

XXVIII IFSO World Congress

9-12 September 2025 | Santiago, Chile



Eating Behaviors in the Era of Combined Therapies

David Creel, PhD, RD, ACSM-CEP

Cleveland Clinic

Thursday, September 11, 2025

IFSO 2025 Santiago

Combined Therapies, The Dawn of a New Era

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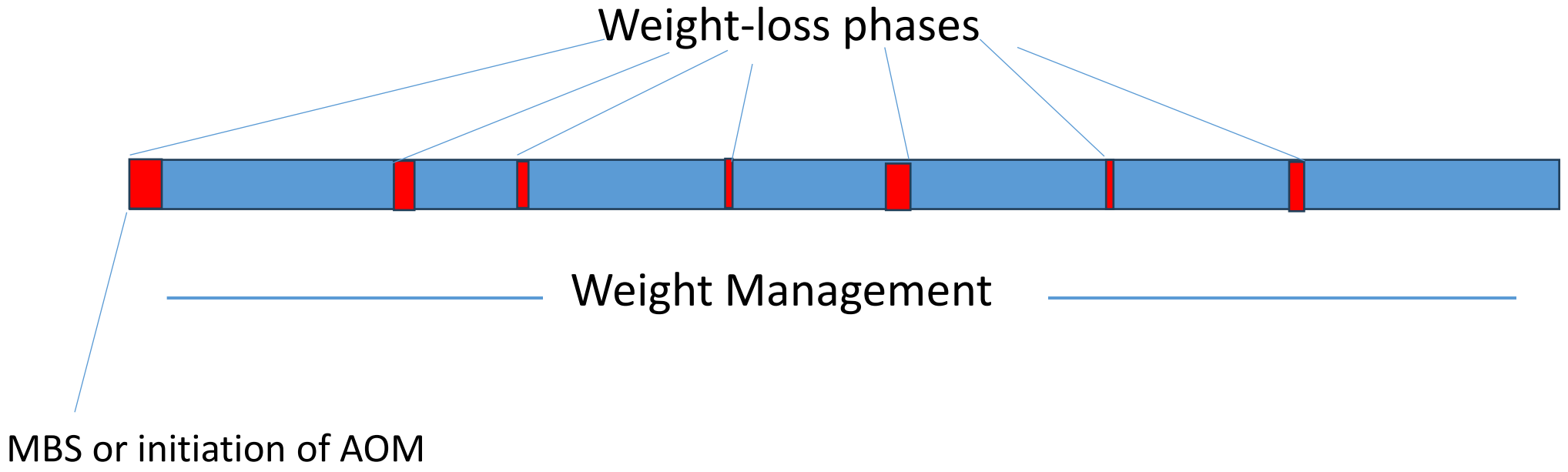




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The Weight-Loss Phase is relatively short



Excited...and Troubled



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Problems

- Our Foods
- Attitudes
- Treatment vs Prevention
- Mindless

Approaches

- Systemic
- Personal Importance
- Healthiest=Easiest
- Mindful

Ultra-Processed Diets Cause Excess Calorie Intake and Weight Gain: An Inpatient Randomized Controlled Trial of *Ad Libitum* Food Intake

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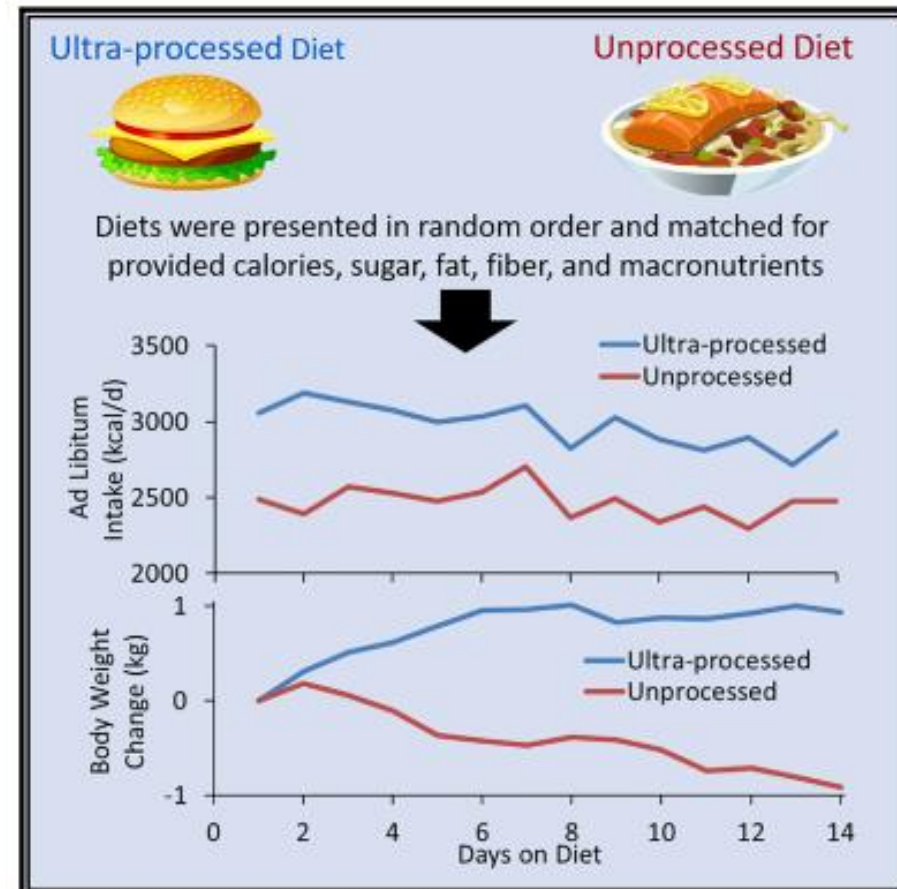
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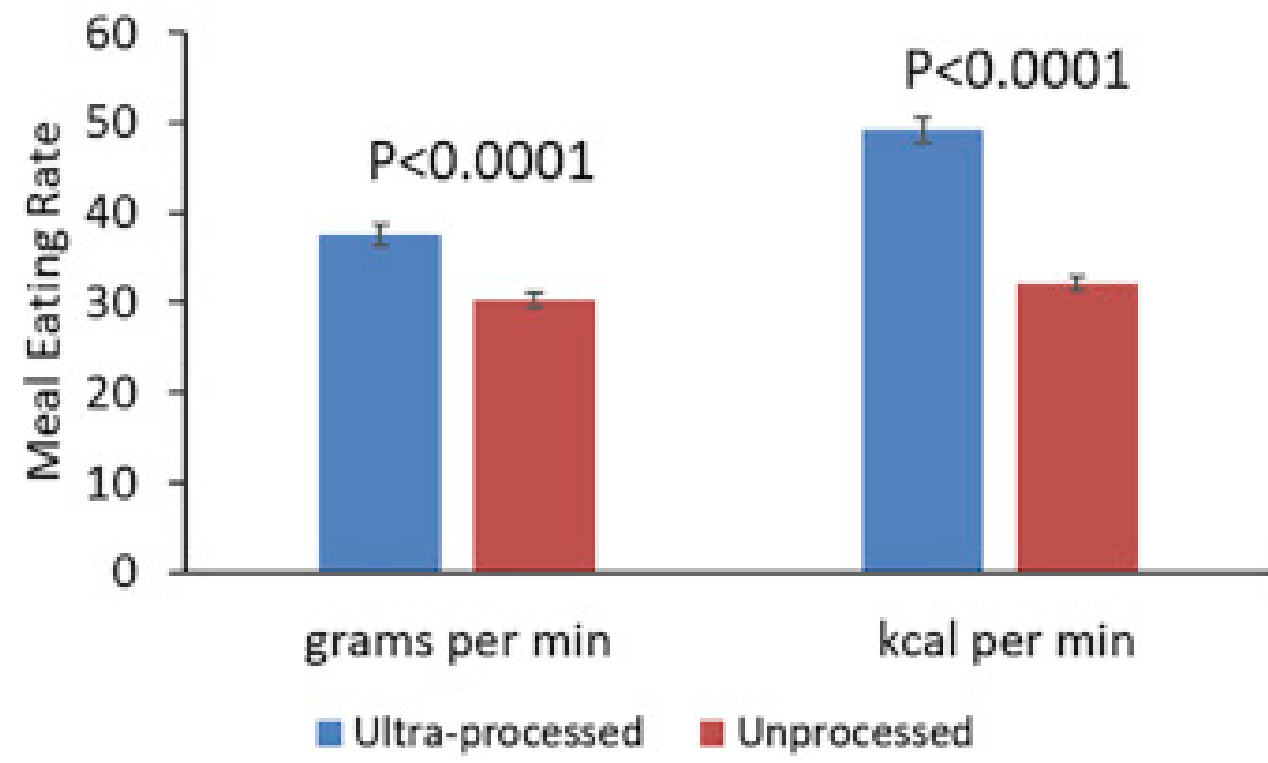
<https://doi.org/10.1016/j.cmet.2019.05.008>





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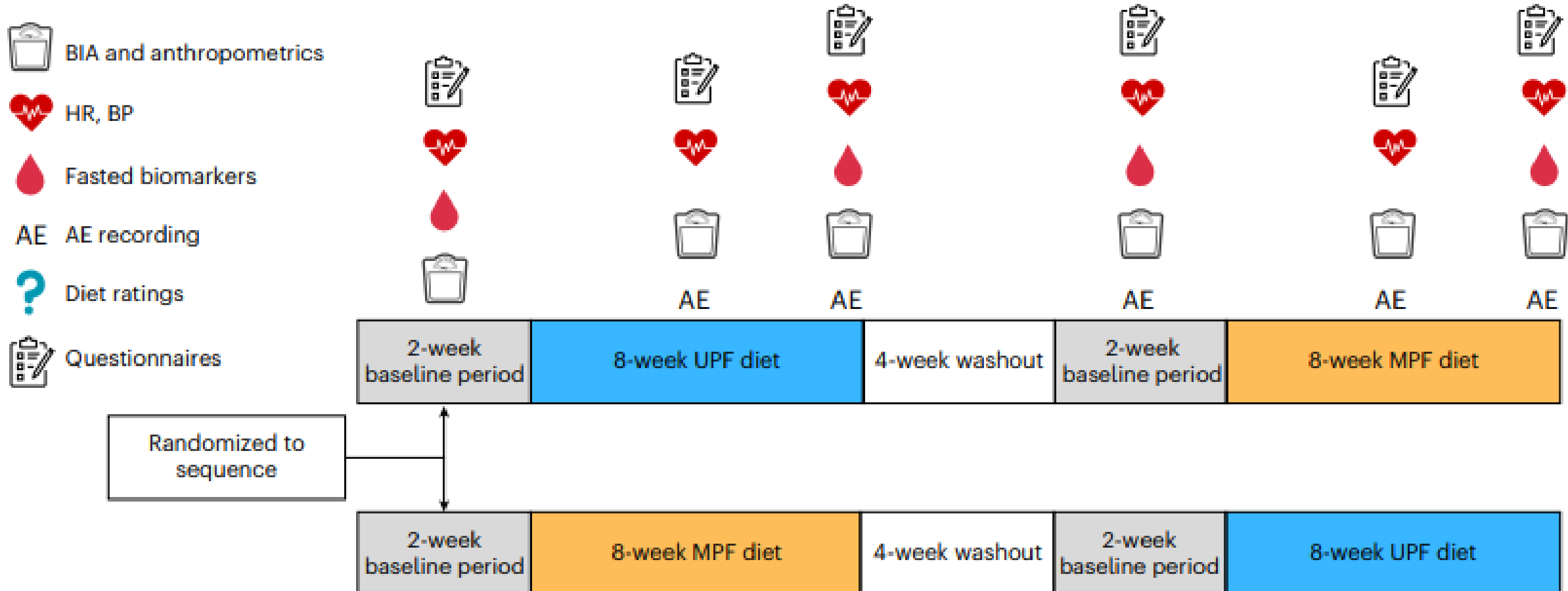










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Ultraprocessed or minimally processed diets following healthy dietary guidelines on weight and cardiometabolic health: a randomized, crossover trial



Supplementary Table 26: Pictures of meals and snacks of the provided MPF and UPF diets.

MPF diet	UPF diet
<p>*Participants provided with multiple fruits on the diet. Apples and bananas pictured for menus as example fruits.</p> <p>Breakfast Cinnamon and apple overnight oats</p> 	<p>*Participants provided with squash and artificially-sweetened beverages to consume at their discretion.</p> <p>Breakfast Oat and fruit bars</p> 
<p>Lunch Mexican chicken with flatbread</p> 	<p>Lunch Chicken Wraps</p> 
<p>Dinner Cottage pie with green beans and corn</p> 	<p>Dinner Cottage pie, greens and corn</p> 
<p>Snacks Fruit and nut bar, Fruit, Vanilla and berry yoghurt pot</p>	<p>Snacks Nut snacks, Yoghurts</p>



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- Participants lost weight on both diets
- More weight loss with minimally processed





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NOVA 1	NOVA 2	NOVA 3	NOVA 4
<p>Unprocessed or minimally processed foods, namely the edible parts of plants or animals that have been taken straight from nature or that have been minimally modified/preserved</p>	<p>Culinary ingredients, such as salt, oil, sugar, butter, or starch, which are produced from NOVA1 foods by pressing, refining, grinding, milling and drying</p> <p>Not always meant to be consumed by themselves</p> <p>Normally used in combination with Group 1 foods to prepare drinks, dishes and meals</p>	<p>Processed foods, such as freshly baked breads, canned/bottled vegetables, or cured meats, which are obtained by combining NOVA1 and NOVA2 foods</p> <p>Typically, with 2 or 3 NOVA2 ingredients</p> <p>Processes include various preservation or cooking methods, or non-alcoholic fermentation (e.g. breads, cheese)</p>	<p>Ultra-processed foods, namely ready-to-eat industrially formulated products made mostly or entirely from substances derived from foods and additives, with little if any intact Group 1 food</p> <p>Typically, with 5 or more NOVA2 ingredients</p>



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Factors to consider

- Palatability
- Calorie Density
- Protein Content
- Fiber
- Chewing Required



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Progress?





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Obesity Strategies: What Can Be Done



Public Health
OCTOBER 29, 2024

AT A GLANCE

Obesity is a complex and costly chronic disease with many contributing factors. Access to healthy, affordable foods and safe, convenient places for physical activity can impact obesity. Addressing obesity requires organizations and people to work together to create communities, environments, and systems that support healthy, active lifestyles for all.

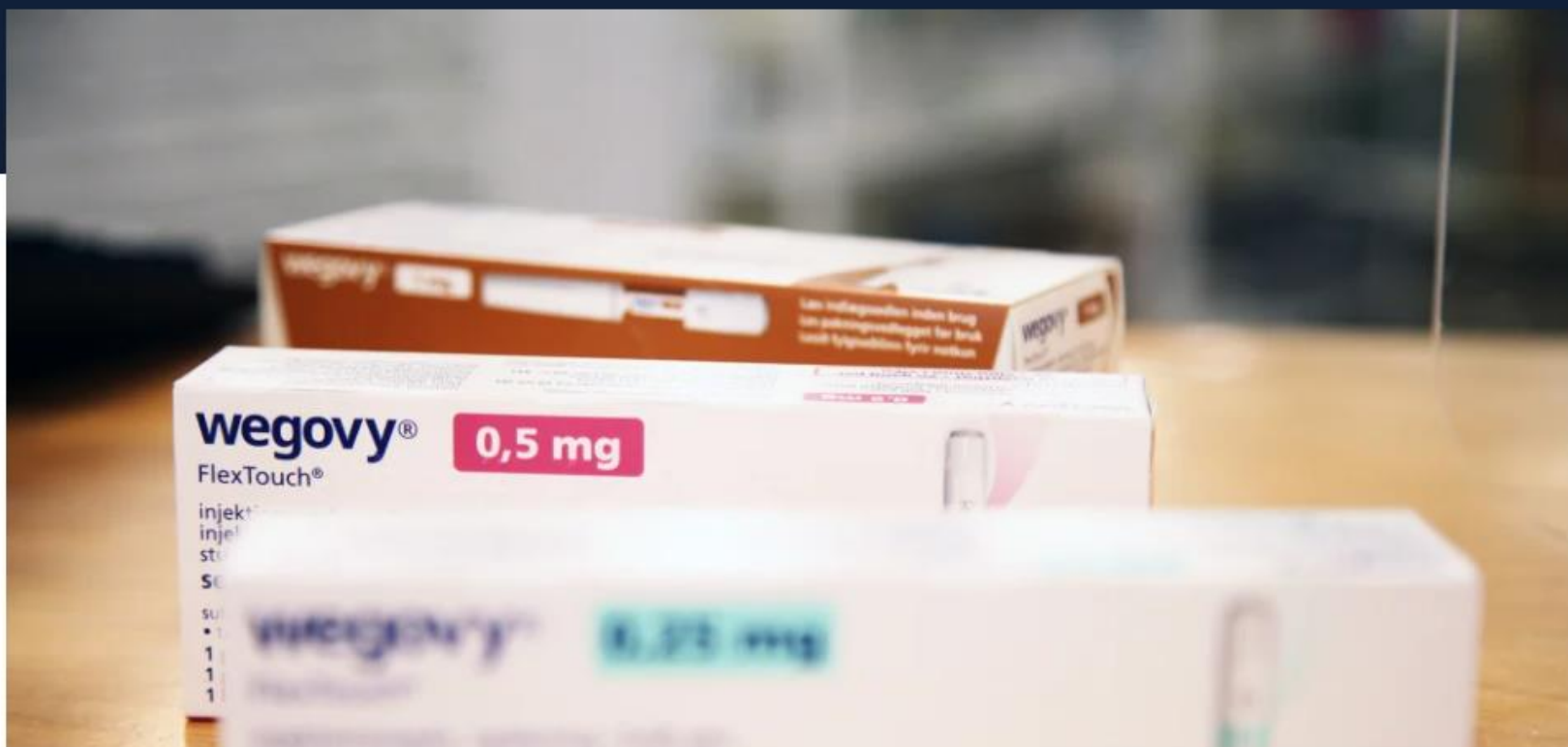




KIDS' HEALTH

What to know about weight loss drugs for teens

The American Academy of Pediatrics now says doctors should suggest weight loss drugs for children with obesity ages 12 and up.





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Gastroenterology 2017;152:1739–1751

TREATMENT OF OBESITY

Is There an Optimal Diet for Weight Management and Metabolic Health?

► JAMA. 2018 Feb 20;319(7):667–679. doi: [10.1001/jama.2018.0245](https://doi.org/10.1001/jama.2018.0245)

Effect of Low-Fat vs Low-Carbohydrate Diet on 12-Month Weight Loss in Overweight Adults and the Association With Genotype Pattern or Insulin Secretion

The DIETFITS Randomized Clinical Trial

[Christopher D Gardner](#) ^{1,✉}, [John F Trepanowski](#) ¹, [Liana C Del Gobbo](#) ¹, [Michelle E Hauser](#) ¹, [Joseph Rigdon](#) ²,
[John P A Ioannidis](#) ^{1,3,4,5}, [Manisha Desai](#) ^{2,3,4,5}, [Abby C King](#) ^{1,3}

- Weight loss improves almost all obesity-related conditions
- Individuals vary in preferences and ability to adhere to diets
- Adherence is key



23 Centers in Spain

Mediterranean Diet

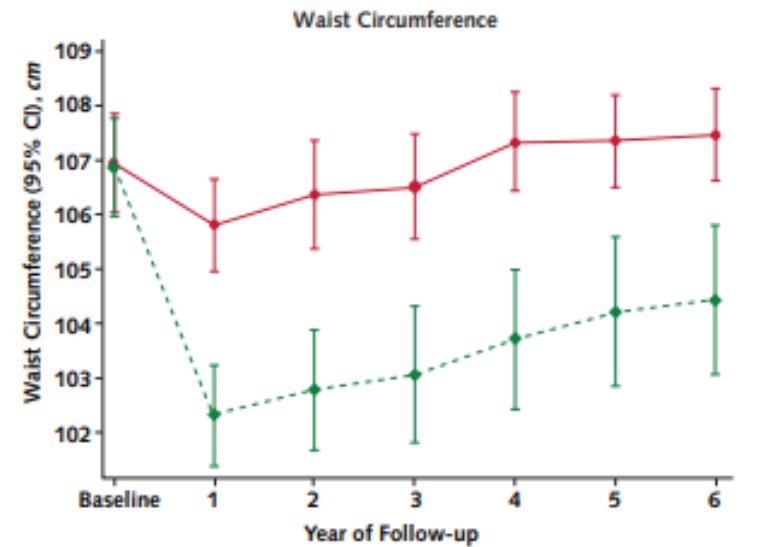
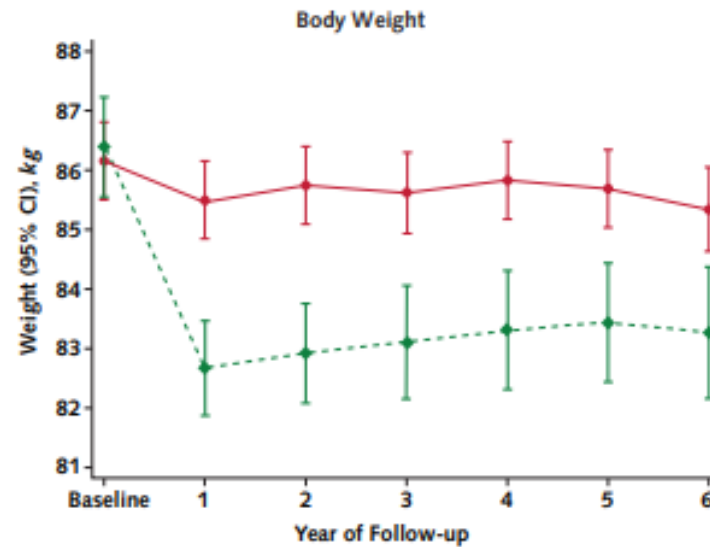
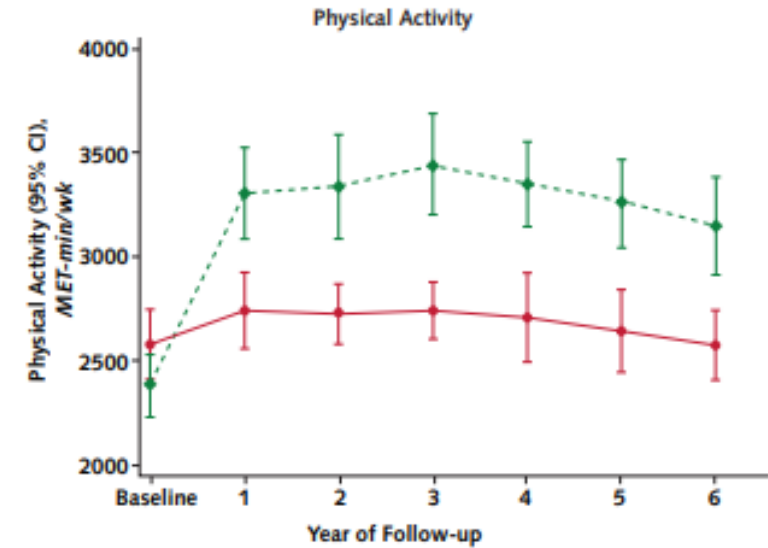
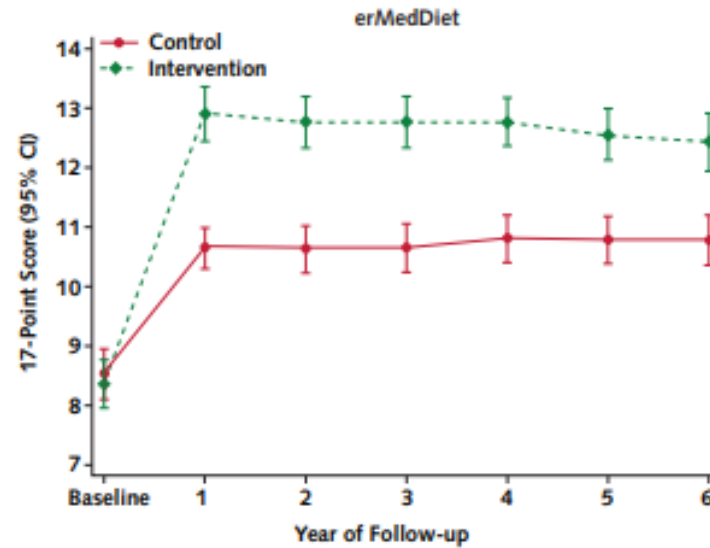
vs.

Reduced-calorie Mediterranean diet plus physical activity + professional support

Diabetes incidence 31 % lower in Intervention Group

Comparison of an Energy-Reduced Mediterranean Diet and Physical Activity Versus an Ad Libitum Mediterranean Diet in the Prevention of Type 2 Diabetes, Ruiz Canela et al., *Annals of Internal Medicine*, 2025

Figure 3. Mean values (95% CIs) of adherence to the erMedDiet (17-point score), physical activity, body weight, and waist circumference during follow-up by intervention group.



erMedDiet = energy-reduced Mediterranean diet; MET-min/wk = metabolic equivalent of task minutes per week. Mixed linear model with random intercepts at recruitment site, participant, and cluster family level. Conducted with completers only. $P = 0.027$ (between-group differences at baseline); $P < 0.001$ (between-group differences during the follow-up period).



Changes in carbohydrate intake and long term weight changes

Summary



Limiting low quality carbohydrate food sources (eg, added sugar, sugar sweetened beverages, refined grains, and starchy vegetables) in favor of high quality sources (eg, whole grains, fruit, and non-starchy vegetables) may support efforts to control body weight

Study design



Prospective cohort study | 24 to 28 years of follow-up | 4 year changes in different forms and types of carbohydrate intake

Population



136 432 participants based in the US | Mean age: 50.2 years | Sex: 83.5% women | No major chronic diseases at baseline

Outcomes

Concurrent 4 year change in body weight

Food source | Daily increment

Carbohydrate from non-starchy vegetables	per 100 g	3.0 kg
Fibre	per 10 g	0.8 kg
Added sugar	per 100 g	0.9 kg
Starch	per 100 g	1.5 kg
Carbohydrate from starchy vegetables*	per 100 g	2.6 kg

All values were larger among people with existing overweight or obesity

Less weight gain

Average change

More weight gain



► BMJ. 2023 Sep 27;382:e073939. doi: [10.1136/bmj-2022-073939](https://doi.org/10.1136/bmj-2022-073939)

Association between changes in carbohydrate intake and long term weight changes: prospective cohort study

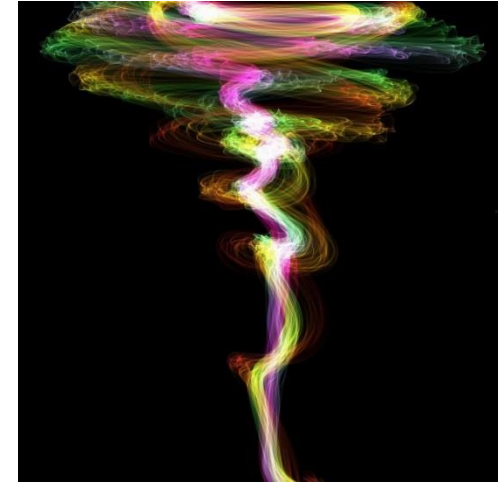
Yi Wan ¹, Deirdre K Tobias ^{1,2}, Kristine K Dennis ², Marta Guasch-Ferré ^{1,2}, Qi Sun ^{1,2,3}, Eric B Rimm ^{1,2,3}, Frank B Hu ^{1,2,3}, David S Ludwig ^{1,4,5}, Orrin Devinsky ⁶, Walter C Willett ^{1,3,✉}

Data from the Nurses' Health Study, women in the Nurses' Health Study II, and men in the Health Professionals Follow-up Study



The Behavioral Tornado

regained 20.7% more of maximum wt loss



- ≥ 2 fast food meals per week
- Eating when full at least weekly
- Continuous eating throughout the day
- Binge Eating
- Not weighing at least weekly
- Highest quartile of sedentary behavior



Original Investigation | Nutrition, Obesity, and Exercise



Cite Permissions Metrics Comments

Discontinuation and Reinitiation of Dual-Labeled GLP-1 Receptor Agonists Among US Adults With Overweight or Obesity

JAMA Netw Open
Published Online: January 31, 2025
2025;8;(1):e2457349.
doi:10.1001/jamanetworkopen.2024.57349

Patricia J. Rodriguez, PhD, MPH¹; Vincent Zhang, BA²; Samuel Gratzl, PhD¹; [et al](#)

» Author Affiliations | Article Information

☰ RELATED ARTICLES  FIGURES  SUPPLEMENTAL CONTENT

- Over 50% of people stop using GLP-1 within a year
- Higher rates among those without diabetes
- Almost ½ of people reinitiated within 2 years

In addition to addressing side effects, cost concerns, and adherence to medication, **we need to help people prepare to manage weight without medication.**

Summary



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- Eating behaviors are essential for health no matter the power of the medical weight loss intervention
- Weight management consists of fluctuations in weight that can be minimized with lifestyle change and consistent approaches to eating
- Food is fuel for physical activity
- Nutrition has independent effects on health (cardiovascular disease, bone health, etc.)
- Minimally processed foods and carefully selected “processed” foods can yield benefits
- Recommendations are only as good as the patient’s willingness and ability to incorporate them (cooking skills, budget, enjoyment)



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