

Cancer Screening and Prevention in Action
2025-2026 Webinar Series

Obesity Treatment and Cancer Risk Reduction

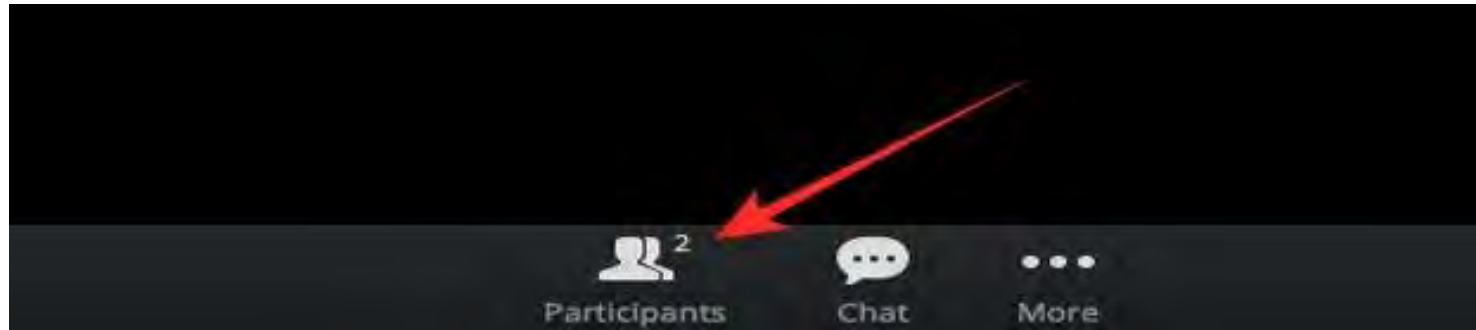
March 3, 2026



USING ZOOM



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In support of improving patient care, University of Kansas Medical Center 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.

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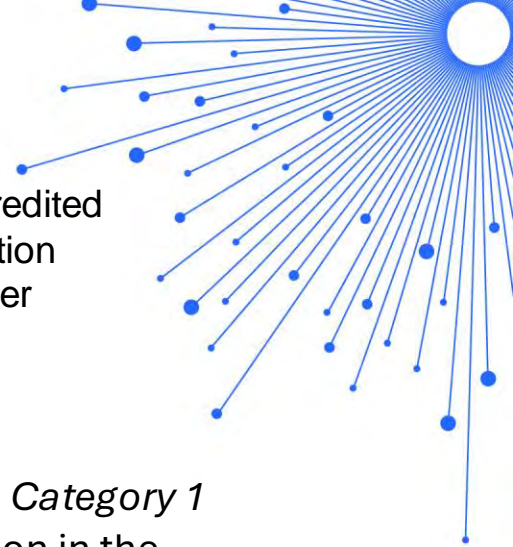
The University of Kansas Medical Center designates this activity for a maximum of 1 ANCC contact hours. Nurses should claim only the credit commensurate with the extent of their participation in the Activity.

SOCIAL WORK:

The University of Kansas Medical Center Area Health Education Center East, as an approved provider of continuing education by the Kansas Behavioral Sciences Regulatory Board presents this offering for a maximum of 1 hour(s) credit applicable for relicensure of LASWs, LBSWs, LMSWs and LSCSWs. Kansas Provider Number 12-002. Karen Aufdemberge, RN, BSN, Coordinator

Certificate of Attendance available to other participants upon completion of documentation of attendance and evaluation as outlined.

Session must be attended in its entirety to receive credit.



DISCLOSURES

Below contains disclosure of all financial relationships with any ineligible companies from individuals involved in planning, design and/or implementation of this offering over the past 24 months. We define ineligible companies as those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.



The following presenters/moderators/panelists/planning committee members report no relationships of a financial, professional or personal nature with ineligible companies over the past 24 months:

- Karin Denes-Collar, LSCSW, Karen Aufdemberge, RN, Susan Beckman, MPH, Ellie Brent, MPH, Chavely Conde, MPA, Traci McCarty, BS, Kelly Sabol, Cathleen Beaver, MD, Christie Befort, PhD

COMMERCIAL/NON-COMMERCIAL SUPPORT



- There is no commercial/non-commercial/in-kind support for this CE activity.

OBJECTIVES

Series Objectives:

- Identify how and where to access resources to find the most current Kansas cancer data available
- Summarize the current guidance on cancer screening and prevention for the featured cancer topic of the session
- Identify a best practice or innovative strategy that can be implemented in the primary care or public health setting to improve cancer screening and prevention and/or survivorship care



Event Objectives:

- Describe obesity as a chronic, relapsing disease and current evidence-based medical management strategies including lifestyle interventions, pharmacotherapy, and indications for metabolic bariatric surgery.
- Identify FDA-approved anti-obesity medications, their mechanisms of action, indications, contraindications, and common adverse effects, and apply this knowledge to patient-centered treatment selection in primary care settings.
- Describe the association that weight reduction can have on lowering cancer risk and apply current clinical guidelines to assess obesity-related cancer risks.



DOCUMENTING ATTENDANCE

Take a photo of this slide or write down the code. It will not be released after session ends.

01meze (zero one M E Z E)

NOTE: The **deadline** to enter the sign-in code is **March 10, 2026 @ 5:00 PM**

You may enter the sign-in code to complete the course evaluation by:




1. **Text** the activity identification code to (828) 295-1144, **OR**
2. **Access** www.eeds.com from a mobile device or PC and enter the activity identification code, **OR**
3. **Download** the eeds mobile app (iOS, Android) and use the activity identification code to sign-in to events, **OR**
4. **Scan** the QR code on the left.

Once we confirm your attendance via the Zoom participant log, and that you have met all attendance requirements, **you will receive an e-mail that your certificate is available** 7-10 business days post event.

Thank you to the study team and practices participating in...




for the additional support in planning today's session.



KanSurvive 2.0

Testing Enhanced Models of Cancer Survivorship Care for Rural Cancer Survivors in Primary Care Practice




This study is for rural primary care practices who care for cancer survivors.

KanSurvive 2.0 is designed to provide tailored support and tools that may help your clinic deliver evidence-based cancer survivorship care within existing workflows.

We are conducting this study because rural cancer survivors experience a higher risk of negative health outcomes and rely on primary care for most of their survivorship care.

Evidence is needed to inform practical strategies to promote high-quality, evidence-based cancer survivorship in the primary care setting.

Your practice may gain skills and resources to support patient care and clinic efficiency through education sessions (free CE provided), practice facilitation & quality improvement, and access to new documentation tools (such as AI scribes).



Participating practices will...

- ▶ Sign a Service & Data Use Agreement
- ▶ Identify a Team with a Provider Practice Champion & Staff Lead
- ▶ Attend 4, one-hour virtual education sessions on breast, lung, colorectal, and prostate cancer survivorship
- ▶ Collect EHR data at baseline, 6, 12, & 24 months
- ▶ Use one of 3 approaches (random assignment) to improve the delivery of cancer survivorship care
- ▶ Implement a Quality Improvement protocol (MOC IV QI project eligible)
- ▶ Meet with research team members monthly for 12-months
- ▶ Opportunity to evaluate the cost-effectiveness of AI / scribe services


Project activities and deliverables are spread out over 2 years.

Compensation: Practices receive \$15,000 to participate

No direct patient recruitment

Interested? Have questions?

Scan the QR code or [CLICK HERE](#) to complete an Interest Form and a team member will reach out!



www.kansurvive.com

Guest Presenters



Christie A. Befort, Ph.D.

Professor, Population Health
University of Kansas Medical Center
Associate Director of Cancer Prevention and Control
University of Kansas Cancer Center

Bio: <https://www.kumc.edu/cbefort.html>



Cathy R. Beaver, MD

Clinical Assistant Professor, Obesity Medicine
University of Kansas Medical Center

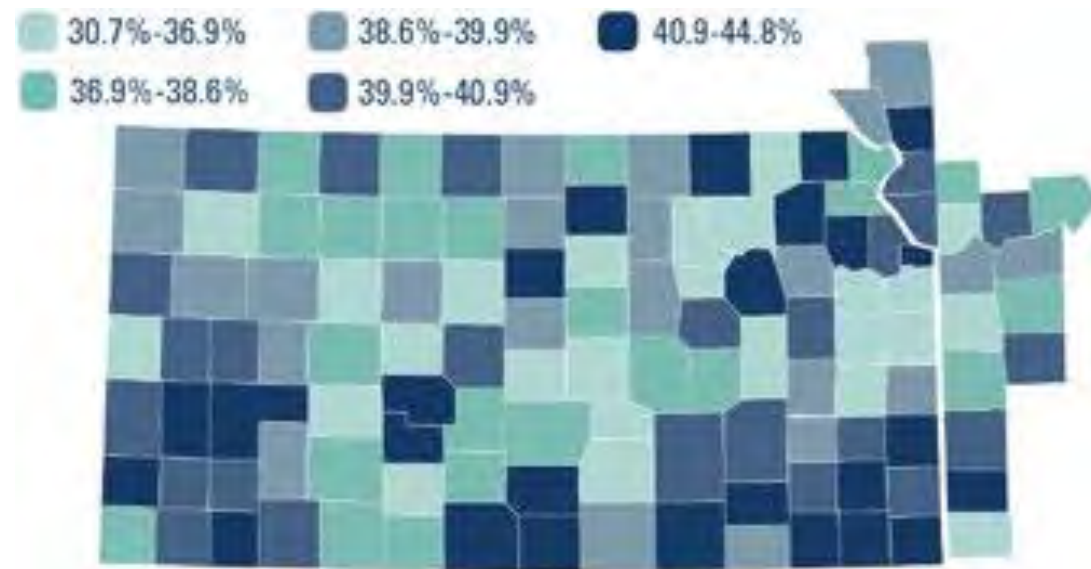
Bio: <https://www.kumc.edu/cbeaver.html>

Treatment for adults with obesity: Incorporating lifestyle change

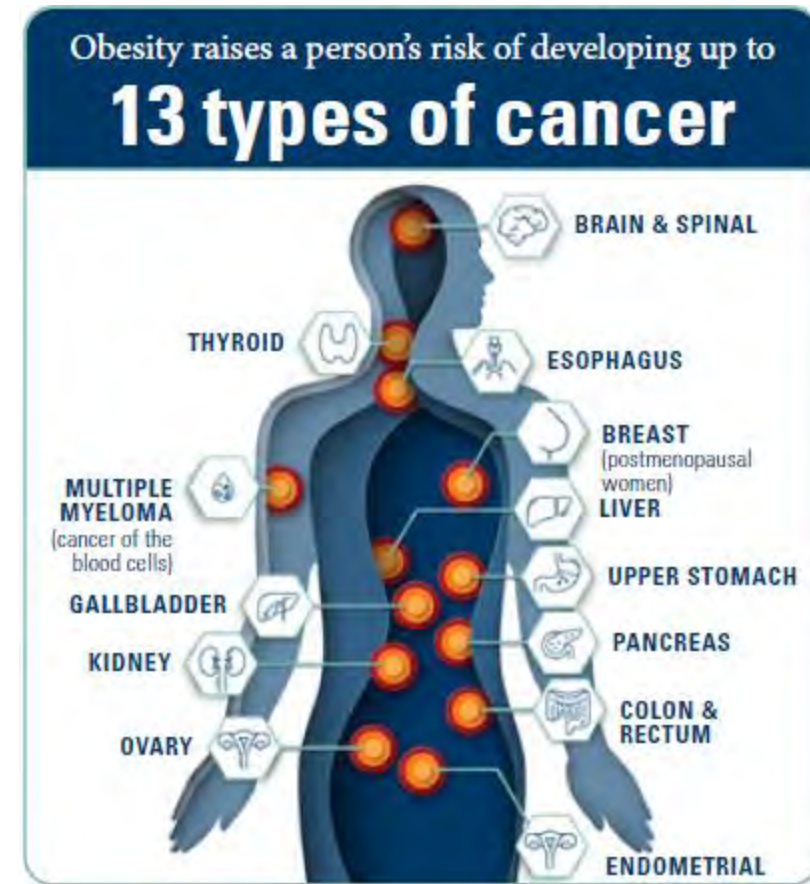
Christie Befort, PhD
Professor, Population Health
Associate Director, Cancer Prevention and Control

Obesity prevalence in our region

- 7 out of 10 have BMI > 25 kg/m²
- Rural areas have higher rates of obesity, especially severe obesity (BMI > 40 kg/m²)



Source: CDC 2024



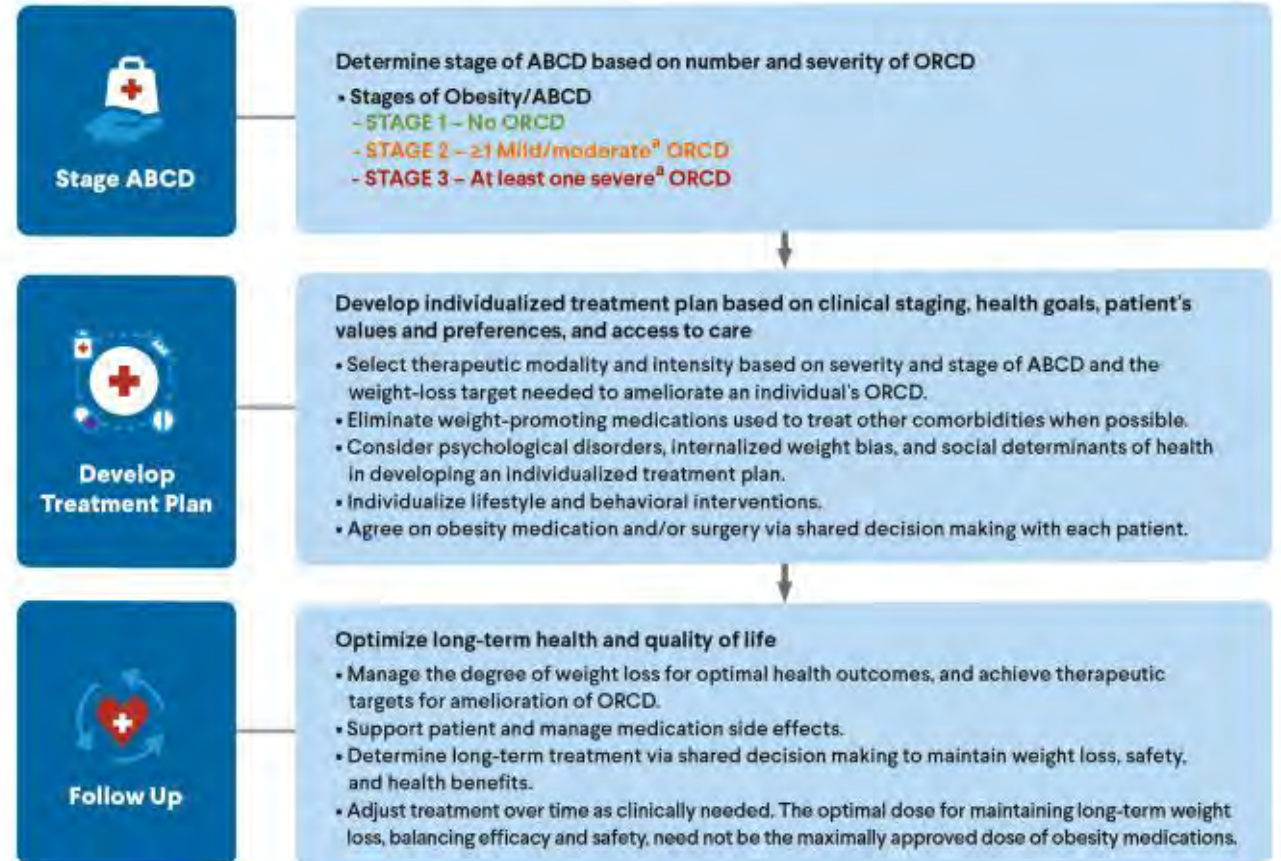
American Association of Clinical Endocrinology Consensus Statement: Algorithm for the Evaluation and Treatment of Adults with Obesity/Adiposity-Based Chronic Disease – 2025 Update

Obesity/Adiposity-based chronic disease (ABCD)

“The WHO guideline on the use and indications of GLP-1 therapies for adults living with obesity is **grounded in the recognition of obesity as a chronic, relapsing disease that requires lifelong care.** It emphasizes the **importance of early diagnosis** and the need for **integrated, person-centered approaches that combine behavioral, medical, surgical, and other interventions**, alongside the prevention and management of obesity-related comorbidities.”

Celletti et al., 2025, *JAMA*

INDIVIDUALIZED TREATMENT PLAN, THERAPEUTIC GOALS, AND FOLLOW-UP



^a The degree of severity for ORCD is based on clinical judgment, incorporating findings from physical examination, laboratory testing, and/or other diagnostic procedures, as well as a person's symptomatology, in ways that apply to each individual complication.

Abbreviations: **ABCD**, adiposity-based chronic disease; **ORCD**, obesity-related complications and diseases

Algorithm Figure 5 - Treatment Plan, Therapeutic Goals, and Follow-Up

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What Do Patients Want?

We want you to see us as a person as opposed to an obese person with a certain BMI and a series of conditions. We know first-hand what it's like for obesity to be treated as an individual failing, a character defect, or a personality flaw. We know all about failure. But we are asking for your help to climb out of the bodies we're in so we can do the things we want in order to be ourselves. We need a full court press from the medical community to help us succeed, and a treatment plan that gets monitored and taken seriously like treatment plans for other conditions.

- **Treatment options**

*I started losing weight, and sure I failed, but **then he picked me up, dusted me off, and said "Well, we know that didn't work, so let's go another route and try something else."** That's what I needed to hear.*

- **Accountability and feedback**

*Respect me, inform me, help me. **Follow up on my progress, encourage me with realistic goals. Expect me to be accountable and responsible.***

- **Encouragement and understanding**

*We dread feeling judged or like a failure. So, we look for signs that we can **trust you and your staff, that you will see us as people...***

- **Long-term follow up**

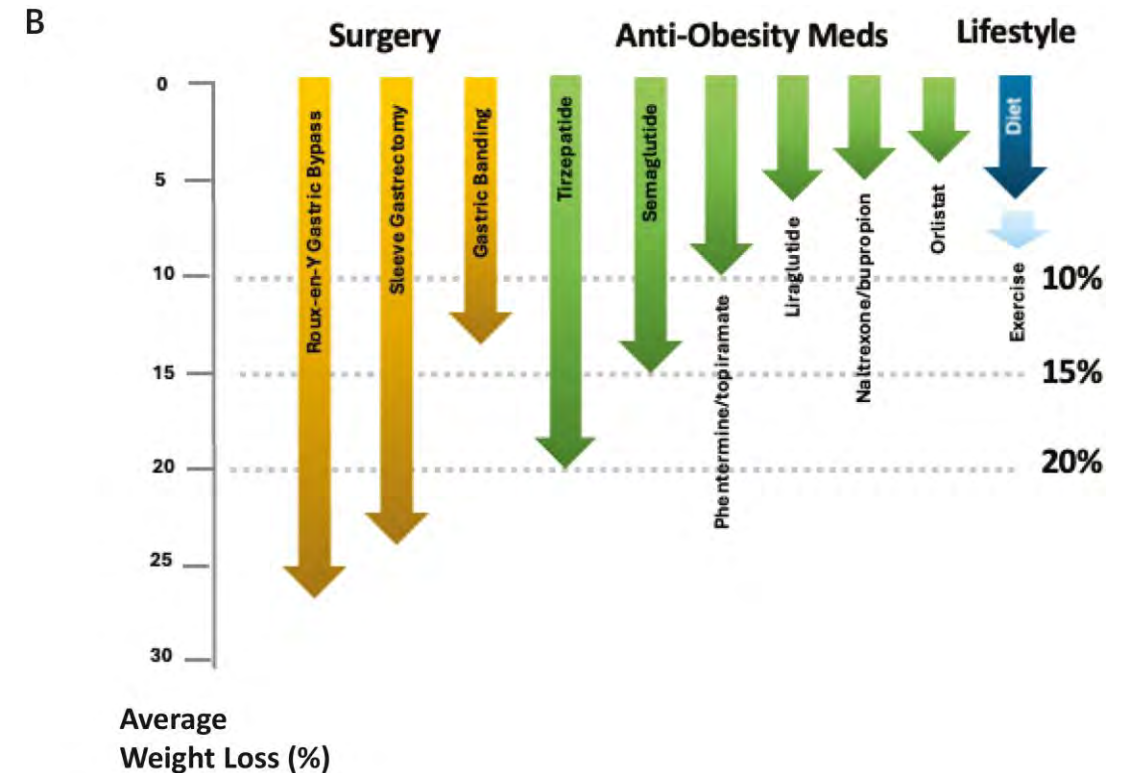
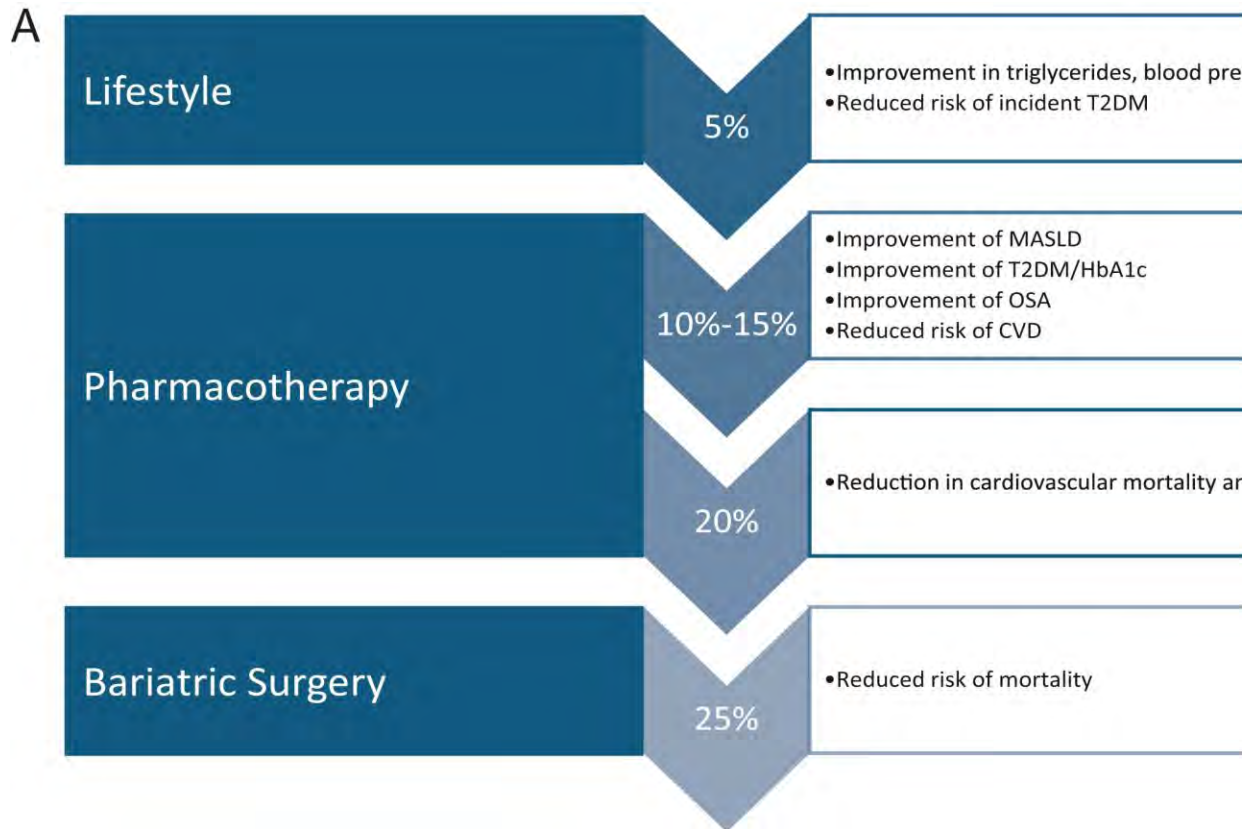
*I need you to be invested with me for the long haul... **I need you to not give up on me. Once I had a doctor tell me "every failure means you're going to be more successful next time."** I never had a doctor tell me that before.*



Johnston et al. 2020, *Ann Fam Med*



Weight loss thresholds and co-morbidity improvement

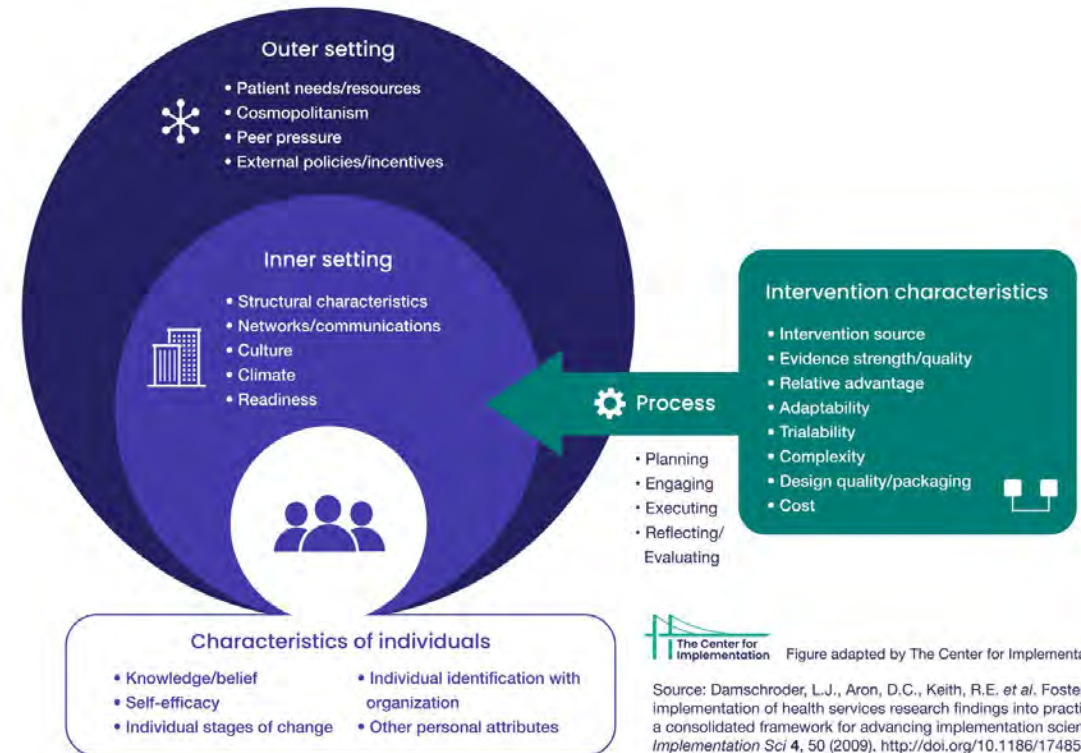
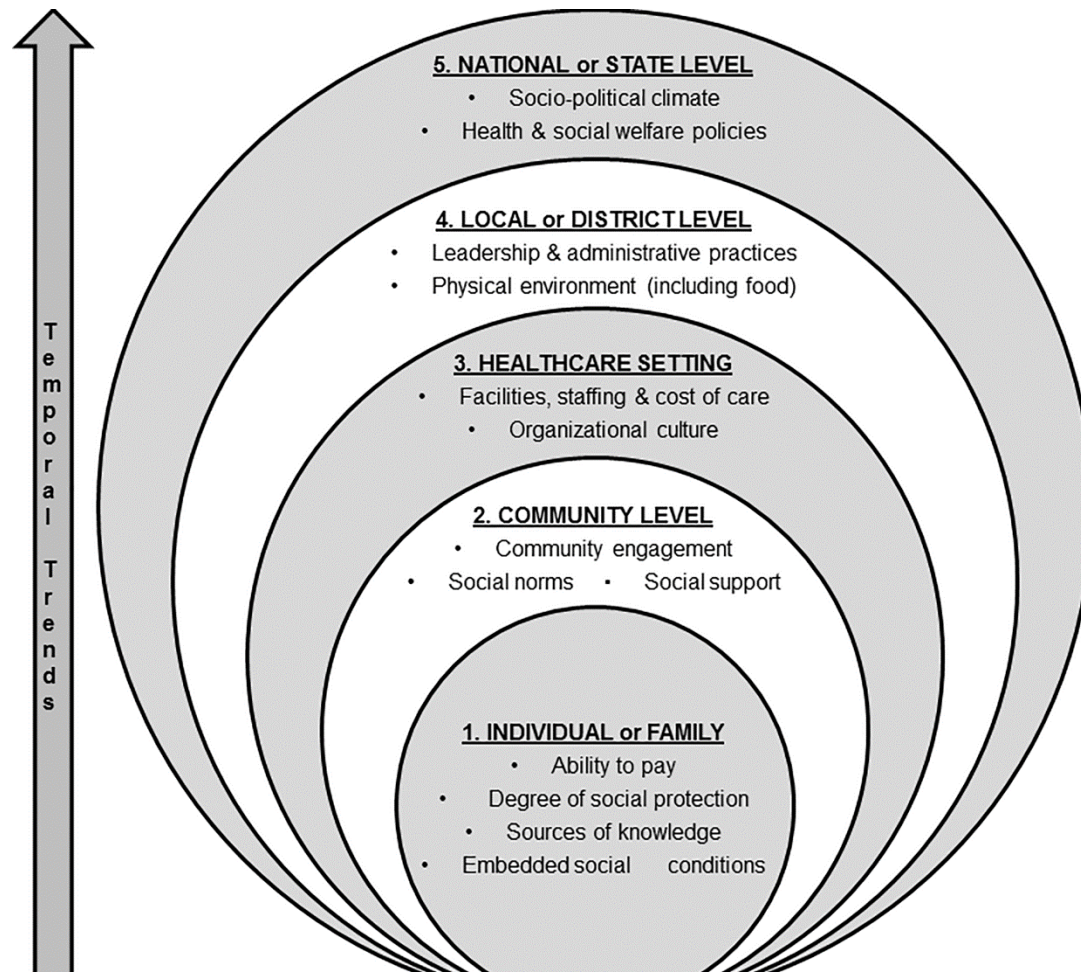


Context matters in reaching weight loss thresholds

Clinician skill and characteristics

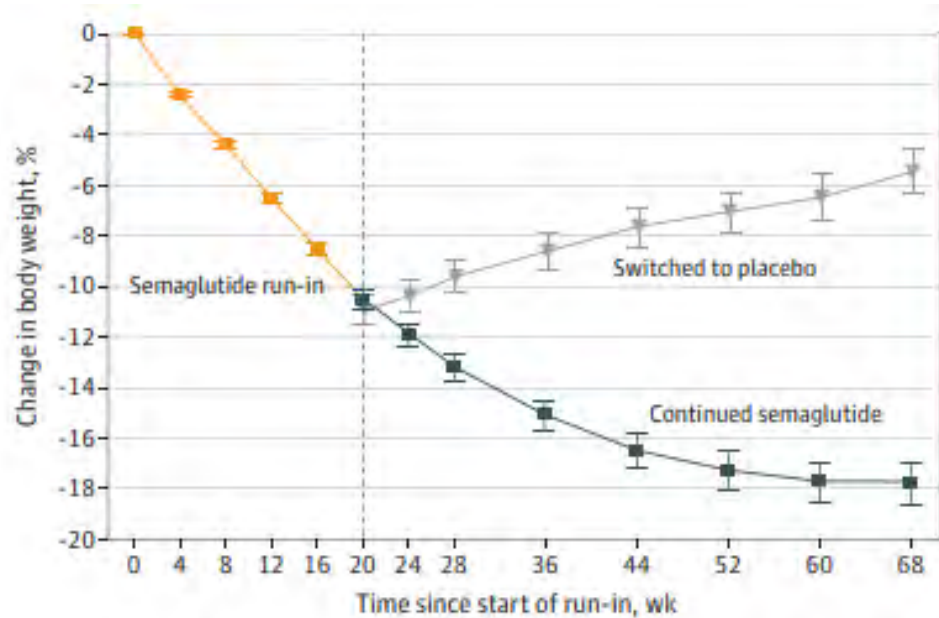
Setting characteristics

Place-based characteristics



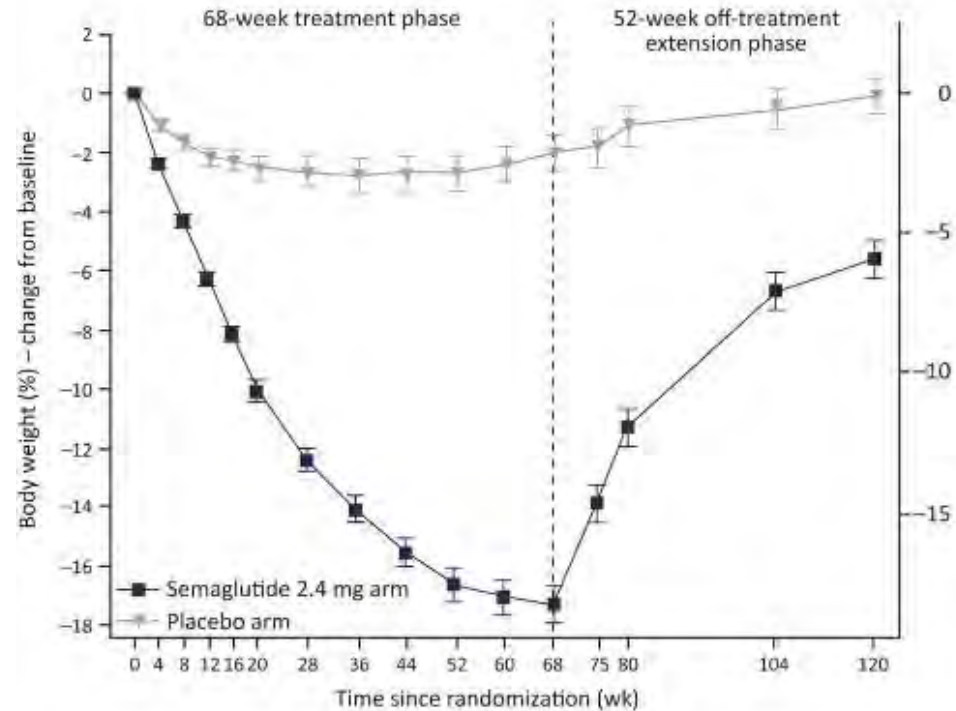
The Weight Loss Maintenance Problem

STEP 4 Trial



Rubino D, et al.. JAMA. 2021

STEP 1 Trial Extension



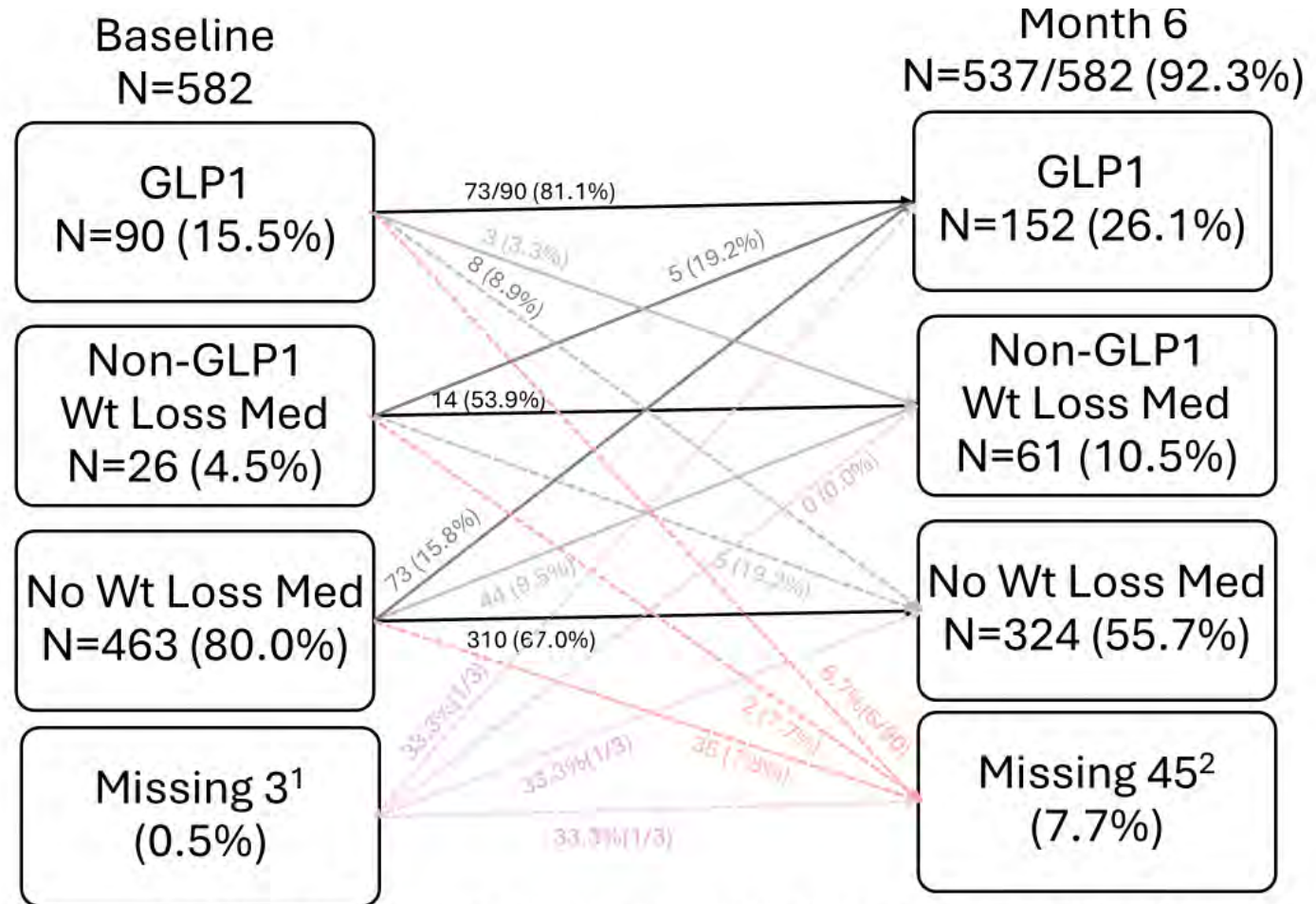
Wilding JPH, et al. Diabetes Obes Metab. 2022

“Patients should not be required to 'try and fail' lifestyle changes prior to initiating pharmacotherapy; nonetheless, lifestyle interventions should always be offered in conjunction with obesity medications”

Olivia Gilbert, American College of Cardiology, Chair of Concise Clinical Guidance (CCG) on the Medical Management of Obesity, 2025

Anti-obesity medication use among primary care patients in rural Kansas

- Starting, switching, discontinuing
- Side effects, costs, preferences

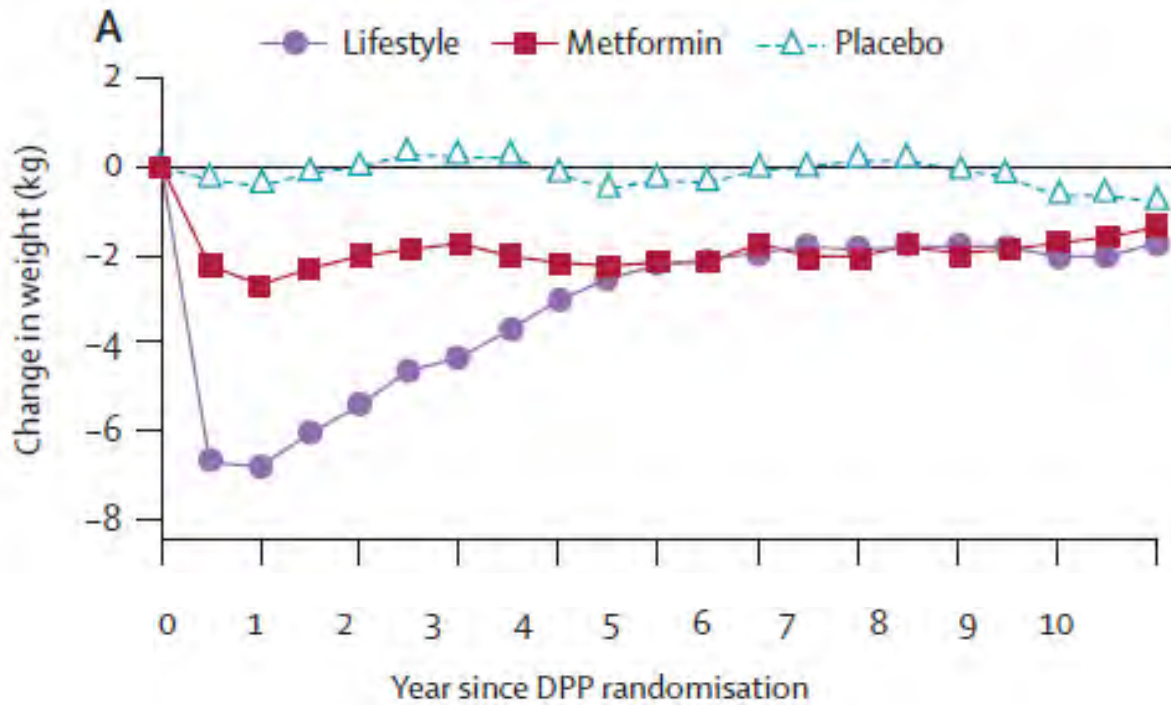


Black indicates the probability of continuing the same med/no med from baseline to Month 6
 Dark Gray indicates the probability of transition to GLP1 weight loss med.
 Light Gray indicates the probability of transition from to non-GLP1 weight loss med.
 Light Gray Dotted Line indicates the probability of transition from to no weight loss med.

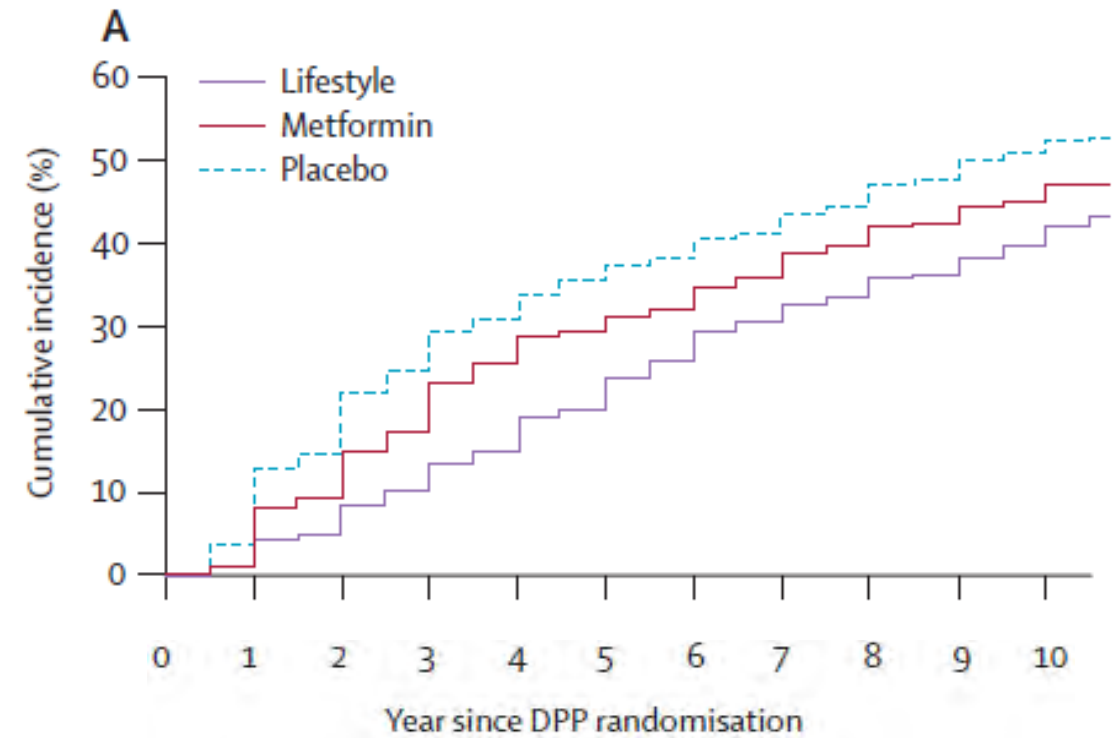
Nutrition and exercise Lifestyle Intervention works for diabetes prevention

10 Year Results of DPP

Change in Body Weight

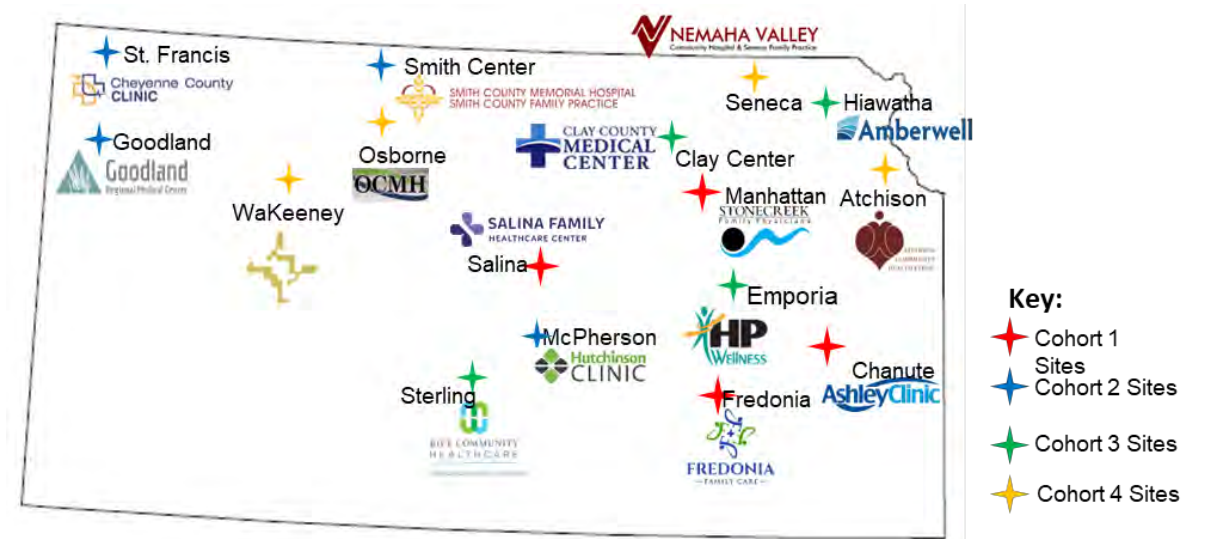
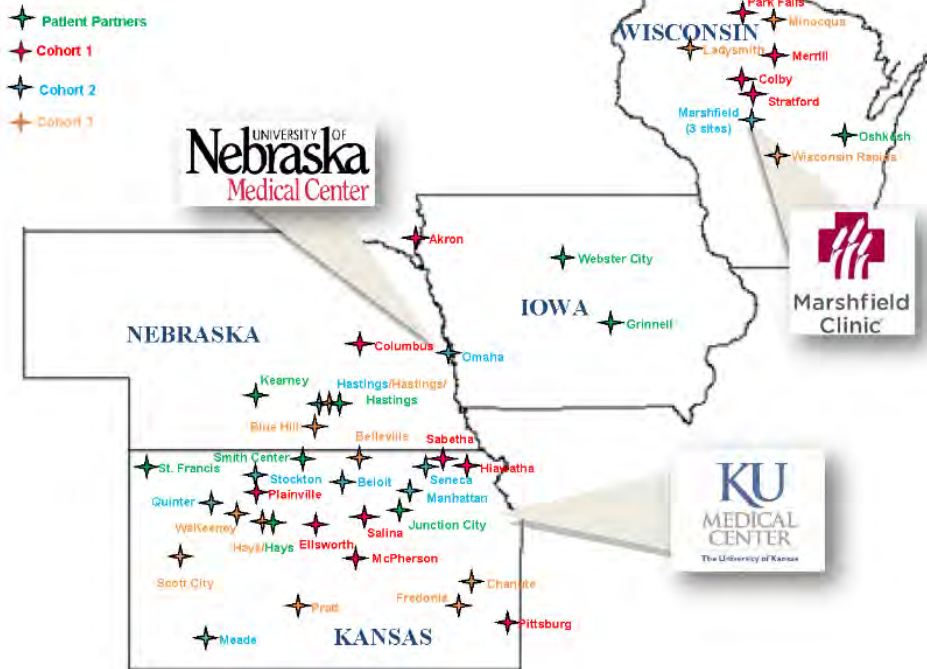


Incidence of Diabetes



Research on providing obesity treatment in rural clinics

- 44 clinics: 69% Rural Health Clinics, 45% in isolated rural areas
- Nearly 200 clinicians
- Over 2000 patients
- Comprehensive treatment for 1 ½ to 2 years



- Key:**
- ★ Cohort 1 Sites
 - ★ Cohort 2 Sites
 - ★ Cohort 3 Sites
 - ★ Cohort 4 Sites

Comprehensive lifestyle intervention program plus adjunctive therapy

GOAL:

- **5-10%** weight loss within 6 months
- **Weight loss maintained for 1 year or longer**
- Lifestyle interventions with 14+ sessions/year result in 4-7 kg average weight loss over 1-2 years
 - ~50% ≥ 5% weight loss at 2 years
 - ~25% ≥ 10% weight loss at 2 years

Component	Weight Loss	Weight-loss Maintenance
Counseling	≥14* in-person or telephone counseling sessions (individual or group) with a trained interventionist during a 6-mo period; recommendations for similarly structured, comprehensive Web-based interventions, as well as evidence-based commercial programs	Monthly or more frequent in-person or telephone sessions for ≥1 yr with a trained interventionist
Diet	Low-calorie diet (typically 1200–1500 kcal per day for women and 1500–1800 kcal per day for men), with macronutrient composition based on patient's preferences and health status	Reduced-calorie diet, consistent with reduced body weight, with macronutrient composition based on patient's preferences and health status
Physical activity	≥150 min per week of aerobic activity (e.g., brisk walking)	200–300 min per week of aerobic activity (e.g., brisk walking)
Behavior therapy	Daily monitoring of food intake and physical activity, facilitated by paper diaries or smartphone applications; weekly monitoring of weight; structured curriculum of behavioral change (e.g., DPP), including goal setting, problem solving, and stimulus control; regular feed-back and support from a trained interventionist	Occasional or frequent monitoring of food intake and physical activity, as needed; weekly-to-daily monitoring of weight; curriculum of behavioral change, including problem solving, cognitive restructuring, and relapse prevention; regular feedback from a trained interventionist

Lifestyle Intervention Key Components

Energy Deficit



caloric intake

- 1200-1800 kcal/day
- Jump start with high FV and focus on diet quality



physical activity

- Moderate intensity
- 225 min/week

Knowledge for basic foundation

Behavioral Modification

- Self-monitoring
- Goal-setting
- Stimulus control
- Cognitive reframing
- Problem-solving

Self-regulation for lifestyle change

Support Targeted to Rural Setting

- Lower SES/literacy
- Access barriers
- Recipes and food
- Linked to values (hard work, self-reliance, family first)

Support for engagement

Goal: 10% weight loss, minimize regain



Diet Quality and Quantity

✓ Increase diet quality, thereby decrease calories

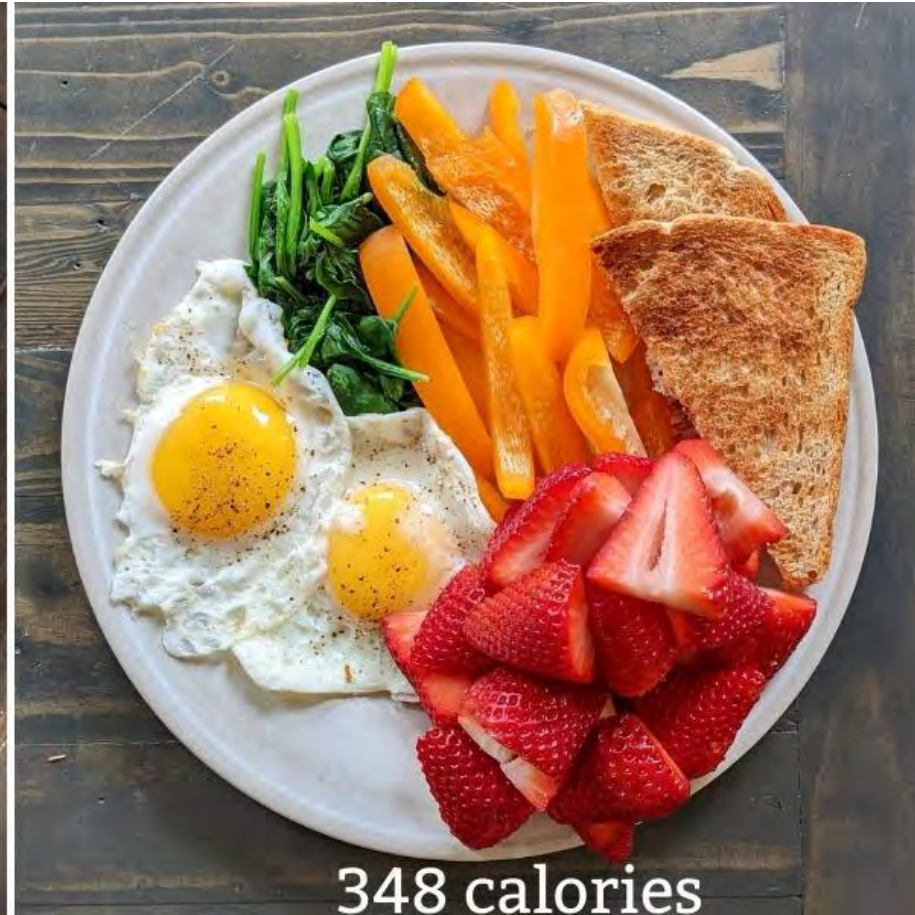
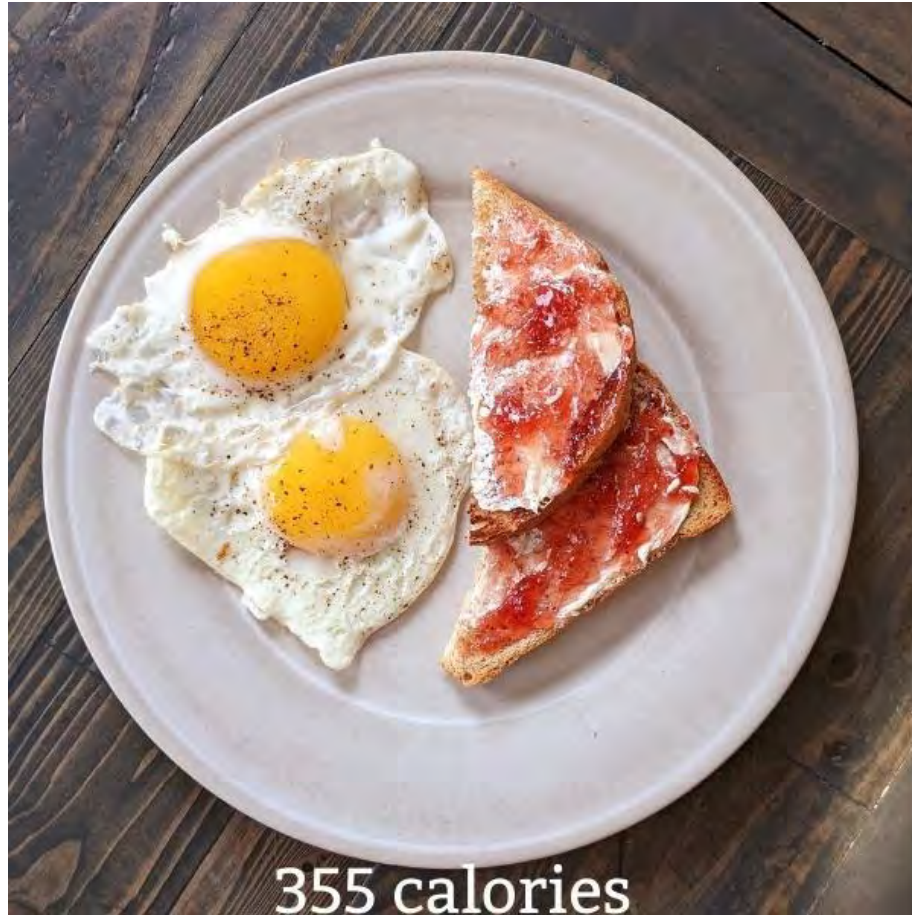
- ✓ Micronutrients
- ✓ Phytochemicals
- ✓ Fiber

✓ Fullness (satiety) is driven by the *volume* of food more than calories

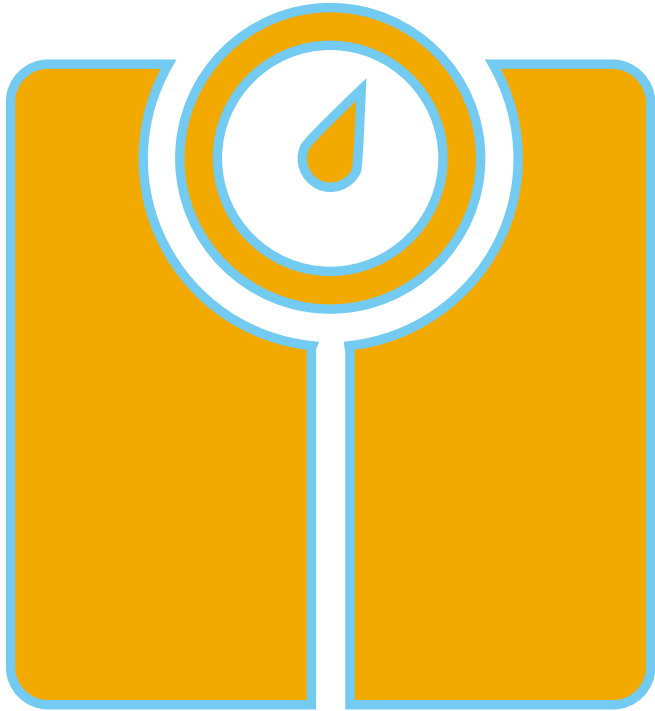
- ✓ Fat and sugar pack a lot of calories in a small volume



High Volume of Food = Increased Satiety



Reduced Calorie Guidelines



For weight loss:

- 500-1000 calorie reduction per day
 - 1200-1500 kcal/day if < 250 lbs
 - 1500-1800 kcal/day if \geq 250 lbs

For weight loss maintenance:

- Personalized calorie goal
- Standard equations based on sex, age, activity level
 - Mifflin-St. Jeor equation
 - <https://reference.medscape.com/calculator/846/mifflin-st-jeor-equation>

Specific Diet Approaches

A variety of healthy diets work if they are sustained for the long term!

Weight Loss At A Year

Compared to no diet

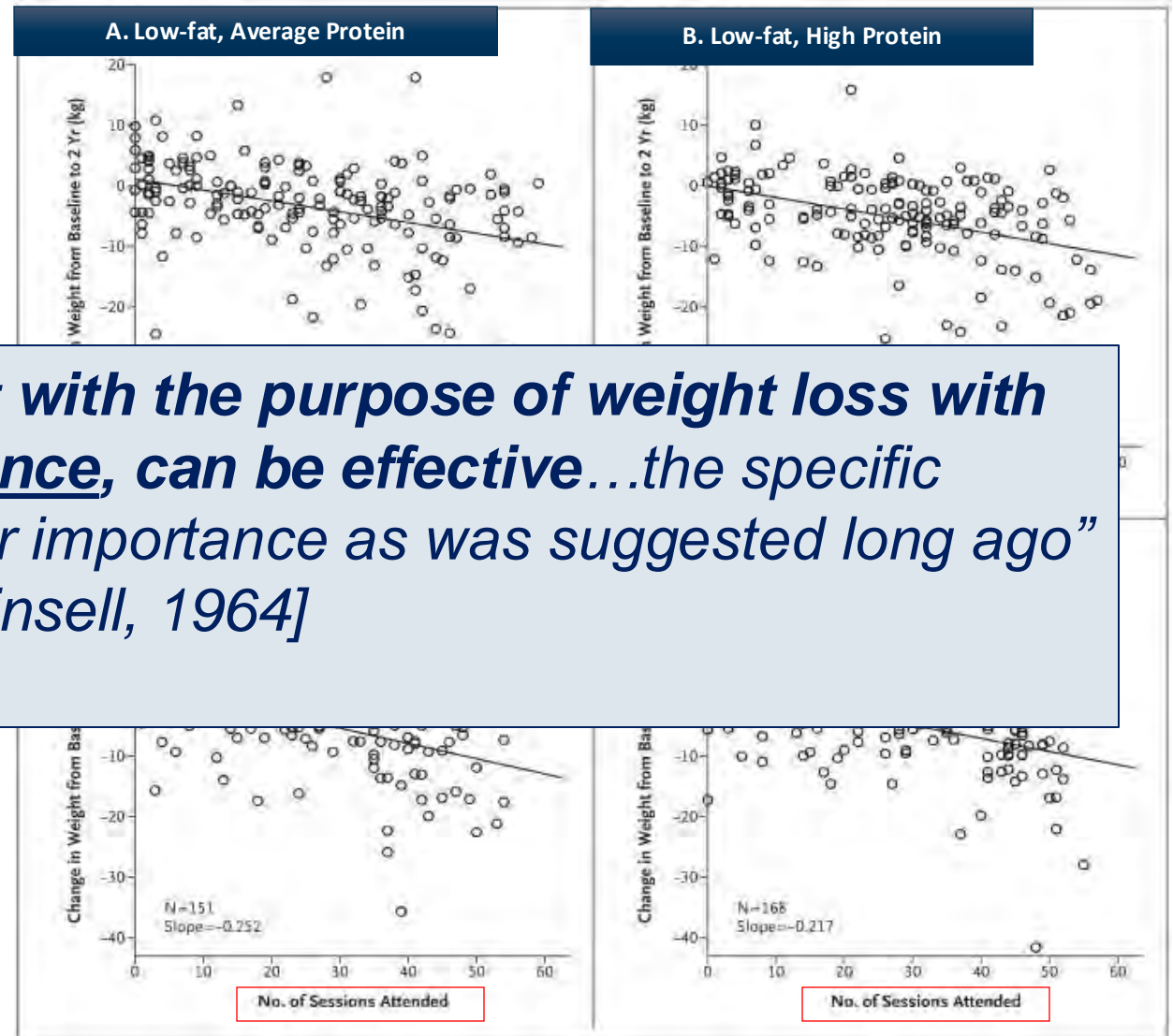
DIET	TYPE	WEIGHT LOSS
Ornish	Low fat	14.4 lbs
Jenny Craig	Moderate	14.3
Rosemary Conley	Low fat	14.2
Atkins	Low carb	14.0
Volumetrics	Moderate	13.2
Zone	Low carb	13.1
Weight Watchers	Moderate	13.0

What Diet to Prescribe?

How much Fat,

*“Any type of diet, when **taught with the purpose of weight loss with enthusiasm and persistence**, can be effective...the specific macronutrient content is of minor importance as was suggested long ago”*
[Kinsell, 1964]

- Key factor is diet adherence!



Healthy Dietary Patterns

High-quality carbohydrates

- Fruits, non-starchy vegetables, whole grains, beans

Variety of proteins

- Lean meats, seafood, eggs, beans, legumes, nuts

High-quality fats

- Nuts, seeds, fish, vegetable oils
- Small serving sizes

Reduce poor-quality carbs and processed foods

- Sugar-sweetened beverages, refined grains, processed foods

Quick Tips for Common Questions

Water

- Enough to maintain clear light urine color

Beverages

- Little to no alcohol, soda, high calorie coffee drinks

Low Sodium

- < 2300 mg/day

Eating Out

- Americans spend ~40% of food budget eating out
- Excess calories, poor diet quality

Snacking

- ~1/3 total calories of U.S. adults come from snacks
- Excess calories, poor diet quality

Condiments

- Hidden calories

Supplements

- Multivitamin

Meal times

- Eat at regular meal times, Avoid eating late

Standard Physical Activity Guidelines for Adults

MOVE YOUR WAY.

Adults need a mix of physical activity to stay healthy.

Moderate-intensity aerobic activity*
Anything that gets your heart beating faster counts.

at least **150 minutes a week**

AND

Muscle-strengthening activity
Do activities that make your muscles work harder than usual.

at least **2 days a week**

If you prefer vigorous-intensity aerobic activity (like running), aim for at least **75 minutes a week**.
If that's more than you can do right now, **do what you can**. Even 5 minutes of physical activity has real health benefits.

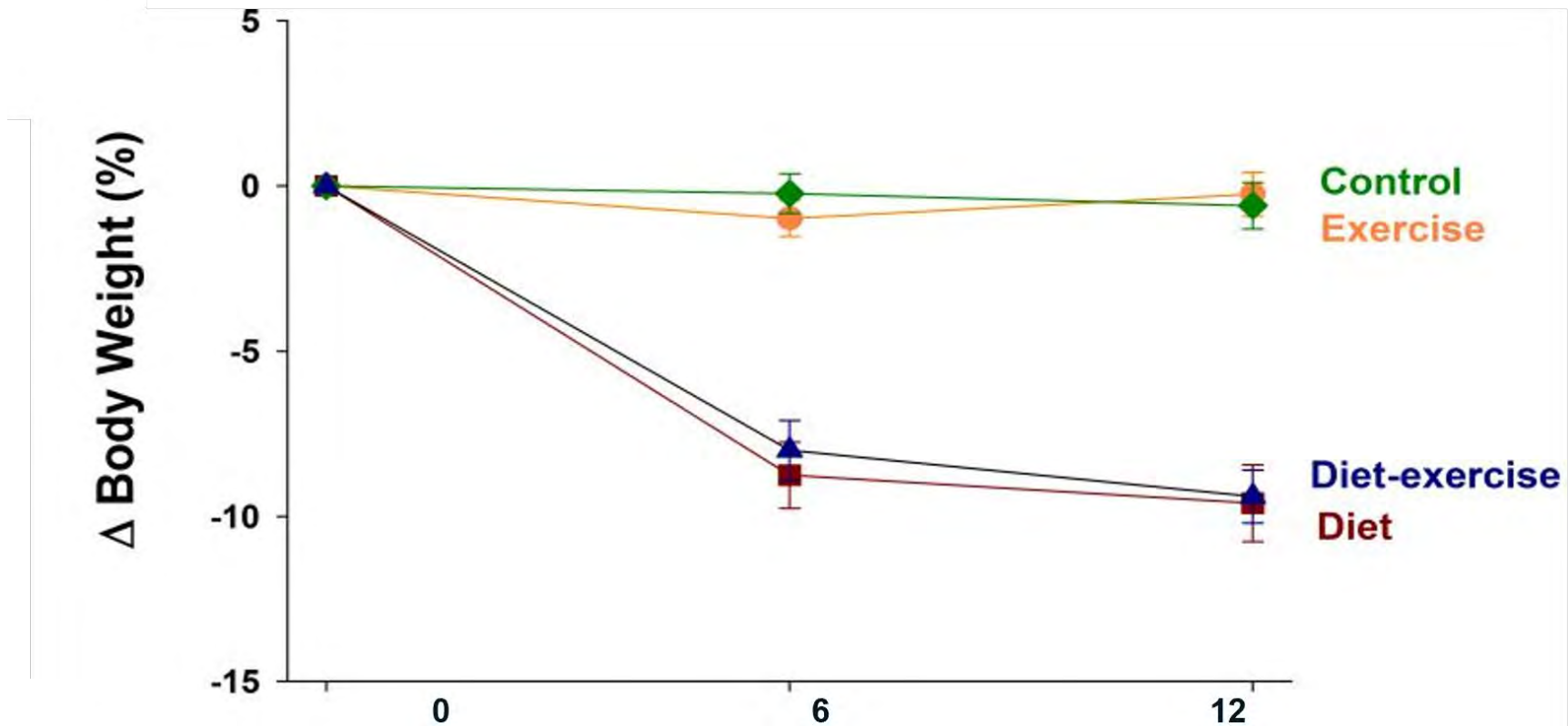
Walk. Run. Dance. Play. What's your move?

Physical Activity Recommendations for Weight Management

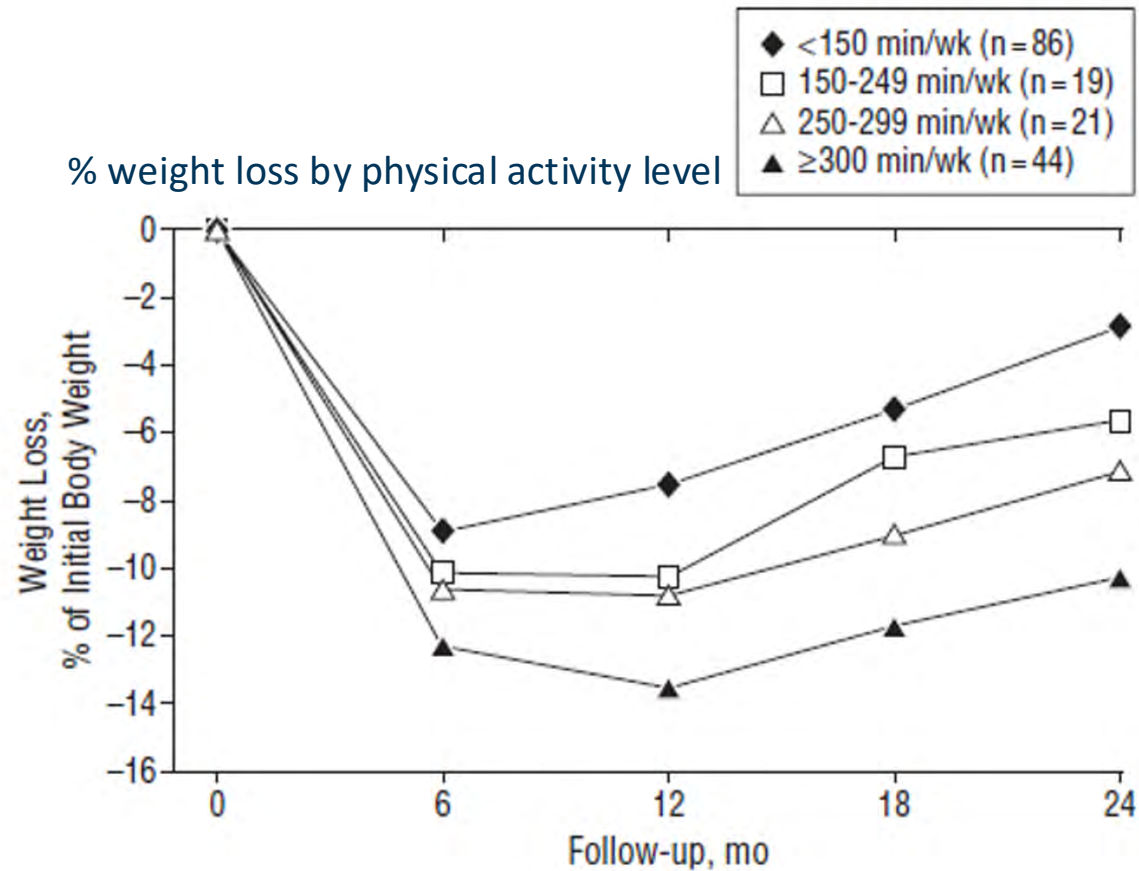
Goal	MVPA Guideline
To improve health	150/min week (e.g. 30 min/day, 5 days/wk)
To prevent weight gain	150-250/min week
To lose weight	150-250 min/week with caloric restriction
To maintain weight loss	~250+min/week



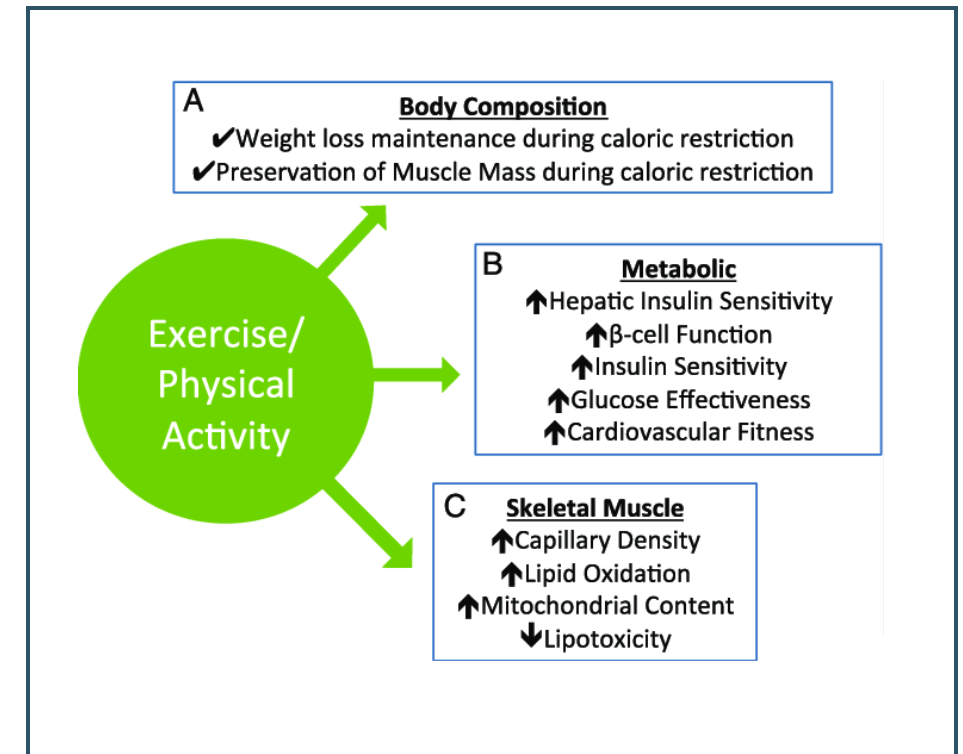
Non-supervised physical activity without dietary modification does not result in weight loss



But...Physical Activity Is Highly Predictive of Successful Weight Loss Maintenance



It's all about long-term commitment!



Strategies to safely increase physical activity and improve long term adherence

- Gradual progression
- Moderate intensity
- Home-based
- High frequency (5+ days/week)
- Consistent time of day

Week of Program	Days of Week	Minutes Per Day	Total Minutes Per Week
2	3	15	45
3	4	15	60
4	4	20	80
5	4	25	100
6	4	30	120
7	5	30	150
8	5	30	150
9	5	35	175
10	5	35	175
11	5	40	200
12	5	40	200
13+	5	45	225

Heart Rate Zone	Effort	How Hard It Feels	Heart Rate	Talk Test
Zone 1	Very easy	5 out of 10	50-60% Max HR	Can Sing
Zone 2	Easy	6 out of 10	60-70% Max HR	Comfortable to talk
Zone 3	Medium	7 out of 10	70-80% Max HR	Can Talk, but breathing heavily
Zone 4	Hard	8 out of 10	80-90% Max HR	Too hard to talk
Zone 5	Very Hard	9-10 out of 10	90-100% Max HR	Unable to talk

Wing et al. 2005 *Am J Clin Nutr*

Perri et al. 2002 *Health Psychol*

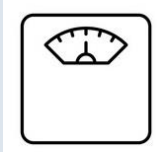
Jakicic et al. 1999 *JAMA*

Schumacher et al., 2019, *Obesity*

Core Behavior Change Strategies



Self-Monitoring = Major Predictor of Success!

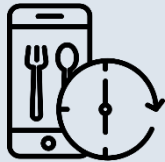


Daily to weekly self-weighing

- Helps stay on target and understand normal fluctuations
- Creates a connection between lifestyle behaviors and weight trajectory



Step and PA min tracking using a wearable or cell phone

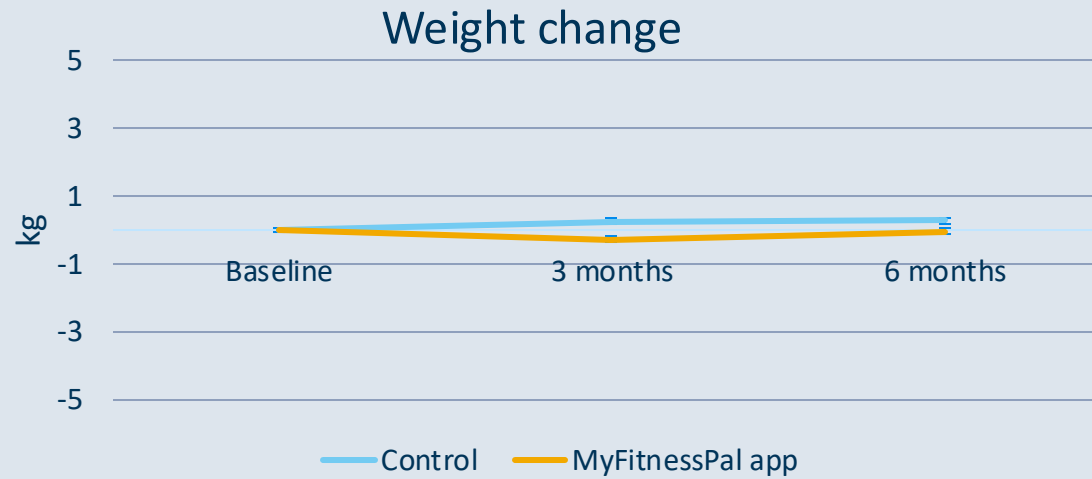


Nutrition apps: MyNetDiary, MyFitnessPal or Lose It! (free)

- Paper Trackers and journals work too!
1. Increases knowledge of portion size and calories
 2. Provides accountability toward goals
 3. Increases understanding of antecedents and consequences of behaviors
 4. Promotes consistency in diet
 5. Provides feedback to/from treating clinician



Just an App: no difference



	Month					
	1	2	3	4	5	6
Participants who logged in, n (%)	97%	55%	47%	43%	23%	35%
Median logins, n	8	1	0	0	0	0

Seekaew et al., 2015, *J Clinical Outcomes Management*,

SMART Goal Setting



- **Unrealistic goals = goals not met**
 - negative emotions
 - negative self-perceptions
 - abandonment of goals
 - weight regain

Not-so-SMART goals	SMART-er goals
Lose 75 lbs in 3 months	Lose 10% of body weight in 6 months
Stop eating out so much	Eat out only twice in the next month
Exercise more	Over next 3 mo progress up to walking for 45 min/day, 5 days per week (225 min/week)

Stimulus Control: Skill Power NOT Will Power

- Environments heavily influence individuals' daily choices
- Take charge of environmental triggers
- Create easy and quick path for the healthy choice



Extended care visits

- **Provide accountability, feedback, and options at each visit**
 - Agree on short and long term SMART goals
 - Chart goals and check in on progress toward goals
 - Review self-monitoring logs with patient
 - Link progress to specific health changes and labs
- **Monitor behavioral risk factors for weight regain**
 - Within first 2 years of weight loss
 - Depression, stress, life events
 - Binge eating
 - Inconsistency in diet
 - Reduced frequency of self-weighing
 - Changes in sleep
 - Reduced physical activity

RETOOL WEEKLY GOAL SETTING					
Week	Nutrition Goals <i>(ex. Eat 5 fruits and veggies every day)</i>	Physical Activity Goals <i>(ex. Walk for 15 min on 3 days this week)</i>	Is it SMART? Y/N	Achieved? Y/N	If not, why not?
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

RETOOL

Setting and Short and Long-Term Goals

Weekly short terms goals chart progress, while long term goals help clarify your destination. Both short and long-term goals need to be revisited and revised every month along the journey.

My Long-term goal(s): _____
 My 3-month goal(s): _____
 My 6-month goal(s): _____
 My 12-month goal(s): _____
 My 18-month goal(s): _____

Diet physical activity behaviors to focus on:

- Setting a calorie goal
- Increasing fruits and vegetables
- Choosing lean proteins
- Adding steps to my day
- Scheduling physical activity
- Avoiding empty calorie beverages

My goals for this week include: _____

I will meet these goals by: _____

Potential barriers to meeting my goals: _____

Potential solutions to managing these barriers: _____

If I get off track, I will: _____



TEAM CARE + RESOURCES








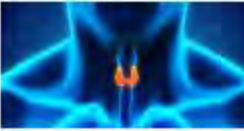










Team Care Patient Handouts



Team Care Provider Tools



Webinar Series

<p>Obesity Medication Coverage and Pre-Authorizations; September 2024</p>  <p>Catherine Beaver, MD and Ashley Greer KU Weight Management Clinic, University of Kansas Medical Center https://youtube.com/watch?v=A2D4PH8E_U</p>	<p>Pediatric Obesity Treatment Guidelines; July 2024</p>  <p>Sarah Ramps, MD - Professor of Pediatrics UMKC and Children's Mercy Hospital https://youtube.com/watch?v=9Caf0u0t8w</p>	<p>Hormonal Influences on Weight; June 2024</p>  <p>Catherine Beaver, MD and Ashley Greer KU Weight Management Clinic, University of Kansas Medical Center https://youtube.com/watch?v=7m78B1vVY</p>	<p>Nutrition Targets; December 2025</p>  <p>Debra K. Sullivan, PhD, RD, Chair & Midwest Dairy Endowed Professor of Clinical Nutrition, Department of Diabetes and Nutrition, University of Kansas Medical Center https://youtube.com/watch?v=C9v9d3h0nag</p>	<p>Exercise and Preservation of Muscle Mass with and without GLP-1 Meds; September 2025</p>  <p>John M. Jakovic, PhD, University of Kansas Medical Center, Division of Physical Activity and Weight Management https://youtube.com/watch?v=1n8J5XQ</p>	<p>Polycystic Ovary Syndrome; August 2025</p>  <p>Phoutavone ("Noy") Phingphasone-Brody, PhD, Colorado Center for Women's Behavioral Health and Wellness, University of Colorado https://youtube.com/watch?v=mg1m0q7-g</p>
<p>SEPTEMBER 2024</p>					
<p>The Gut-Brain Connection and Appetite Regulation; February 2024</p>  <p>Catherine Beaver, MD - Assistant Professor, KU Weight Management Clinic, University of Kansas Medical Center https://youtube.com/watch?v=UQV5K2uE8</p>	<p>Endocrine and Hormonal Issues Related to Weight Gain; September 2023</p>  <p>Catherine Beaver, MD - Assistant Professor, KU Weight Management Clinic, University of Kansas Medical Center https://youtube.com/watch?v=evy3L10c</p>	<p>RETOOL Exercise Recommendations; August 2023</p>  <p>James Ritter - Research Assistant, University of Kansas Medical Center https://youtube.com/watch?v=7m78B1vVY</p>	<p>Binge Eating Disorder; May 2025</p>  <p>Maya Alexander, PsyD and Tara Halsey, PhD - University of Kansas Medical Center https://youtube.com/watch?v=8A06v0v0g</p>	<p>Antiobesity Medication Selection Case Studies; April 2025</p>  <p>Catherine Beaver, MD KU Weight Management Clinic, University of Kansas Medical Center https://youtube.com/watch?v=V03P1G0R5U</p>	<p>Endoscopic Bariatric Procedures; February 2025</p>  <p>Eric Motley, MD Assistant Professor, Gastroenterology, Hepatology & Motility, The University of Kansas Health System https://youtube.com/watch?v=C1Xed1m6Ys</p>
<p>Bariatric Surgery and Post-Surgical Nutrition Considerations; October 2023</p>  <p>Jennifer McAlister, MD - Metabolic, Bariatric and Minimally Invasive Surgery, University of Kansas Health System https://youtube.com/watch?v=K0Qw8934Uc</p>	<p>Weight Loss Maintenance and Regain; November 2023</p>  <p>Christie DeFarr, PhD - Professor, Population Health, University of Kansas Medical Center https://youtube.com/watch?v=0C9V85amg</p>	<p>Promoting Sleep Health; May 2024</p>  <p>Catherine Berganson, PhD - Director, Sleep Health & Wellness Lab, University of Kansas Medical Center https://youtube.com/watch?v=4S4qT17taq</p>	<p>RETOOL Intervention: Nutrition and Exercise Guidelines; February 2025</p>  <p>Christie DeFarr, PhD - Professor, Population Health, University of Kansas Medical Center https://youtube.com/watch?v=8f93010p00c</p>	<p>The Impact of Trauma on Weight; December 2024</p>  <p>Maya Alexander, PsyD - Behavioral Health Consultants and LCP, University of Kansas Medical Center https://youtube.com/watch?v=1560k1te</p>	<p>Nutrition and Protein Recommendations; October 2024</p>  <p>Debra K. Sullivan, PhD, RD, Chair & Midwest Dairy Endowed Professor of Clinical Nutrition, Department of Diabetes and Nutrition, University of Kansas Medical Center https://youtube.com/watch?v=71n8k5XUMM</p>

Obesity Treatments and Cancer Risk Reduction

Cathleen Beaver, MD
Assistant Professor Internal Medicine
Weight Management Clinic
University of Kansas Health System



THE UNIVERSITY OF KANSAS
CANCER CENTER

Obesity Myths

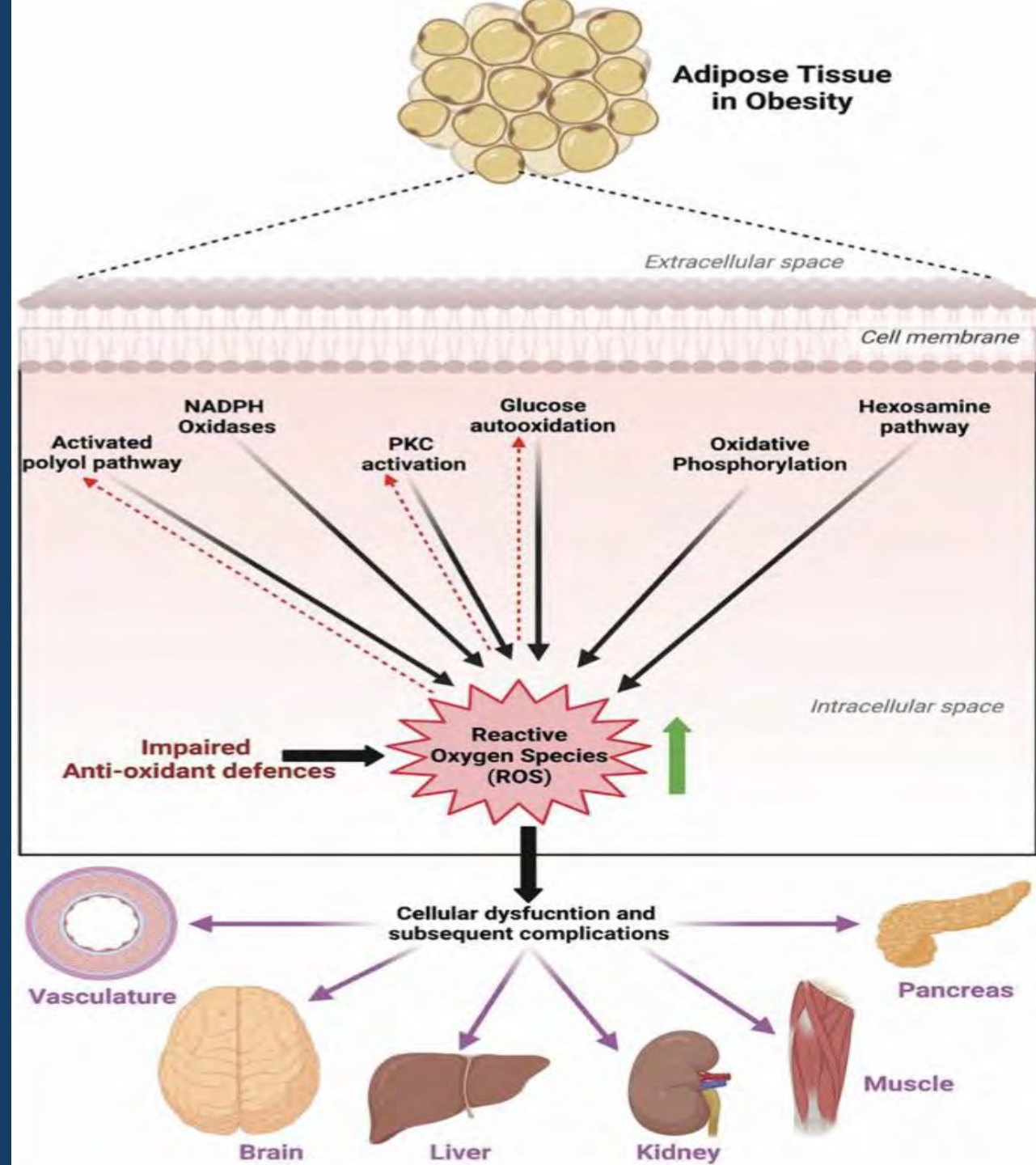
- Body weight = calories in – calories out
- Obesity is primarily caused by voluntary overeating and a sedentary lifestyle
- Obesity is a lifestyle choice
- Obesity is not a disease
- Severe obesity is reversible by voluntarily eating less and exercising more



Obesity...

IS NOT a disease of
excess weight

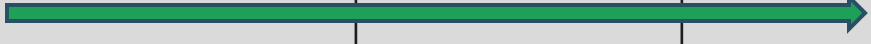
IS a disease of abnormal
adiposity



Current Obesity Treatment Guidelines

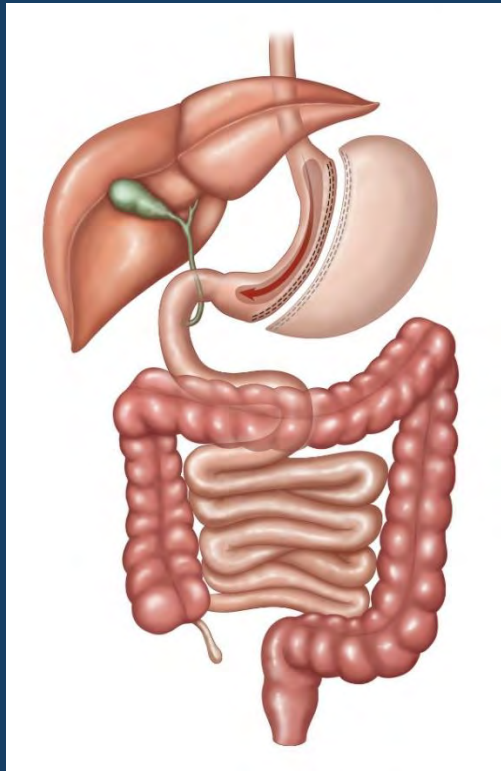
Treatment	BMI Category (kg/m ²)				
	25-26.9	27-27.9	30-34.9	35-35.9	≥ 40
Diet, physical activity and behavioral therapy	Yes, with comorbidities	Yes, with comorbidities	Yes	Yes	Yes
Pharmacotherapy		Yes, with comorbidities	Yes	Yes	Yes
Surgery			**Yes, with comorbidities	Yes, with comorbidities	Yes
Endoscopic Sleeve Gastroplasty (ESG)			BMI of 30-50		

Adjunct Therapies to Lifestyle Change



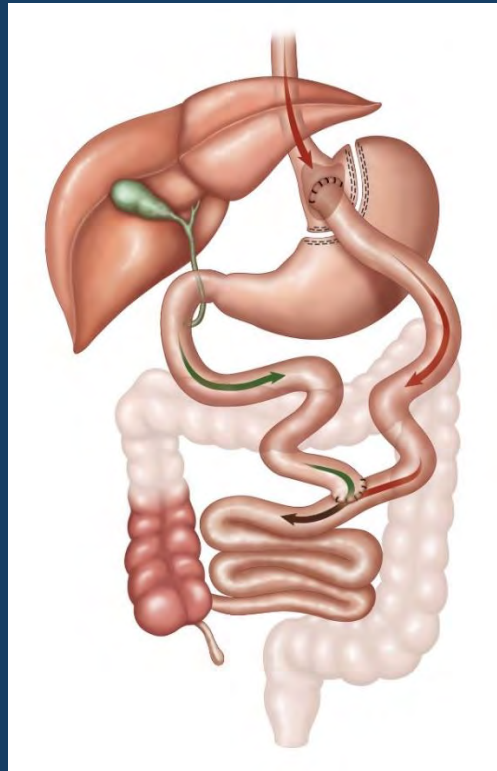
Metabolic and Bariatric Surgery

Sleeve Gastrectomy



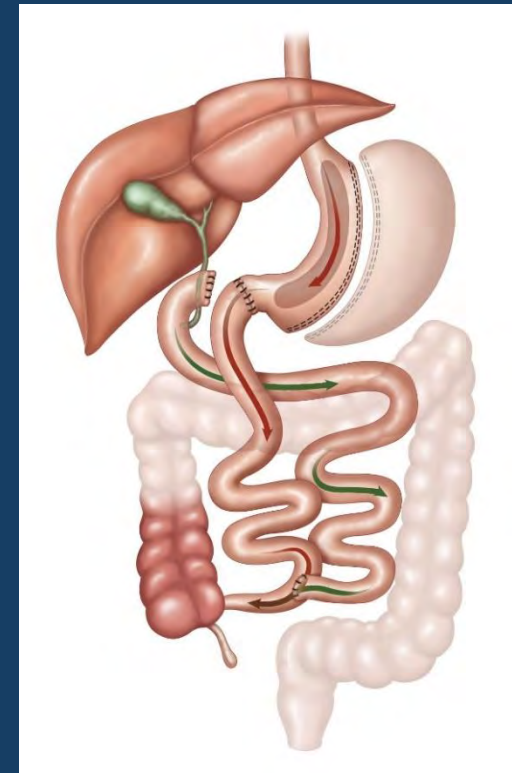
25-30% TBWL

Roux-en-Y Gastric Bypass



30-35% TBWL

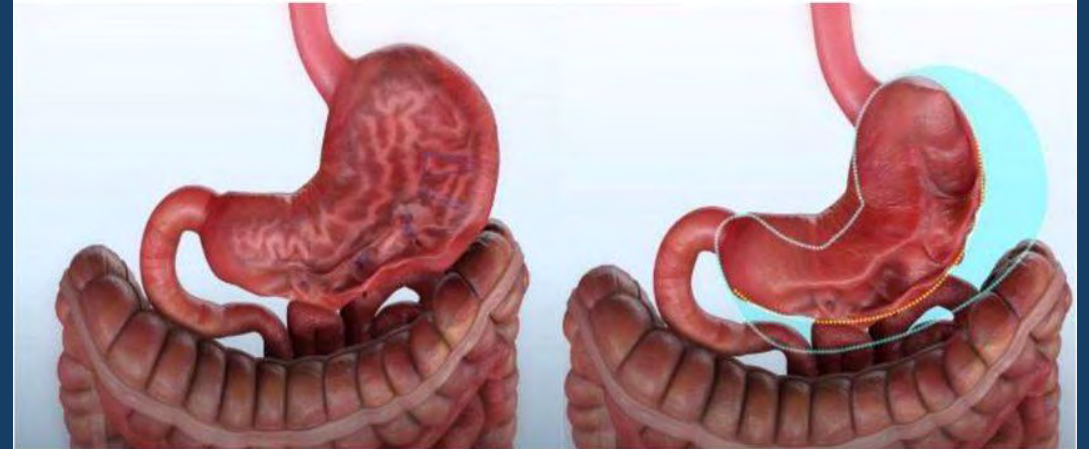
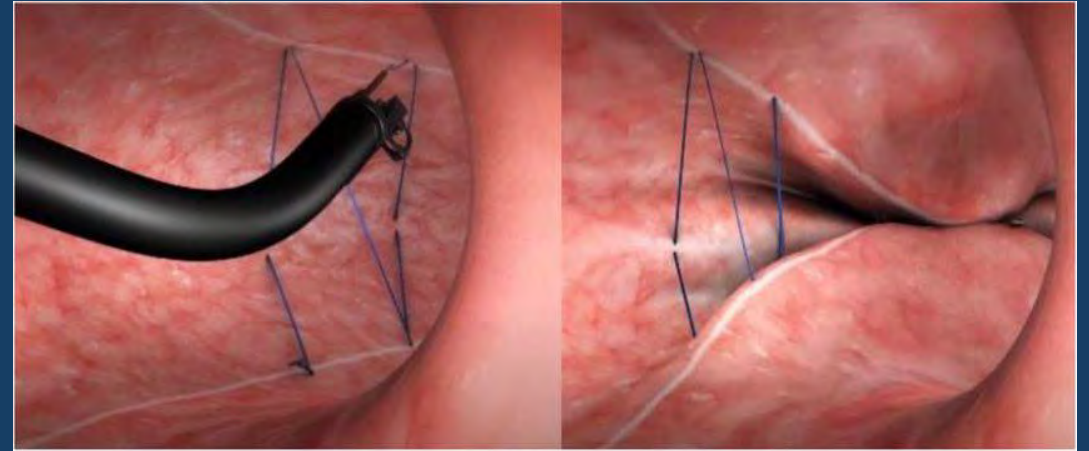
Biliopancreatic Diversion with Duodenal Switch BPD-DS



35-40% TBWL

Endoscopic Sleeve Gastroplasty

- Full-thickness sutures through the gastric wall creating a sleeve configuration
- 70% reduction in gastric capacity
- Positive hormonal effects
- Efficacy:
 - TBWL 13-20%
 - 5-year data demonstrates durability and sustained metabolic benefits



KU Gastroenterology
Eric Molloy, MD
Mitesh, Patel, MD

Current FDA Approved Anti-Obesity Medications



1959 // 1999 2012 2014

↓ ↓ ↓ ↓

Phentermine 7% Orlistat <5% Liraglutide 8%

Phentermine/topiramate 8-10%
Naltrexone/bupropion 5-6%

Average Weight Loss: 5-10%

2020 2021 2023 2025

↓ ↓ ↓ ↓

Setmolanotide Semaglutide 16% Tirzepatide 21% ORAL Semaglutide 14%

Next generation GLP-1 Based Therapies

Average Weight Loss: 14-21%

Paradigm Shift

FDA Approved Indications for Anti-Obesity Medications

Obesity

- Tirzepatide
- Semaglutide
- Qsymia
(phentermine/topiramate)
- Contrave
(bupropion/naltrexone)
- Phentermine/Diethylpropion
- Generic liraglutide
- Orlistat

Secondary
Prevention of
CVD

Semaglutide

MASLD with 2-3
Fibrosis

Semaglutide

OSA and
Obesity

Tirzepatide

MC4 Pathway
Obesity

Setmelanotide



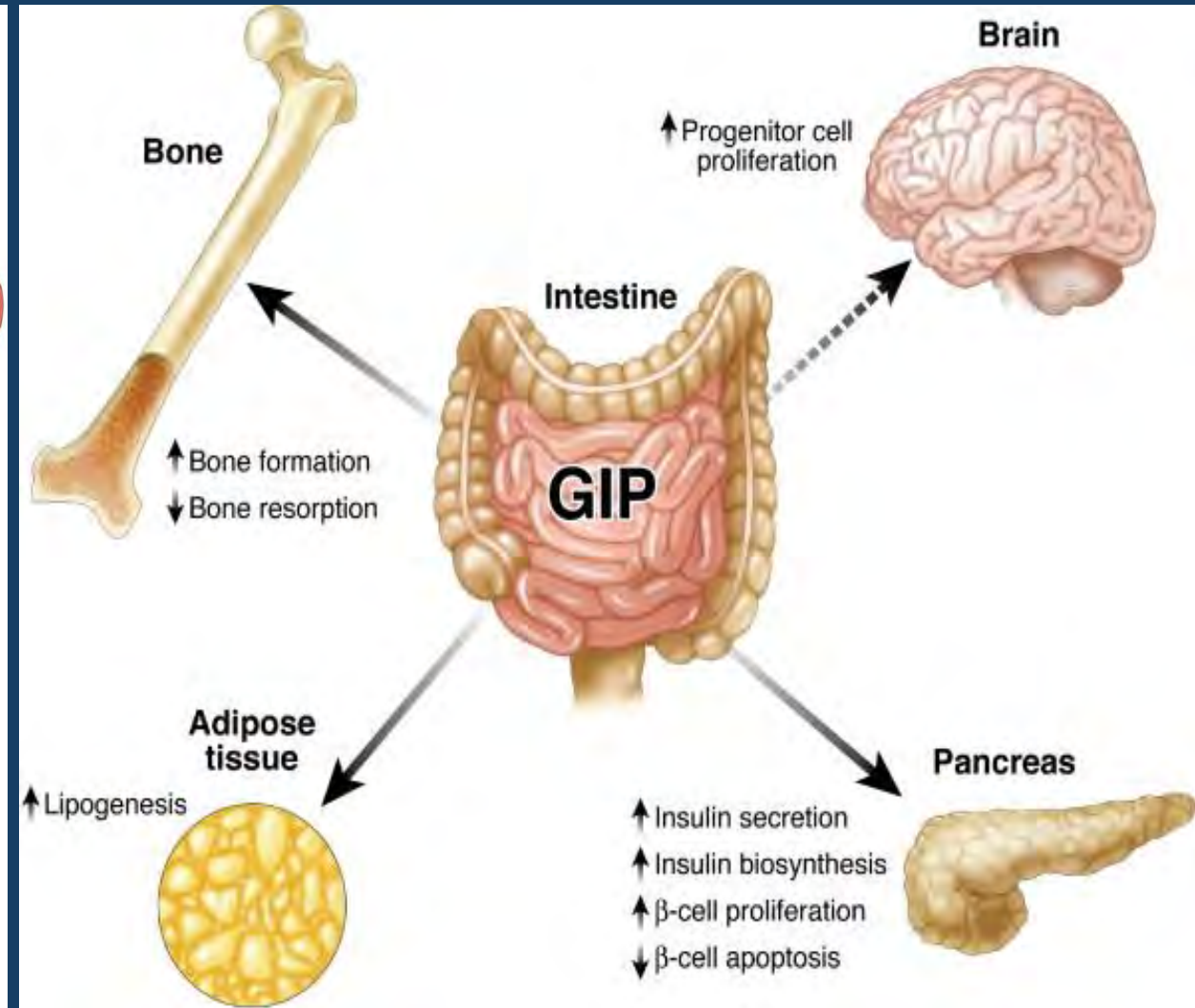
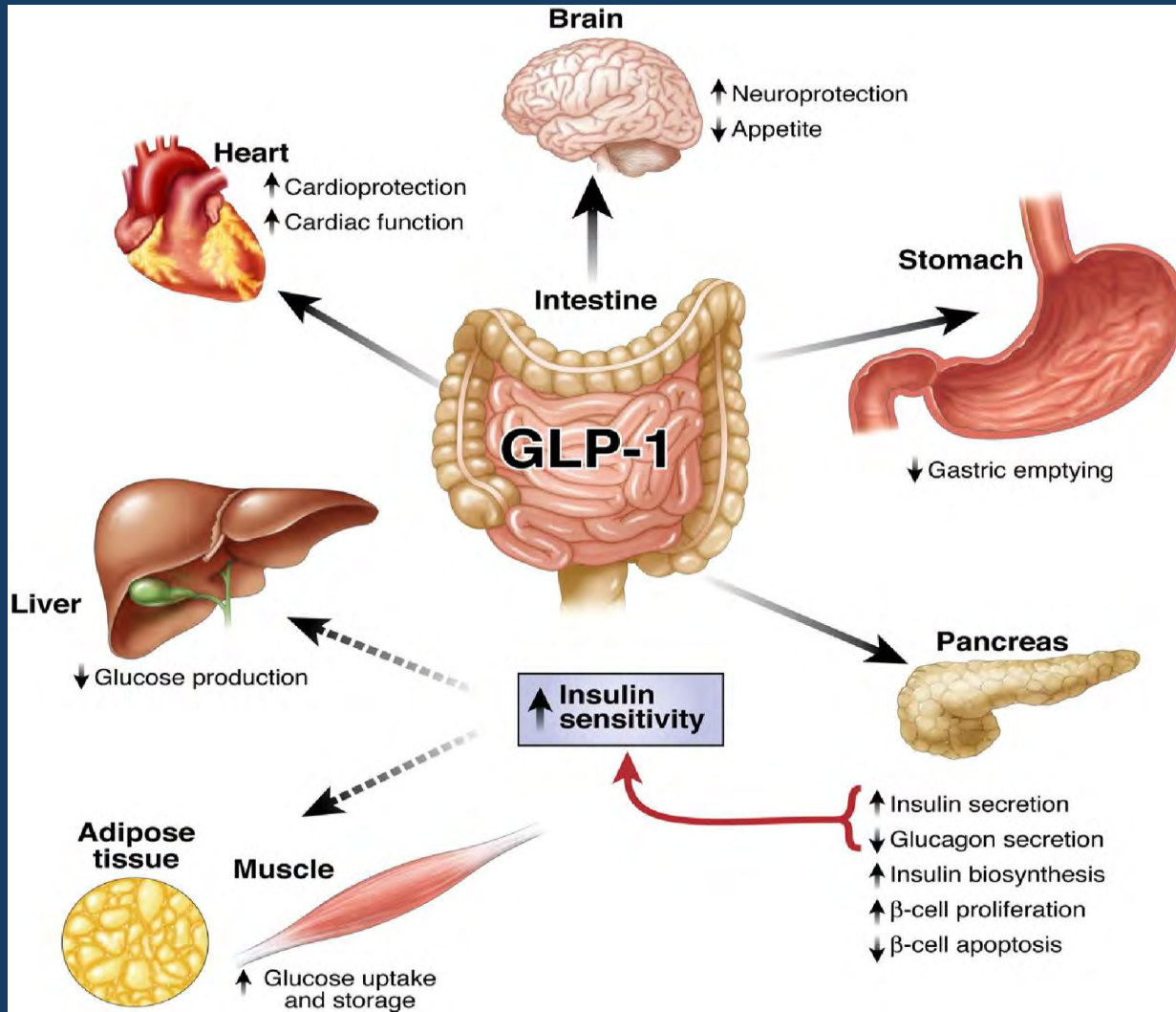
GLP-1 Based Therapy

Mechanisms for weight loss

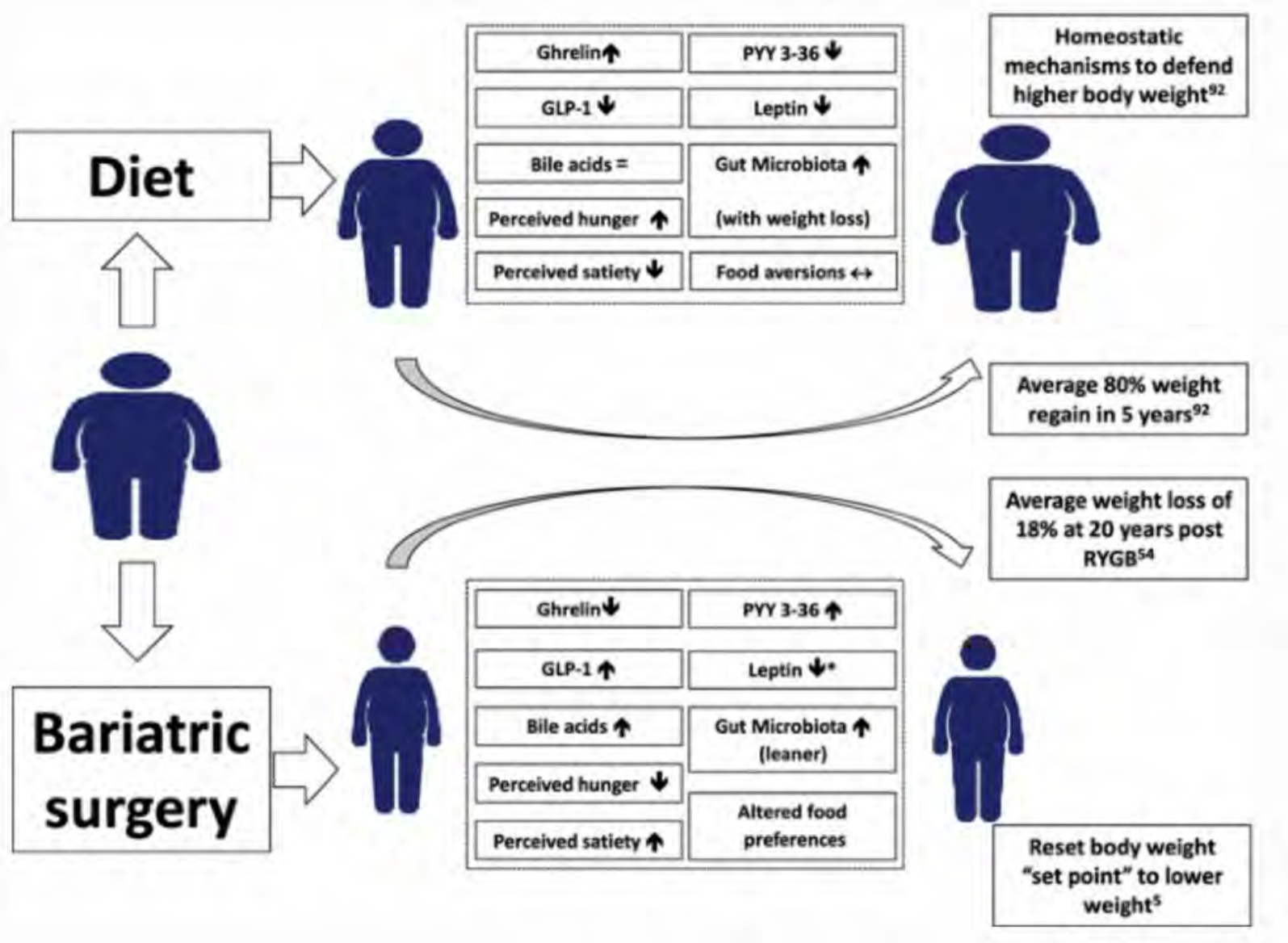
Review of 2nd generation and future options

Management and clinical pearls

Physiologic Effects of GLP-1 and GIP



Mechanisms of Weight Loss



GLP-1 Based Therapy: Mechanisms for Weight Loss

Central Effects

- **Hypothalamic appetite regulation**
 - Reduced hunger signaling
- **Mesolimbic reward modulation**
 - Reduce food reward and hedonic eating
 - Decrease cravings
 - Less impulsive eating behavior
- **Earlier satiety**

Behavioral Effects

Improved adherence to caloric restriction, higher-protein diets, and structured lifestyle change

Gastrointestinal Effects

- **Delayed gastric emptying**
 - Prolongs post-meal fullness
 - Decreases lipid and carbohydrate absorption

Glycemic & Metabolic Effects

- **Increased insulin secretion**
 - Reduces glucotoxicity, which may influence hunger signaling
- **Decreased glucagon secretion**
 - Stabilizes postprandial metabolism

Effects of GLP-1, GIP and Their Receptor Agonists (RA) on Metabolic Pathways

GLP-1 and agonists

- Pancreas - ↑ Insulin secretion and suppresses glucagon secretion
- Brain/NS - ↑ satiety, ↓ appetite, and ↑ sympathetic tone (enhances adipose tissue lipolysis), ↓ inflammation and neuroprotective
- Stomach - delays gastric emptying → ↓ postprandial lipid and carbohydrate absorption
- Adipose Tissue - ↑ adiponectin → ↓ TG
- Liver (indirect) - ↓ Hepatic fat, ↓ insulin resistance, inhibits gluconeogenesis

GIP and agonists

- Pancreas - ↑ Insulin and glucagon secretion
- Brain - ↑ satiety, ↓ inflammation and neuroprotective
- Adipose Tissue - ↑ LPL and adiponectin → ↓ TG and ↓ visceral ectopic fat
- Liver (indirect) - ↓ Hepatic fat, ↓ insulin resistance, inhibits gluconeogenesis
- Bone - ↓ bone resorption and ↑ bone formation

Resultant Primary Driver of Weight Loss: Sustained Caloric Reduction

Possible Secondary Mechanisms:

- **Anti-inflammatory effects**
 - Reduction in systemic inflammation
- **Improved insulin sensitivity**
 - May further stabilize appetite regulation
- **Alteration of gut-brain signaling**
 - Enhanced vagal afferent signaling
 - Modulation of microbiome

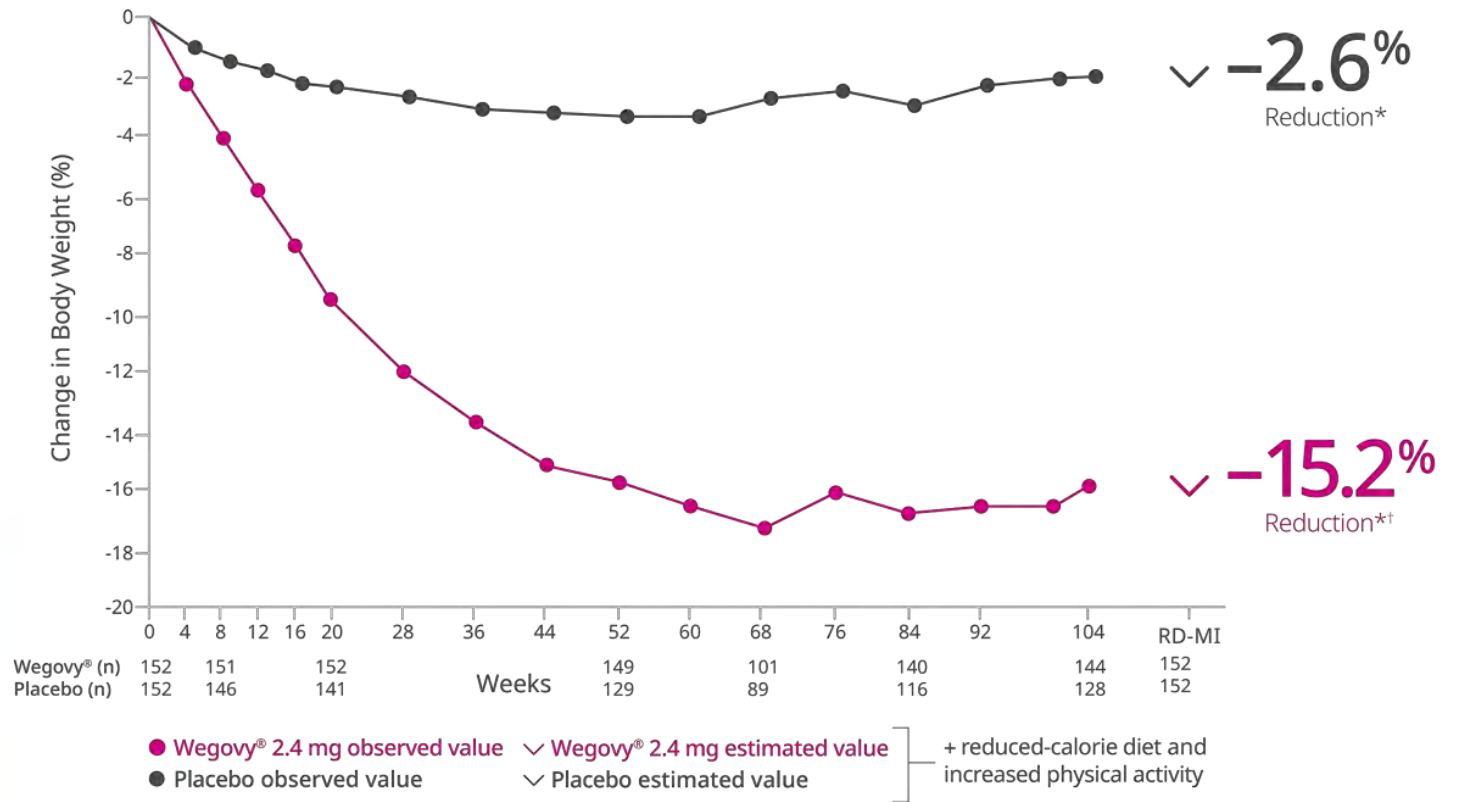


STEP Trials: Semaglutide (GLP-1 Agonist)

ONCE - WEEKLY
wegovy[®]
 semaglutide injection **2.4 mg**



Patients in both arms received instruction for reduced-calorie diet and increased physical activity



SURMOUNT Trials: Tirzepatide (GLP-1 and GIP Dual Agonist)

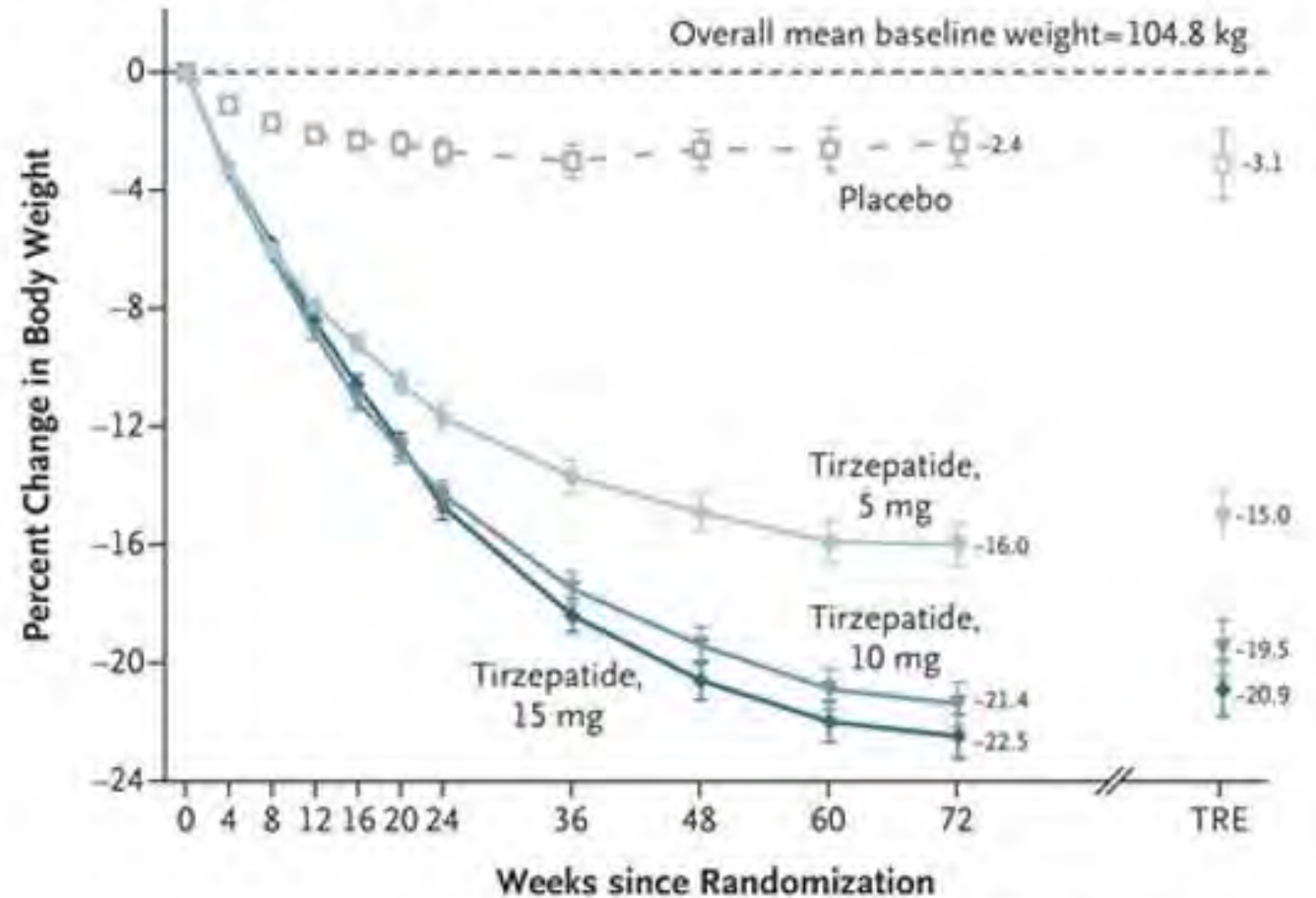
once weekly
zepbound[®]

(tirzepatide) injection 0.5 mL

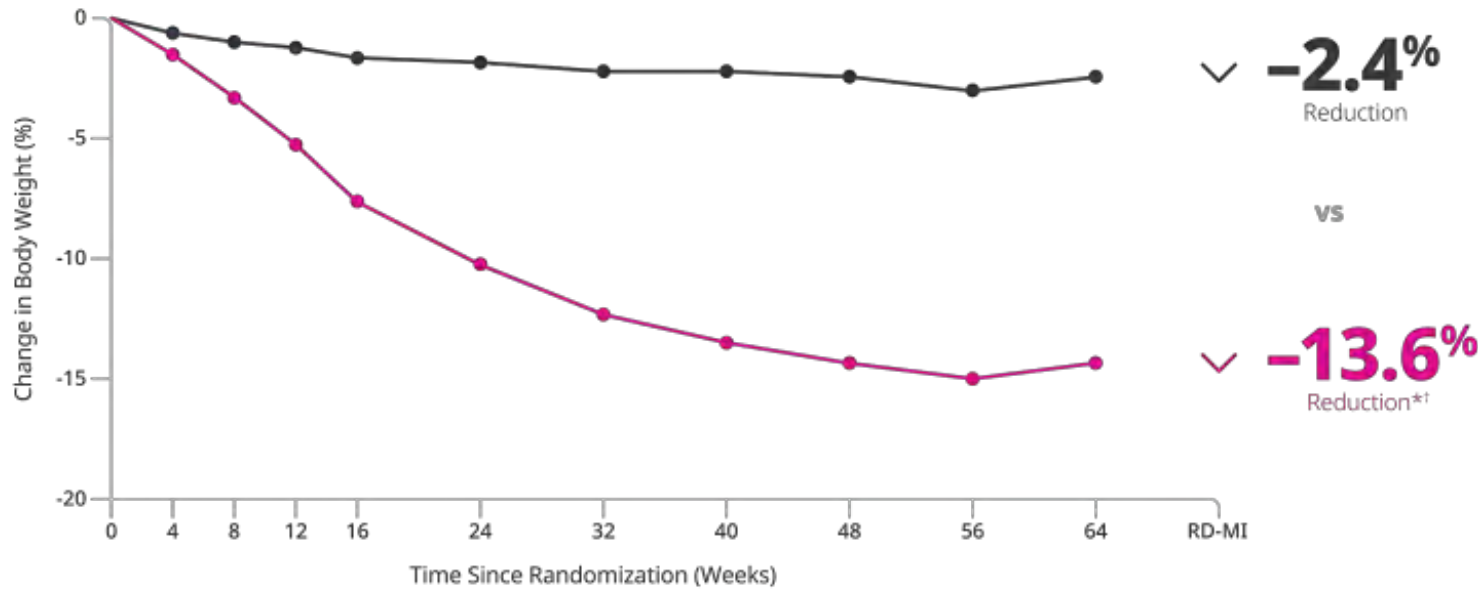
2.5 mg | 5 mg | 7.5 mg | 10 mg | 12.5 mg | 15 mg



B Percent Change in Body Weight by Week (efficacy estimand)



OASIS 4 Trial: Oral Semaglutide (GLP-1 Agonist)



Number of participants

Wegovy [®]	205	201	200	200	198	192	189	181	186	179	192	205
Placebo	102	100	99	99	99	92	89	89	88	87	90	102

● Wegovy[®] pill 25 mg observed value
 ∨ Wegovy[®] pill 25 mg estimated value
 ● Placebo observed value
 ∨ Placebo estimated value
 } + reduced-calorie diet and increased physical activity

Oral Semaglutide

wegovy[®]
semaglutide tablets 25mg

Dose Escalation

- 1.5mg daily x 4 weeks
- 4mg daily x 4 weeks
- 9mg daily x 4 weeks
- 25mg daily

Adverse Events

- Slightly more likely to induce GI adverse events
- Similar overall safety profile

Dose Equivalents Pen to Pill

- 0.25mg = 1.5mg
- 0.5mg = 4mg
- 1mg = 9mg
- 2.4mg = 25mg

Patient Instructions

- Take on an empty stomach with up to 4 oz of water
- Do not take with any other liquids
- Wait 30 minutes before eating, drinking or taking other medications
- Tablets cannot be split

GLP-1 Based Therapy: Best Responders

- Younger Age
- Female
- No type 2 diabetes
- Higher baseline BMI
- Normal HbA1c
- Normotensive and normal liver enzymes
- Tolerates full dose escalation
- Maintains adherence throughout treatment

***** To date, there are no biomarkers predicting response**

GLP-1 Based Therapy: Managing Patients

Side Effects

- **Nausea, constipation, diarrhea**
- Headache, fatigue, dizziness
- Abdominal pain, vomiting, dyspepsia
- Hair loss
- Injection site reaction
- Allodynia

Risks

- Gallstones <3%
- Ileus or small bowel obstruction <1%
- Pancreatitis <1%
- NAION (Nonarteritic Anterior Ischemic Optic Neuropathy)-semaglutide only – very rare

Contraindications

Absolute:

- Pregnancy or Nursing
- Personal or FH or Medullary Thyroid Carcinoma or MEN-type 2

Potential:

- Gastroparesis
- History of pancreatitis
- History of bowel obstruction

GLP-1 Based Therapy: Clinical Pearls

Frequent follow-up visits

- Assess efficacy and side effects
- Monitor intake
 - Prevent nutritional deficiencies
 - Prevent dehydration
- Dose escalation

Muscle mass

- Quality vs Quantity

Tirzepatide and oral contraception

Plateaus

- Switch agents
- Add a 2nd agent
- Interventional approaches
- Newer agents coming

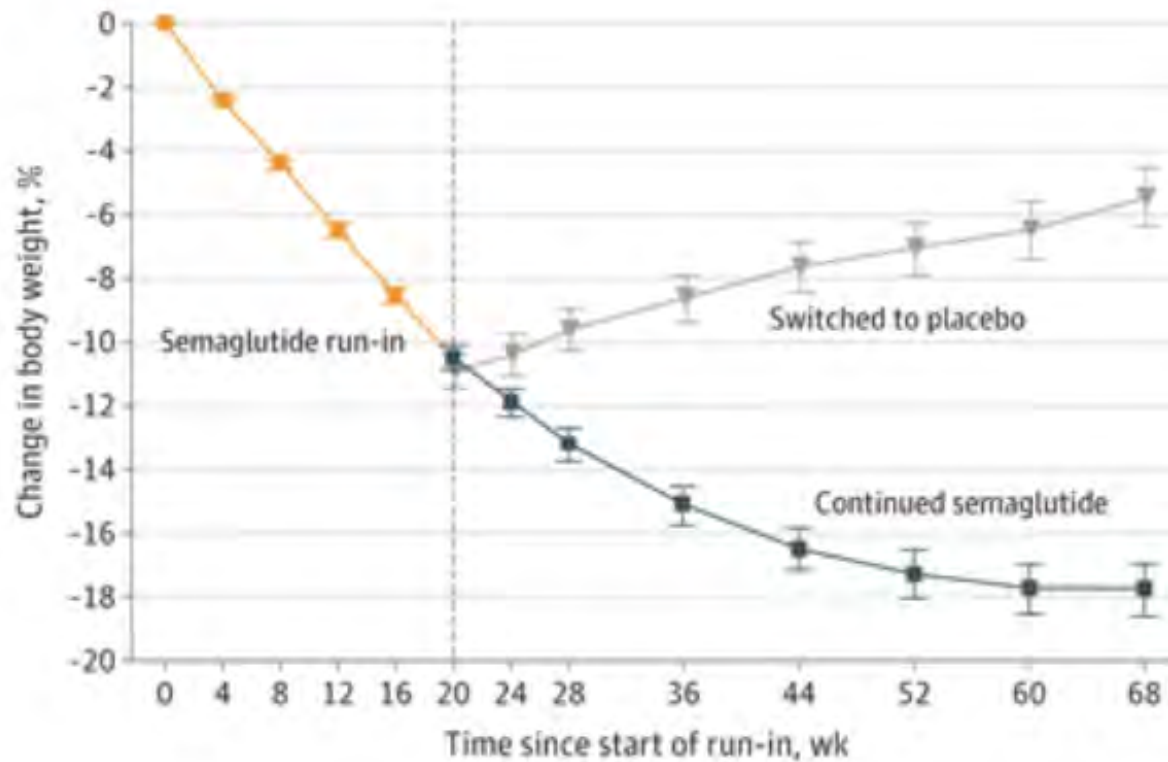
Manage Co-Morbidities

- Adjust anti-hypertensives when indicated
- Awareness of weight-promoting medications
- Tight management of T2DM

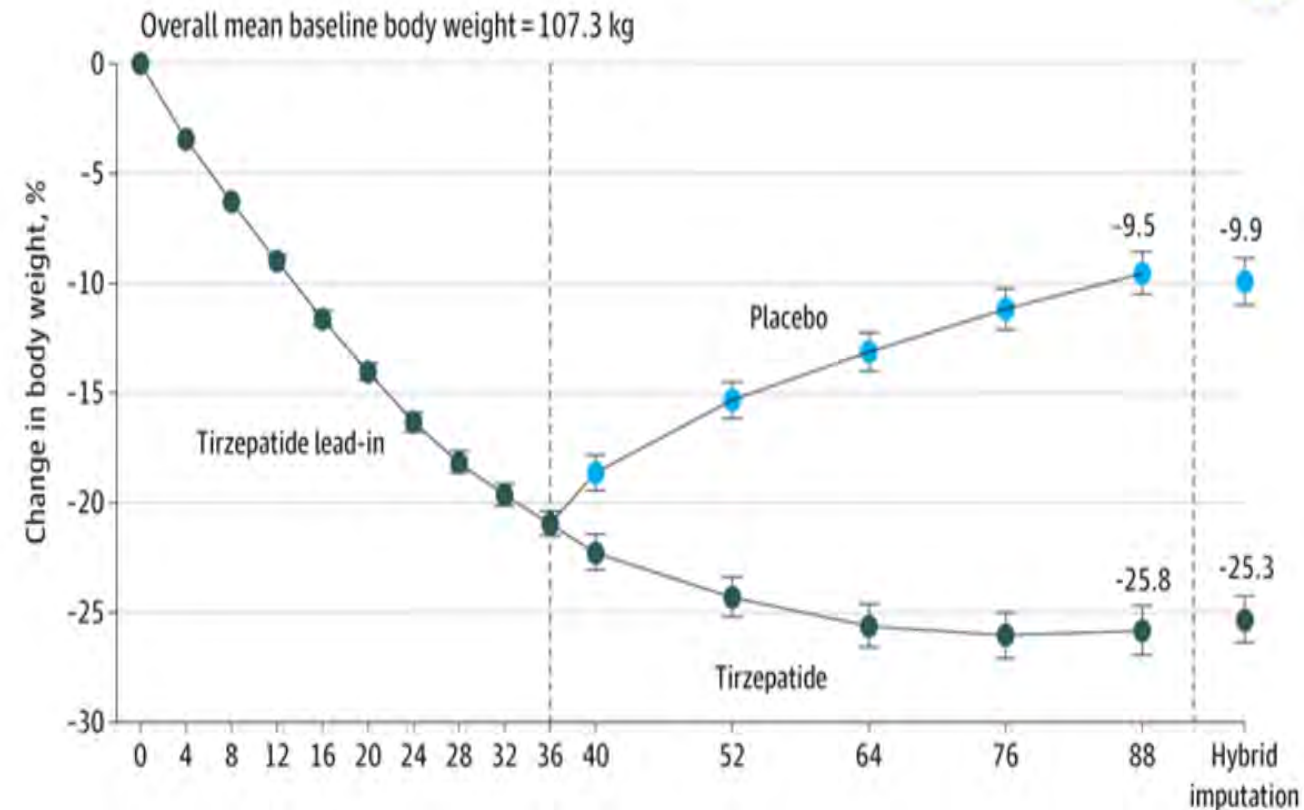
Manage expectations

GLP-1 Based Therapy: Regain Risk with Discontinuation

STEP 4 - Semaglutide



SURMOUNT 4 - Tirzepatitde



GLP-1 Based Therapy: Coverage and Alternatives

Tricks for Coverage


- There are NO tricks
- Link to a Dx
 - MASLD with fibrosis 2-3
 - Fibroscan, liver bx, or MRE
 - ELF score
 - Moderate to Severe OSA (AHI>15)
 - CVD: MI, CVA, or PVD
 - T2DM (Mounjaro and Ozempic)

Insurance Issues

- Drug Exclusions
- Preferred Drugs

Alternatives for No Coverage

- Phentermine 15-37.5mg
- Phentermine 15mg QD + topiramate 50mg BID (titrate topiramate up)
- Bupropion 150mg BID + naltrexone 50mg QD (titrate naltrexone up)
- Metformin ER 500mg-2g daily
- Generic liraglutide
- Self Pay



GLP-1 Based Therapy: Current Self Pay Options

Zepbound:

- 2.5mg: \$299/mo
- 5m: \$399/mo
- 7.5mg, 10mg, 12.5mg, and 15mg: \$449/mo

Wegovy Pens:

- 0.25mg or 0.5 mg for 2months: \$199/mo
- \$349/mo

Wegovy Pills

- 1.5mg: \$149/mo
- 4mg: \$199/mo
- 9mg and 25mg: \$349/mo

Contraindications for Anti-Obesity Medications

GLP1 Agonist based therapies

- FH of MEN Syndrome -Type 2
- Personal or FH of Medullary Thyroid Cancer
- ? Pancreatitis
- ? Gastroparesis

Phentermine

- CVD: Coronary Artery Disease, Heart Failure, or Stroke
- Known arrhythmia
- Uncontrolled HTN
- Glaucoma
- Hyperthyroidism
- MAO Inhibitors
- History of Addiction

Topiramate

- Pregnancy: Teratogenic
- Glaucoma

Bupropion

- Seizure Disorder
- Uncontrolled HTN
- Glaucoma
- Bipolar Disorder or severe GAD
- MAO Inhibitors
- SERMs

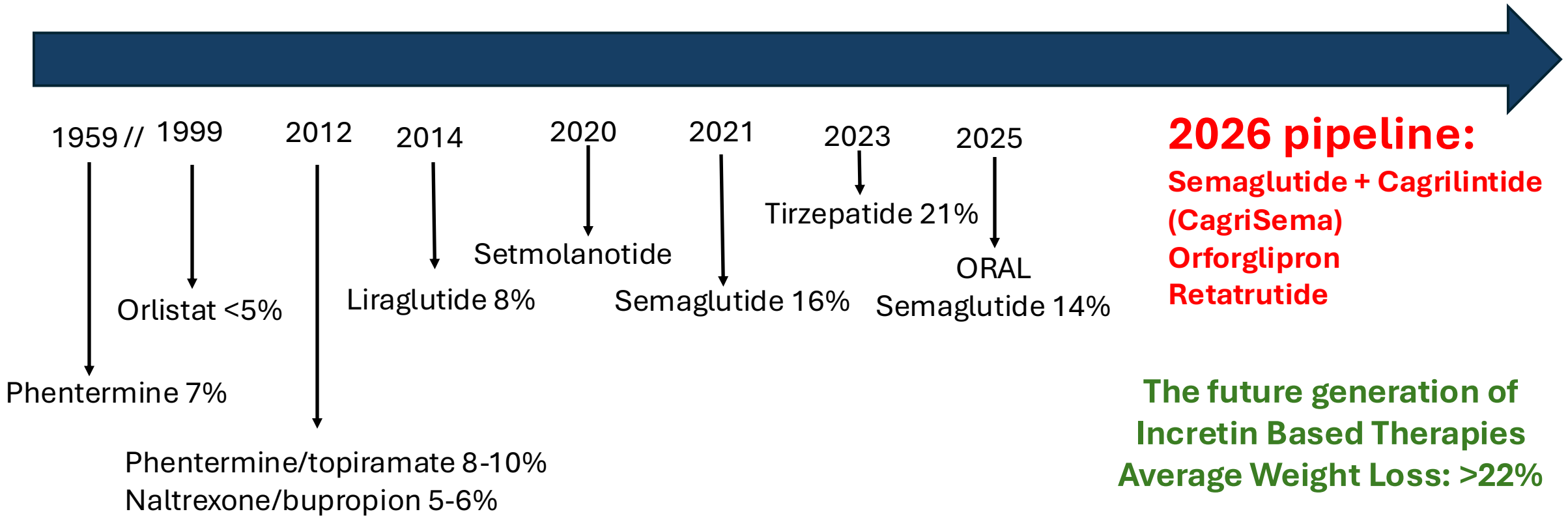
Naltrexone

- Active/Chronic opioid use

** Metformin

- CKD with GFR < 30

FDA Approved Anti-Obesity Medications (AOMs)



Paradigm Shift

Incretin Based Therapy: Expected 2026-2027

- Semaglutide+Cagrilintide (CagriSema)
 - Dual Agonist (GLP-1 and amylin LA)
 - 22.7% TBWL at 68 weeks
 - REDEFINE 4 Trial - cagrisema vs tirzepatide: 20.2-23% vs 23.6-25.5% TBWL at 84 weeks
- Orforglipron
 - Oral GLP-1 Agonist
 - 11.2% TBWL at 72 weeks
- Retatrutide:
 - Triple Agonist (GLP-1, GIP, and Glucagon receptors)
 - Phase 3 trials (TRIUMPH) completion expected 2026
 - Phase 2 Highlights:
 - 24.2% TBWL at 48 weeks

Incretin Based Therapy Targets

- Glucagon-like peptide 1 (GLP-1)
 - Stimulates postprandial insulin secretion
 - Reduces gut motility
 - Suppresses appetite
- Glucose-dependent insulinotropic peptide (GIP)
 - Stimulates postprandial insulin secretion
 - Promotes lipolysis
 - Decreases food intake
- Glucagon
 - Increase hepatic gluconeogenesis
 - Stimulates insulin secretion in the setting of hyperglycemia
 - Promotes lipolysis and glycogenolysis
- Amylin (AMY)
 - Increases satiety
 - Decreases gastric emptying
 - Decreases food intake
- Oxyntomodulin (OXM)
 - Increases satiety
 - Decreases gastric emptying
 - Decreases food intake
- Peptide tyrosine tyrosine (PYY)
 - Increases satiety
 - Decreases gastric emptying and motility
- Cholecystokinin (CCK)
 - Increases satiety
 - Decreases gastric emptying and motility
- Pancreatic polypeptide (PP)
 - Increases satiety
 - Decreases gastric emptying
- Ghrelin
 - Orexigenic



Obesity Treatments and Cancer Risk Reduction

Bariatric Surgery and Cancer Risk Reduction

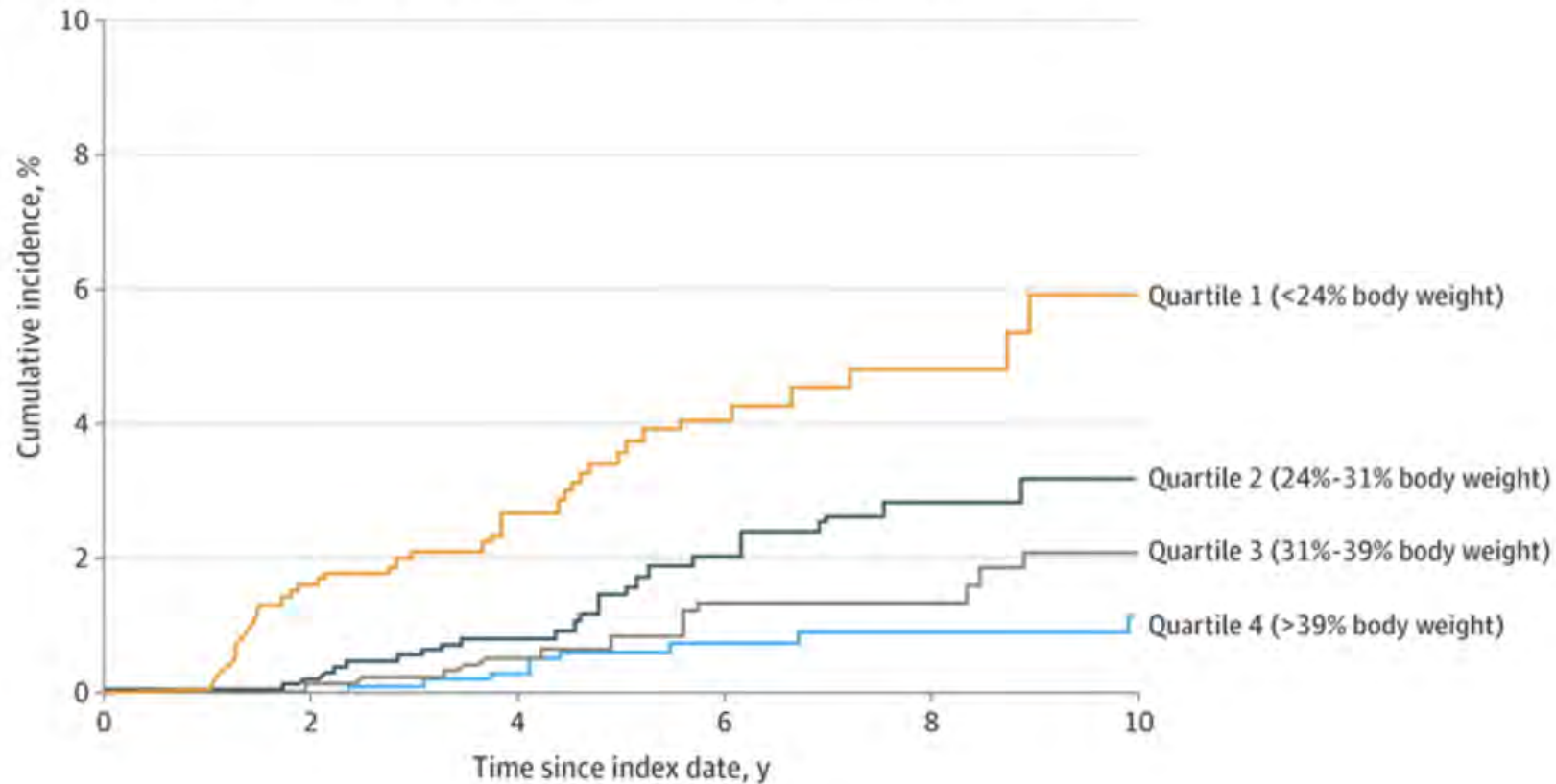
- Decreased cancer incidence after bariatric surgery¹
 - 33% lower risk of developing any type of cancer
 - Even stronger when restricted to obesity-associated cancer
 - Post-menopausal breast cancer: 42%
 - Colon: 41%
 - Endometrial: 50%
 - Pancreatic: 54%
- Decreased incidence of cancer-related deaths²
 - 48% lower risk of cancer-related death
 - Equal risk reduction amongst operations (sleeve versus RYGB)

1. Schaer DP, et al. Bariatric Surgery and the Risk of Cancer in a Large Multisite Cohort. *Ann Surg.* 2019 Jan;269(1):95-101.

2. Aminian A, et al. Association of Bariatric Surgery With Cancer Risk and Mortality in Adults With Obesity. *JAMA.* 2022;327(24):2423-2433.

Bariatric Surgery: dose-dependent relationship between weight loss magnitude and cancer risk reduction over 10 years

Obesity-associated cancer cases by surgically induced maximum weight loss quartiles



Mechanisms Linking Obesity to Cancer

- Chronic inflammation with elevated pro-inflammatory cytokines (TNF- α , IL-6, IL-1 β)
- Adipokine imbalances (elevated leptin, reduced adiponectin)
- Insulin resistance and hyperinsulinemia
- Altered sex hormone metabolism
- Oxidative stress
- Immune dysregulation
- Gut microbiome dysbiosis

GLP-1 based Therapy: Likely Mechanisms for Cancer Risk Reduction



- Chronic inflammation with elevated pro-inflammatory cytokines (TNF- α , IL-6, IL-1 β)



- Adipokine imbalances (elevated leptin, reduced adiponectin)



- Insulin resistance and hyperinsulinemia



- Altered sex hormone metabolism



- Oxidative stress




- Immune dysregulation



- Gut microbiome dysbiosis

**Direct
Antiproliferative
effects**



GLP-1 Based Therapy: Preclinical Studies of Antiproliferative Effects

Mechanisms

- cAMP/PKA Signaling Pathway
- Inhibition of Oncogenic Signaling Cascades
- Tumor Microenvironment and Immune Modulation
- Chemotherapy Sensitization

Direct Effects


- Pancreas
- CRC
- Liver
- Prostate
- Endometrial
- Glioblastoma

Differential Effects of GLP-1 Receptor Agonists on Cancer Risk in Obesity: A Nationwide Analysis of 1.1 Million Patients


Differential effects of GLP1Ra on cancer risk in obesity


Retrospective matched cohorts: GLP1Ra users versus non-users (n = 206,844 per group)


5-year cancer risk


GI cancer ↓ 33%
Female cancers ↓ 39%
Skin cancer ↓ 38%


Drug-specific effects



 Semaglutide
 ↓ 55% GI cancer
 ↓ 53% Breast cancer


 Dulaglutide
 ↓ 26% GI cancer
 ↓ 32% Female cancers

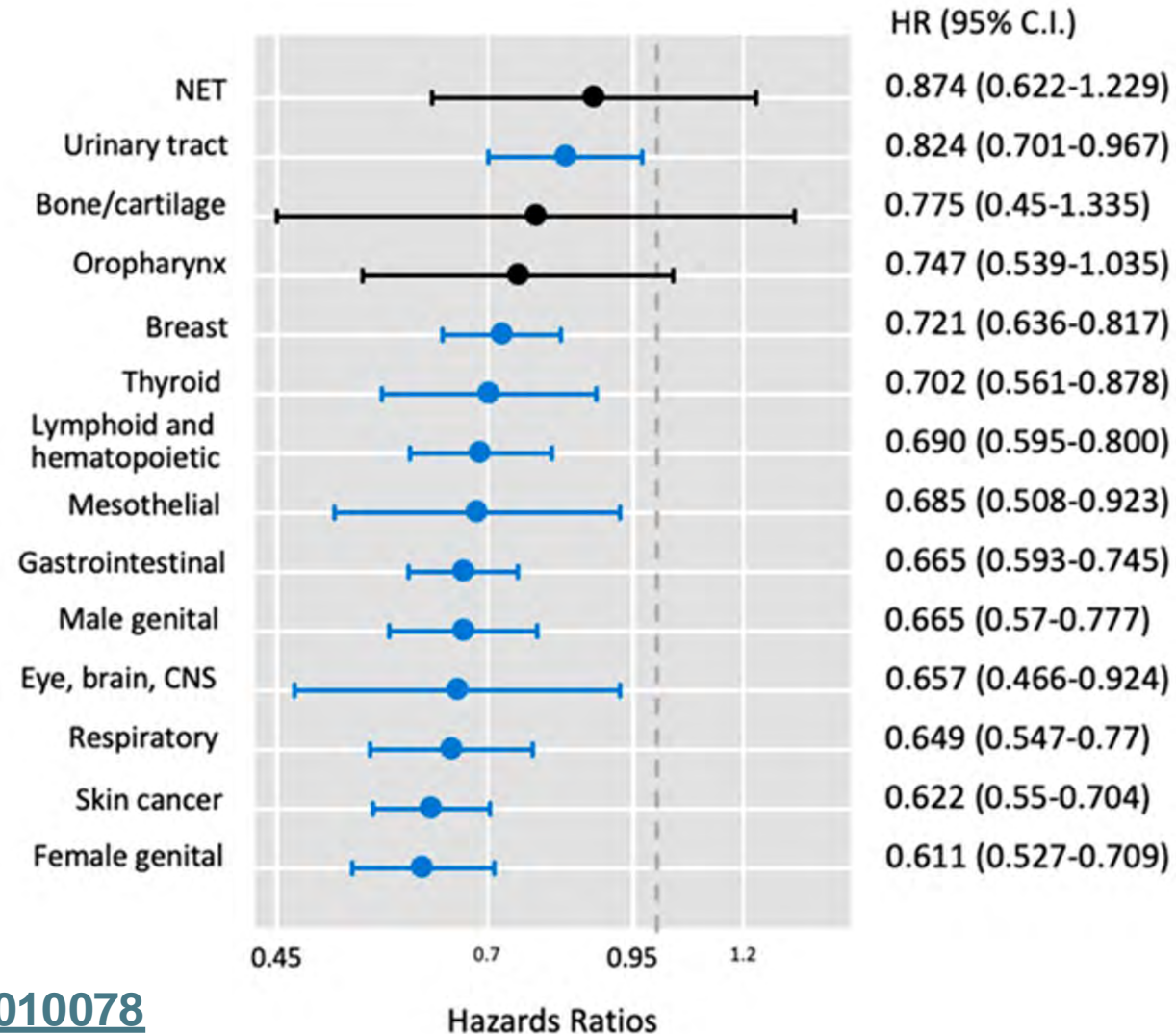

 Liraglutide
 ↑ 70% Thyroid cancer
 ↑ 62% Respiratory cancer

Sex-specific effects


 ↓ 28% Breast cancer
 ↓ 42% Uterine cancer


 ↓ 32% Prostate cancer
 ↓ 37% Lymphoid cancer

Semaglutide shows strongest cancer protection; Liraglutide increases some cancer risks.



GLP-1 Based Therapy: Mixed and Rapidly Emerging Data

- Observational studies consistently demonstrate larger protective effects than randomized trials
- Large real-world cohort studies demonstrate a reduction in overall obesity-related cancer risk
- Randomized Controlled Trials: variable outcomes
 - Shorter duration
 - Largest comprehensive meta-analysis of 48 RCTs involving 94,245 participants: little or no effect on risk for most obesity-related cancers, with moderate to low certainty evidence.

Take Home: GLP-1 based therapies are most likely safe but real world use is out pacing randomized clinical trials



Thank you

Cathleen Beaver, MD
cbeaver@kumc.edu



A Cancer Center Designated by the
National Cancer Institute

THE UNIVERSITY OF KANSAS

CANCER CENTER



Kansas Cancer Partnership

The Kansas Cancer Partnership (KCP) brings together individuals and organizations across the state to share information and resources and work towards a common goal of reducing the burden of cancer in Kansas.



Register to become a member:

<https://bit.ly/JoinKCPNow>



Next Session

Adolescent and Young Adult (AYA) Cancer

Topics covered:

- 1) Cancer screening guidelines and other testing needed based on treatment type
- 2) Important issues around transitioning from pediatric to adult care
- 3) Patient story and unique needs of AYA cancer patients

Date: Tuesday, April 14th @ noon-1pm

Flyer and calendar hold will be sent out soon to all who have already registered for this series.

DOCUMENTING ATTENDANCE

Take a photo of this slide or write down the code. It will not be released after session ends.

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NOTE: The **deadline** to enter the sign-in code is **March 10, 2026 @ 5:00 PM**

You may enter the sign-in code to complete the course evaluation by:



1. **Text** the activity identification code to (828) 295-1144, **OR**
2. **Access** www.eeds.com from a mobile device or PC and enter the activity identification code, **OR**
3. **Download** the eeds mobile app (iOS, Android) and use the activity identification code to sign-in to events, **OR**
4. **Scan** the QR code on the left.

Once we confirm your attendance via the Zoom participant log, and that you have met all attendance requirements, **you will receive an e-mail that your certificate is available** 7-10 business days post event.

