kruppa P, Georgiou I, et al PMID: 32762835; PMCID: PMC7465366.



1) thickened subcutis, soft, with small, palpable nodules, skin surface still smooth



Classification by stage 2) thickened subcutis, soft, some larger nodules, skin surface uneven



3) thickened subcutis, hardened, with large nodules, disfiguring fat deposition







IV) arm*



Classification by morphology

I) buttock II) thigh III) entire lower limb

* Type IV is often associated with type II or III.

V) leg



Goals of Treatment

- BMI < 25
- Improvement in complications
- Symptom Resolution
- QOL
- BMI <30?
- BMI >= 23







Summary – Evaluating the Patient with Obesity



Approach patients with compassion



Take a diseasespecific H&P



Set non-scale goals for treatment



- Kruppa P, Georgiou I, Biermann N, Prantl L, Klein-Weigel P, Ghods M. Lipedema-Pathogenesis, Diagnosis, and Treatment Options. Dtsch Arztebl Int. 2020 Jun 1;117(22-23):396-403. doi: 10.3238/arztebl.2020.0396. PMID: 32762835; PMCID: PMC7465366.
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- Puhl RM, Heuer CA. The stigma of obesity: a review and update. Obesity (Silver Spring). 2009 May;17(5):941-64. doi: 10.1038/oby.2008.636. Epub 2009 Jan 22. PMID: 19165161.
- Westbury, S., Oyebode, O., van Rens, T. *et al.* Obesity Stigma: Causes, Consequences, and Potential Solutions. *Curr Obes Rep* **12**, 10–23 (2023). https://doi.org/10.1007/s13679-023-00495-3