

Obesity, prediabetes, and prevention strategies

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Agenda

Diabetes and prediabetes



Obesity



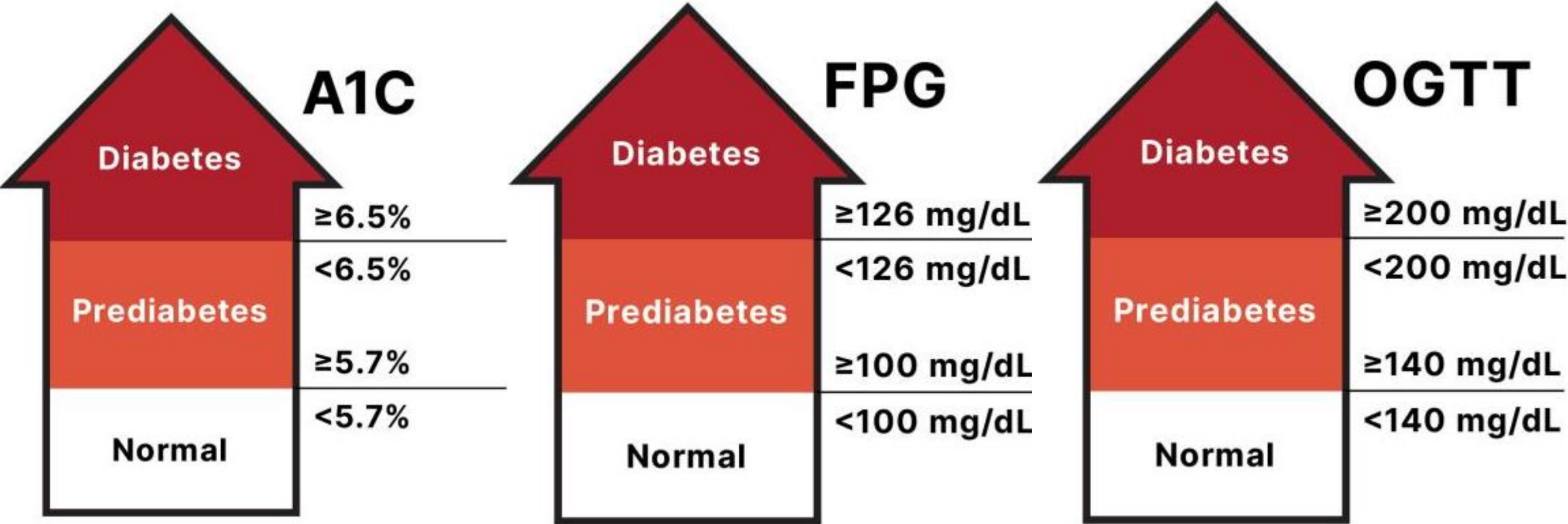
What can we do?



What is Sutter doing?

Diabetes and Prediabetes

Diagnosing Prediabetes and Diabetes



Screening for adult Prediabetes/Type 2 Diabetes

- CDC recommends getting an A1C test if you're over age 45 or have any risk factors which can include:

- Have overweight or obesity.
- Are age 45 or older.
- Have a parent or sibling with type 2 diabetes.
- Are physically active less than 3 times a week.
- Have non-alcoholic fatty liver disease (NAFLD).
- Have ever had gestational diabetes (diabetes during pregnancy) or given birth to a baby who weighed over 9 pounds.
- Are an African American, Hispanic or Latino, American Indian, or Alaska Native person. Some Pacific Islander people and Asian American people also have a higher risk.

Prediabetes Risk Test

NATIONAL DIABETES PREVENTION PROGRAM

1. How old are you? Write your score in the boxes below.

Younger than 40 years (0 points)
 40-49 years (1 point)
 50-59 years (2 points)
 60 years or older (3 points)

2. Are you a man or a woman? Write your score in the boxes below.

Man (1 point) Woman (0 points)

3. If you are a woman, have you ever been diagnosed with gestational diabetes? Write your score in the boxes below.

Yes (1 point) No (0 points)

4. Do you have a mother, father, sister, or brother with diabetes? Write your score in the boxes below.

Yes (1 point) No (0 points)

5. Have you ever been diagnosed with high blood pressure? Write your score in the boxes below.

Yes (1 point) No (0 points)

6. Are you physically active? Write your score in the boxes below.

Yes (0 points) No (1 point)

7. What is your weight category? Write your score in the boxes below.

(See chart at right)

Total score:

Height Weight (lbs.)

Height	Weight (lbs.)	1 Point	2 Points	3 Points
4'10"	119-142	143-190	191+	
4'11"	124-147	148-197	198+	
5'0"	128-152	153-203	204+	
5'1"	132-157	158-210	211+	
5'2"	136-163	164-217	218+	
5'3"	141-168	169-224	225+	
5'4"	145-173	174-231	232+	
5'5"	150-179	180-239	240+	
5'6"	155-185	186-246	247+	
5'7"	159-190	191-254	255+	
5'8"	164-196	197-261	262+	
5'9"	169-202	203-269	270+	
5'10"	174-208	209-277	278+	
5'11"	179-214	215-285	286+	
6'0"	184-220	221-293	294+	
6'1"	189-226	227-301	302+	
6'2"	194-232	233-310	311+	
6'3"	200-239	240-318	319+	
6'4"	205-245	246-327	328+	
		1 Point	2 Points	3 Points
		You weigh less than the 1 Point column (0 points)		

If you scored 5 or higher —————

You are at increased risk for having prediabetes and are at high risk for type 2 diabetes. However, only your doctor can tell for sure if you have type 2 diabetes or prediabetes, a condition in which blood sugar levels are higher than normal but not high enough yet to be diagnosed as type 2 diabetes. **Talk to your doctor to see if additional testing is needed.**

If you are African American, Hispanic/Latino American, American Indian/Alaska Native, Asian American, or Pacific Islander, you are at higher risk for prediabetes and type 2 diabetes. Also, if you are Asian American, you are at increased risk for type 2 diabetes at a lower weight (about 15 pounds lower than weights in the 1 Point column). Talk to your doctor to see if you should have your blood sugar tested.

You can reduce your risk for type 2 diabetes

Find out how you can reverse prediabetes and prevent or delay type 2 diabetes through a **CDC-recognized lifestyle change program** at <https://www.cdc.gov/diabetes/prevention/lifestyle-program>.

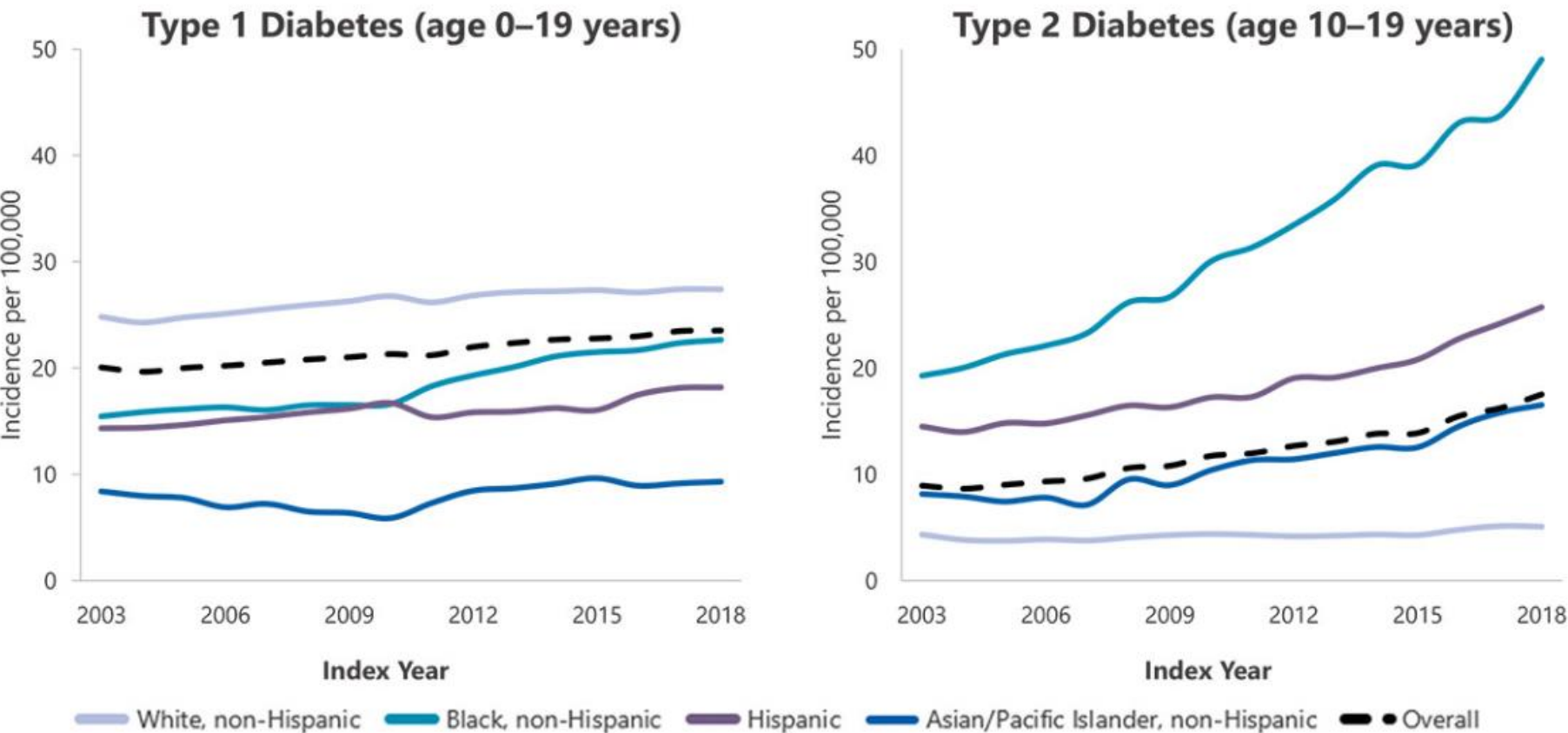
Risk Test provided by the American Diabetes Association and the Centers for Disease Control and Prevention.

American Diabetes Association **CDC**

Screening for pediatric Prediabetes/Type 2 Diabetes

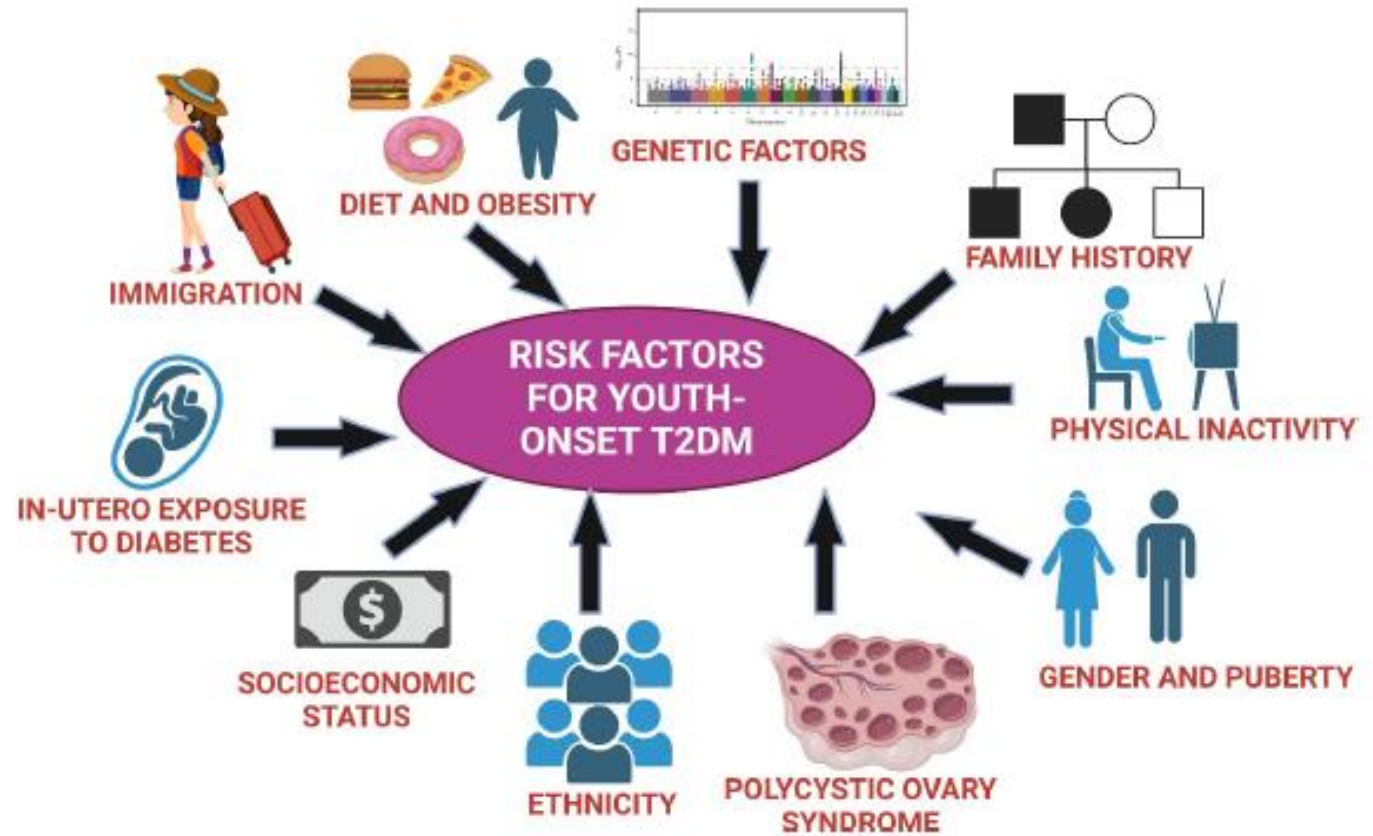
- After onset of puberty or 10 years of age whichever occurs first
- Overweight or obese and with 1 or more additional risk factor
 - ❑ Maternal history of GDM or DM during child's gestation
 - ❑ Family history of type 2 diabetes (1st or 2nd degree relative)
 - ❑ Higher risk race, ethnicity and/or ancestry (e.g., African American, Latino, Native American, Asian American)
 - ❑ Signs of insulin resistance or conditions associated with insulin resistance (acanthosis nigricans, hypertension, dyslipidemia, polycystic ovary syndrome, large- or small-for-gestational-age birth weight)

Rates of Type 2 Diabetes in Children



Data source: SEARCH for Diabetes in Youth study.

Risk factors that affect children



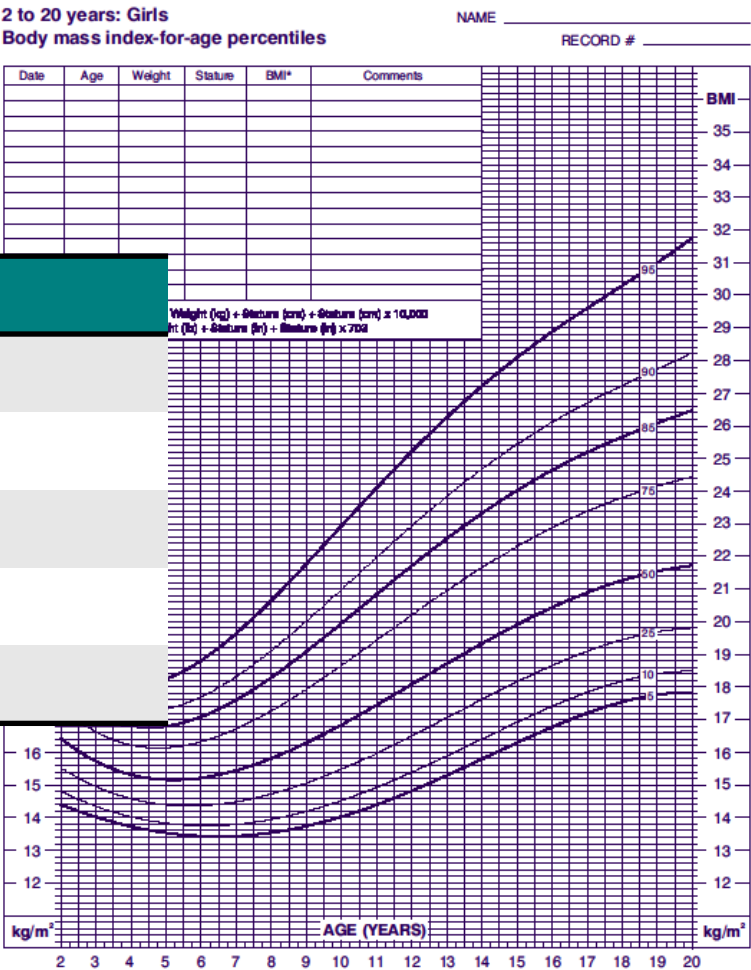
1 Risk factors for childhood-onset T2DM.

Obesity

Defining Overweight and Obesity in Pediatrics

BMI for Age

Weight Status Category	Percentile Range
Underweight	Less than 5 th percentile
Normal	5 th to less than 85 th percentile
Overweight	85 th to less than 95 th percentile
Obesity	95 th percentile or greater
Severe obesity	120% of the 95 th percentile

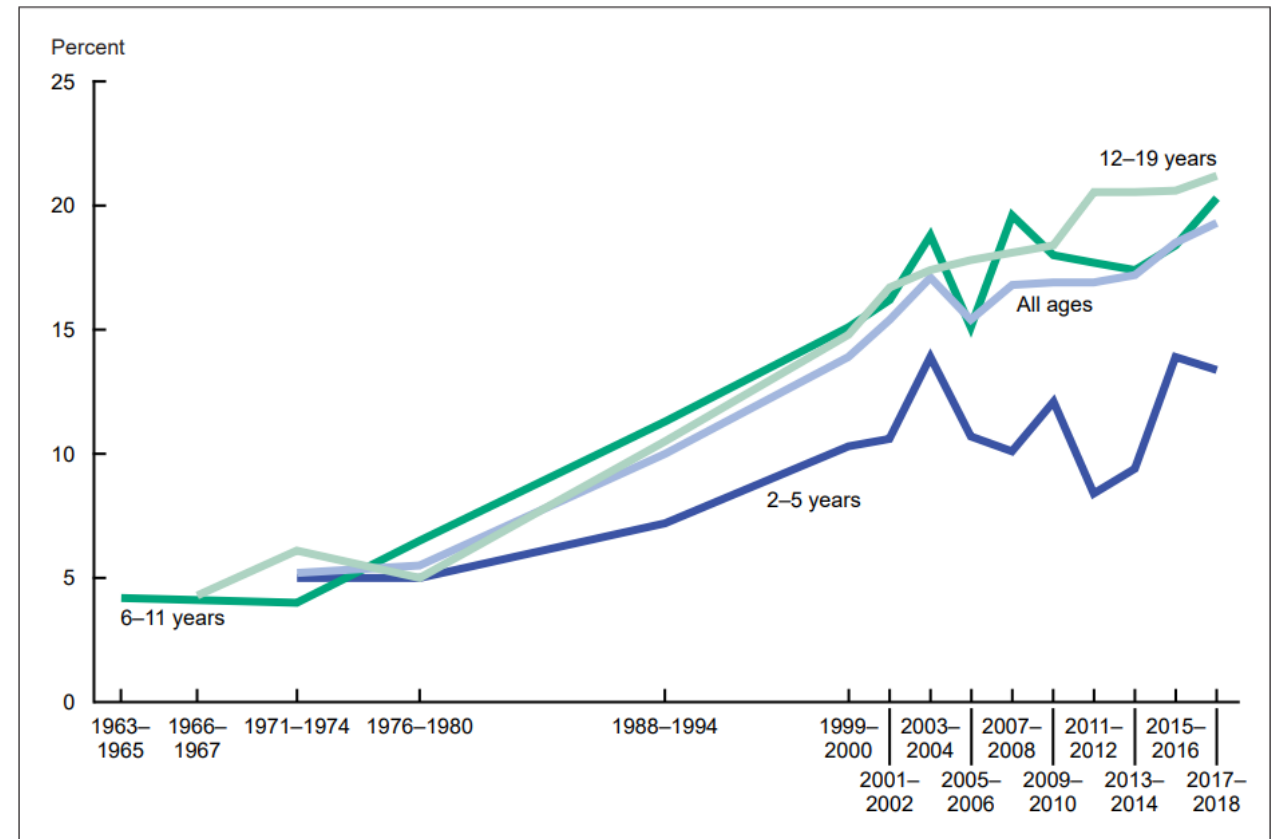


Childhood Obesity Rates

NCHS Health E-Stats

December 2020

Figure. Trends in obesity among children and adolescents aged 2–19 years, by age: United States, 1963–1965 through 2017–2018



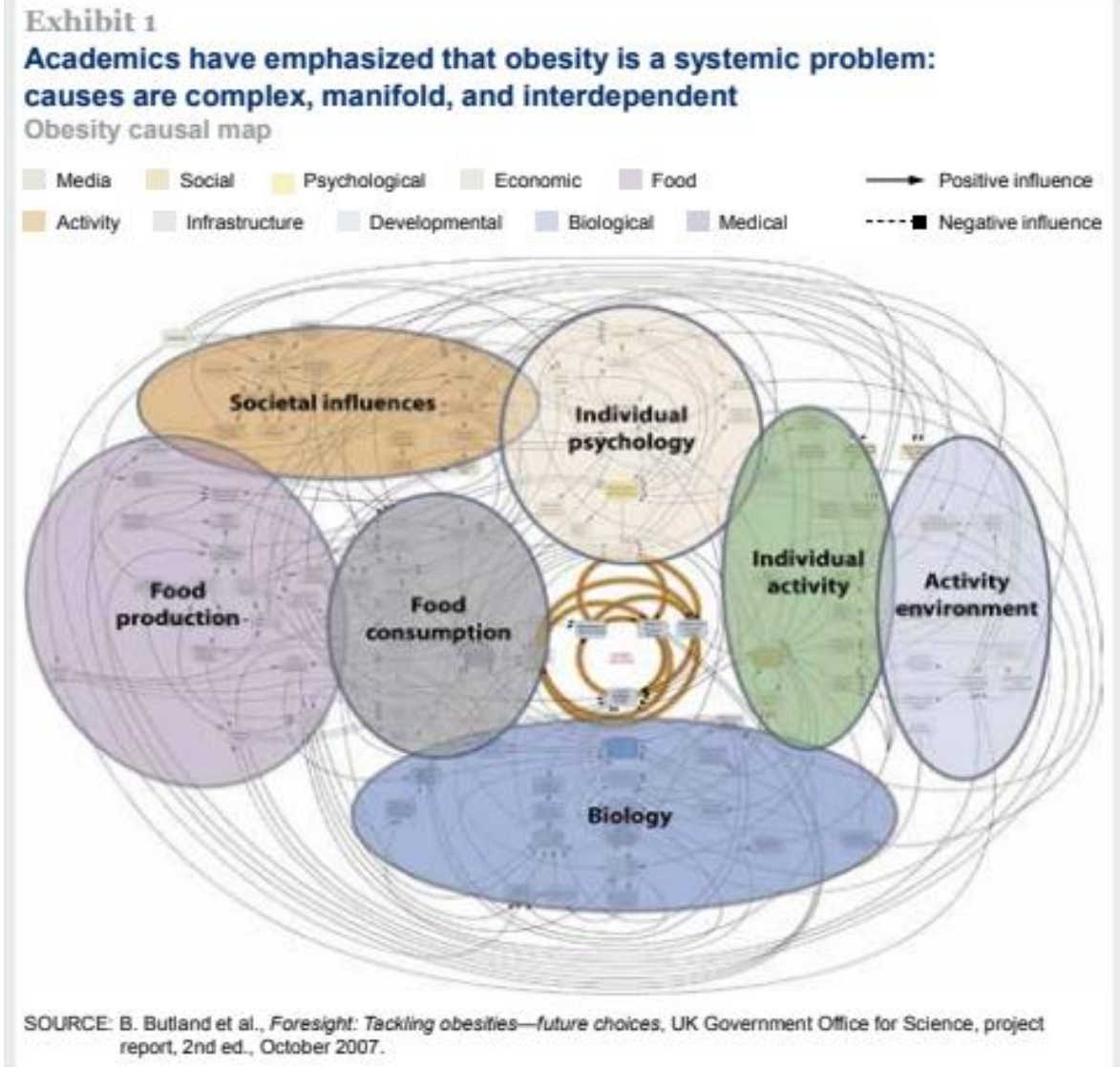
NOTE: Obesity is body mass index (BMI) at or above the 95th percentile from the sex-specific BMI-for-age 2000 CDC Growth Charts.
SOURCES: National Center for Health Statistics, National Health Examination Surveys II (ages 6–11), III (ages 12–17); and National Health and Nutrition Examination Surveys (NHANES) I–III, and NHANES 1999–2000, 2001–2002, 2003–2004, 2005–2006, 2007–2008, 2009–2010, 2011–2012, 2013–2014, 2015–2016, and 2017–2018.

According to 2017–2018 NHANES data

- About 1 in 6 children and adolescents ages 2 to 19 (16.1%) are overweight.³
- Almost 1 in 5 children and adolescents ages 2 to 19 (19.3%) have obesity.³
- About 1 in 16 children and adolescents ages 2 to 19 (6.1%) have severe obesity.³

Risk Factors for Obesity

- More complex than just excess calories consumed versus expended
- Obesity results from the interaction of multiple factors:
 - Genetics
 - Environment
 - Development
 - Biologic
 - Social
 - Behavior
 - Policy



Behaviors linked with obesity



Unhealthy
eating
patterns



Sleep



Screens



Activity

Typical Western Diet



High in

- Ultra-processed foods
- Sodium
- Sugar
- Saturated fat
- Cholesterol
- Processed meats
- Sweetened beverages

Low in

- × Fruits
- × Vegetables
- × Fiber
- × Water

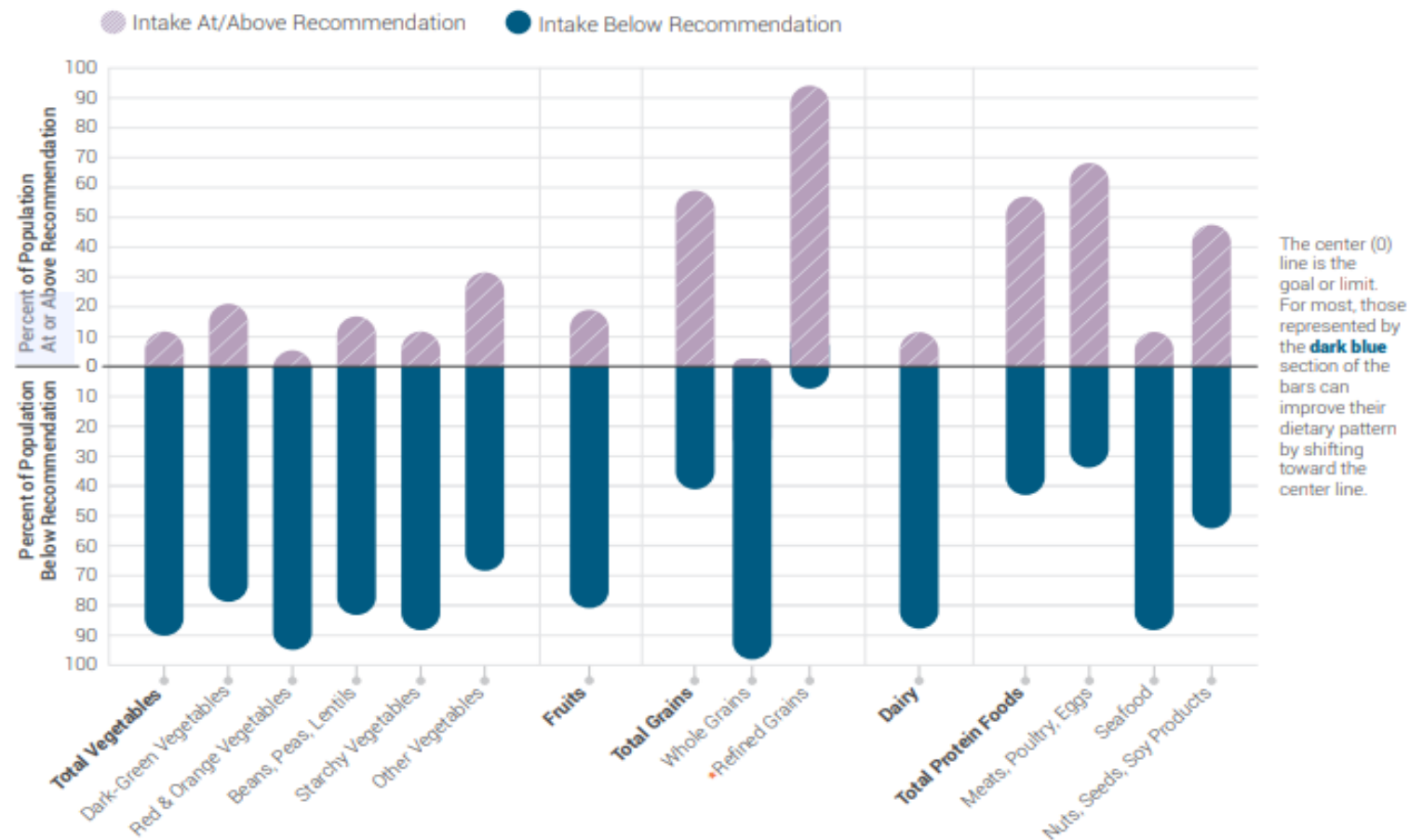
2021 National Survey of Children's Health (NSCH)

- 1 in 3 children did not eat a daily fruit
- One half did not eat a daily vegetable
- More than half drank a sugar-sweetened beverage at least once in a week

2020-2025 Dietary Guidelines

- >90% of women and 97% of men **do not** meet fiber recommendations

Dietary Intakes Compared to Recommendations (ages 1+)



•NOTE: Recommended daily intake of whole grains is to be at least half of total grain consumption, and the limit for refined grains is to be no more than half of total grain consumption.

Data Source: Analysis of What We Eat in America, NHANES 2013-2016, ages 1 and older, 2 days dietary intake data, weighted. Recommended Intake Ranges: Healthy U.S.-Style Dietary Patterns (see [Appendix 3](#)).

Food Environment

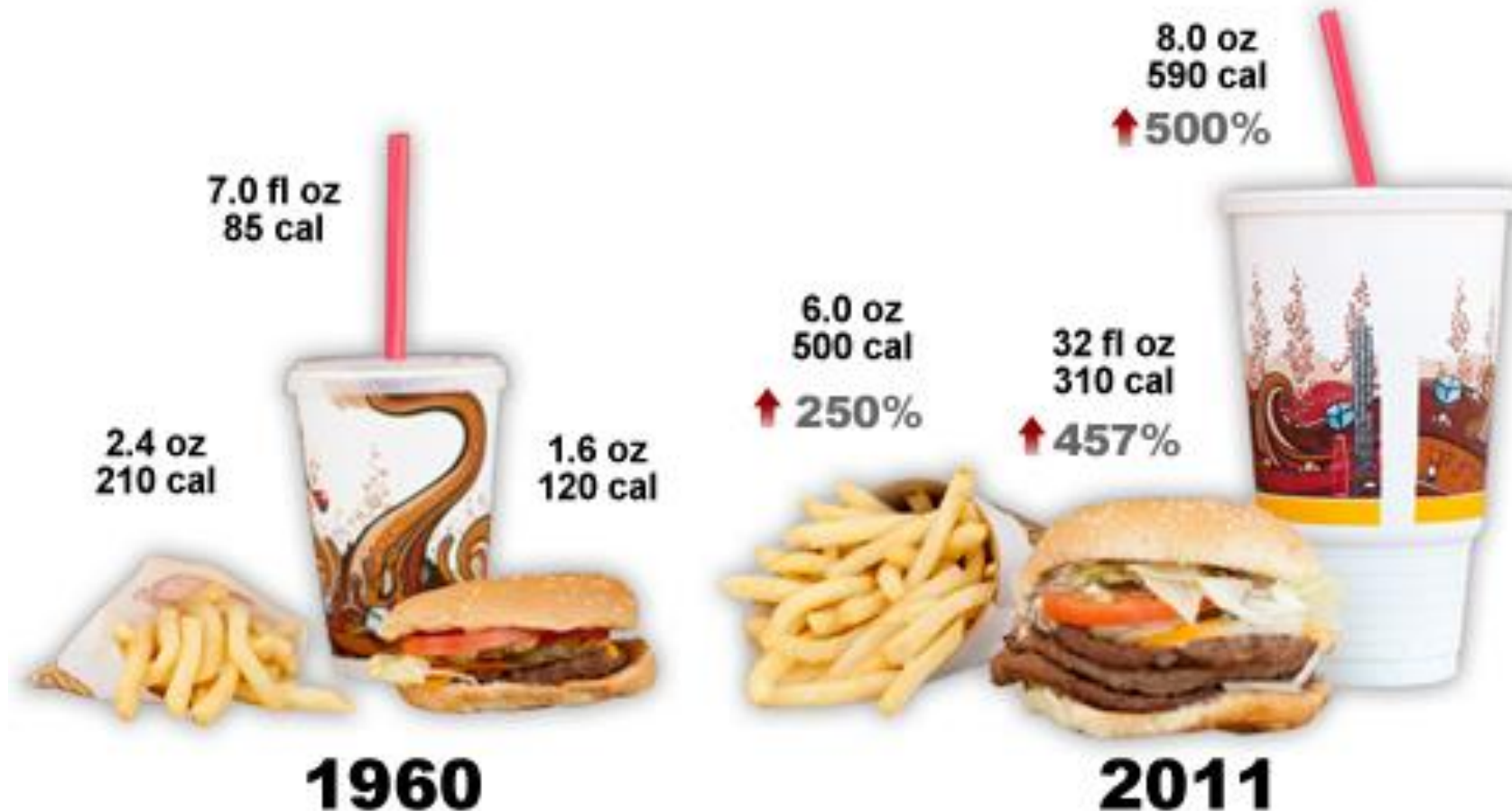


- Food available everywhere
- More meals away from home
- Reduced family meals
- Distracted eating/screens
- Snacking more frequently
- Skipping breakfast
- Promotion of highly profitable, ultraprocessed, addicting foods



Portion Sizes—Then and Now

Fast food portions have increased dramatically since 1960. Here's how they stack up, then and now:



Sleep

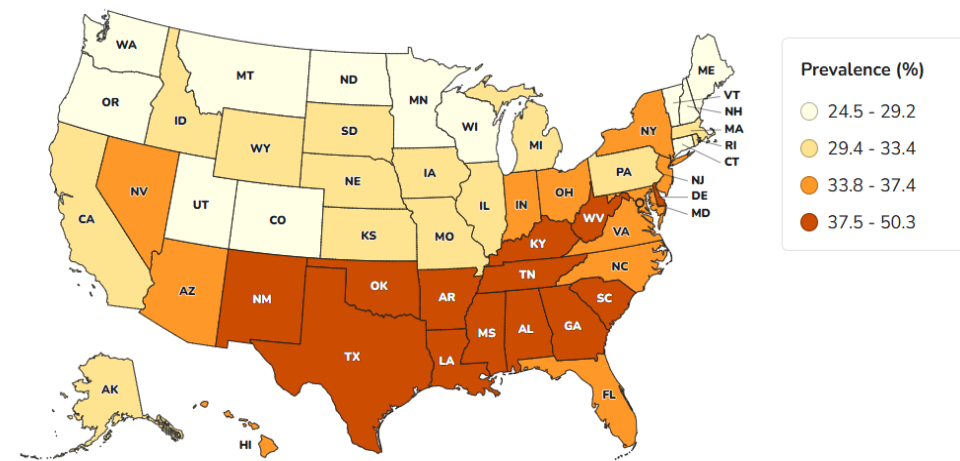


➤ Insufficient sleep across the lifespan is linked to an increased risk for obesity and type 2 diabetes



Insufficient sleep by state, 2020–2021

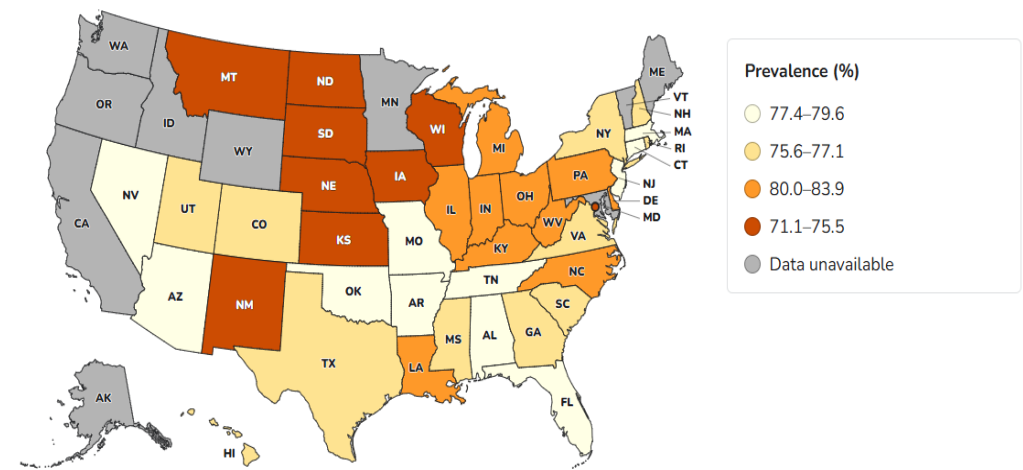
The percentage of children (aged 4 months to 14 years) not getting enough sleep varies by state. In 2020–2021, insufficient sleep among children ranged from 25% in Minnesota to 50% in Louisiana.



Data Source: National Survey of Children's Health (NSCH), 2020–2021.

Insufficient sleep by state, 2021

The percentage of high school students who do not get enough sleep varies by state. In 2021, it ranged from 71% in South Dakota to 84% in Pennsylvania.



CDC
U.S. territories
PR

<https://www.cdc.gov/sleep/data-research/facts-stats/children-sleep-facts-and-stats.html>
<https://www.cdc.gov/sleep/data-research/facts-stats/high-school-students-sleep-facts-and-stats.html>
<https://pmc.ncbi.nlm.nih.gov/articles/PMC7285623/>

Screen time



➤ Too much screen time may lead to:

➤ Weight problems

➤ Sleep problems

➤ Inadequate physical activity



➤ On average, children age 8-18 in the United States spend 7 1/2 hours a day watching or using screens

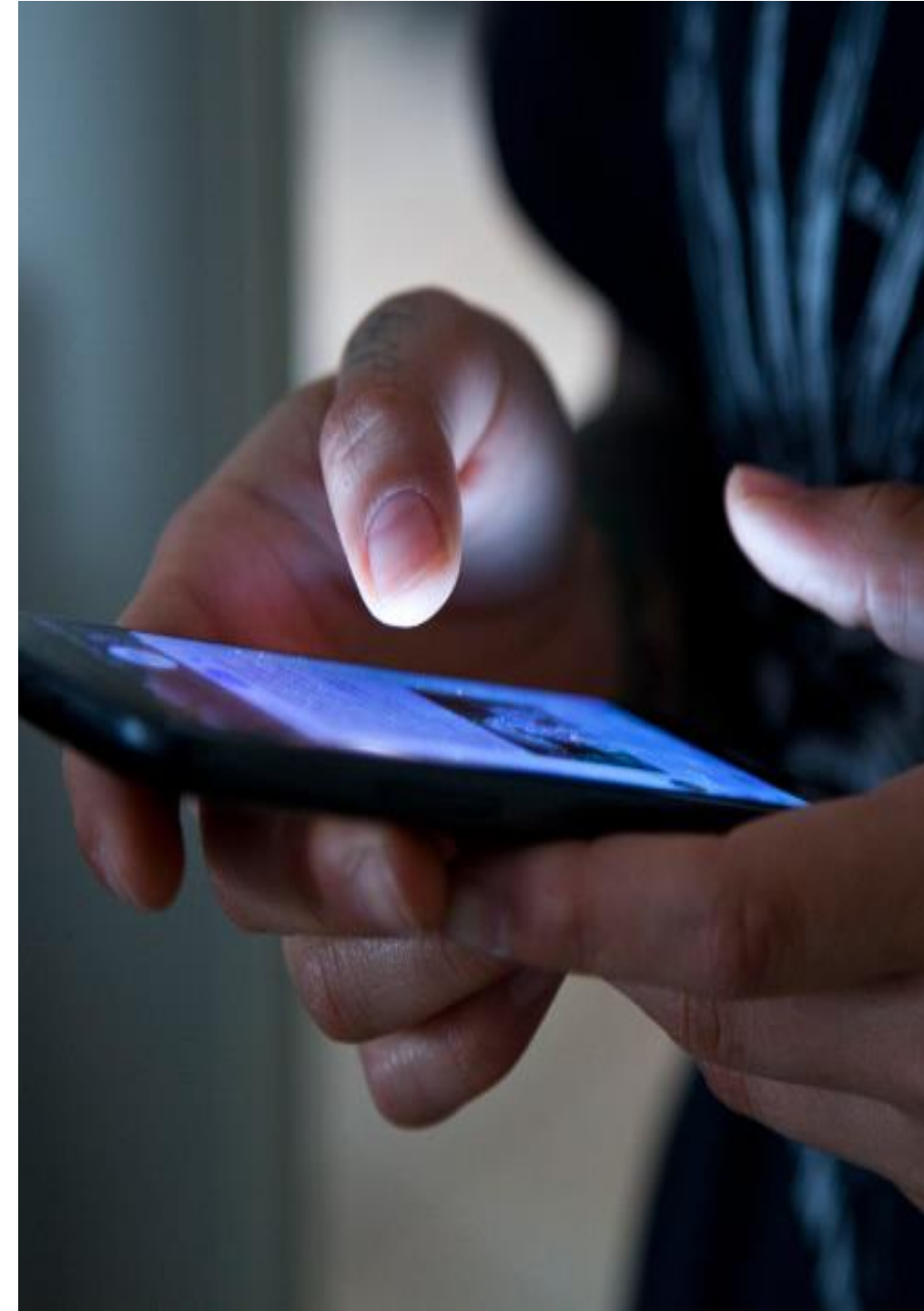


➤ 20% of U.S. children and youth ages 6 to 19 adhere to the recommendation of 2 hours or less of screen time per day

➤ Meta-analysis reported 42% greater risk of overweight/obesity with more than 2 hours per day of TV compared with 2 or fewer hours



➤ Screens + eating = distracted eating



Activity



D- Overall Physical Activity

- 20%-28% of 6-17 year olds meet the **60 minutes of daily physical activity** guideline.^{1,2}
- The proportion of children who meet physical activity guidelines has **not increased** in the past decade.¹
- Physical activity levels **decline with age**: 26%-42% of 6-11 year olds and 15% of 12-17 year olds meet physical activity guidelines.^{1,2}

D- Active Transportation

- 10% of children usually walk or bike to school and this has **not increased** in the past decade.³

C- Organized Sport Participation

- Sports participation among 6-17 year olds has **declined** over the past ~5 years from 58% to 51%.¹
- Children from **low-income households are much less likely** to participate in sports than those from higher-income households.⁴

INC Active Play

- There are **no current national data** on active play.

D- Sedentary Behavior

- 20% of 6-17 year olds engage in 2 hours or less of **screen time** per day.²
- **Adolescents are much less likely** to meet the recommended screen time limits than younger children.¹

C+ Sleep

- 64-67% of 6-17 year olds **sleep long** enough based on recommendations.¹
- Children from **low-income households are much less likely** to meet sleep recommendations than those from higher socioeconomic status households.¹

INC Physical Fitness

- There are **no current national data** on fitness, strength, and endurance.

INC Family and Peers

- There are **no current national data** on family or peer support for PA.

B- Early Care and Education Settings

- 74% of early care and education settings provide **2 or more** physical activity opportunities per day.⁵
- Early care and education settings have an average **physical activity policy** score of 59 on a score of 0-100.⁶

D- School

- 50% of high school students attend PE classes at least 1 day a week, which has **not increased** over the past decade.⁷
- 51% of secondary schools are implementing a Comprehensive School Physical Activity Program.⁸

C+ Community and Built Environment

- 76% of 6-17 year olds live in a neighborhood with **sidewalks** or walking paths, 76% live in a neighborhood with a **park** or **playground**, and 66% live in a **safe** neighborhood.¹
- 70% of states have a complete streets policy and 45% of states have strong complete streets.⁹

Weight Bias

- Can be explicit or implicit
- Partly driven by the inaccurate belief that weight is entirely within an individual's control
- Weight bias can lead to:
 - Weight stigma or social devaluation and mistreatment of individuals based on weight or size
 - Lower healthcare quality
 - Reduced access and utilization of healthcare services

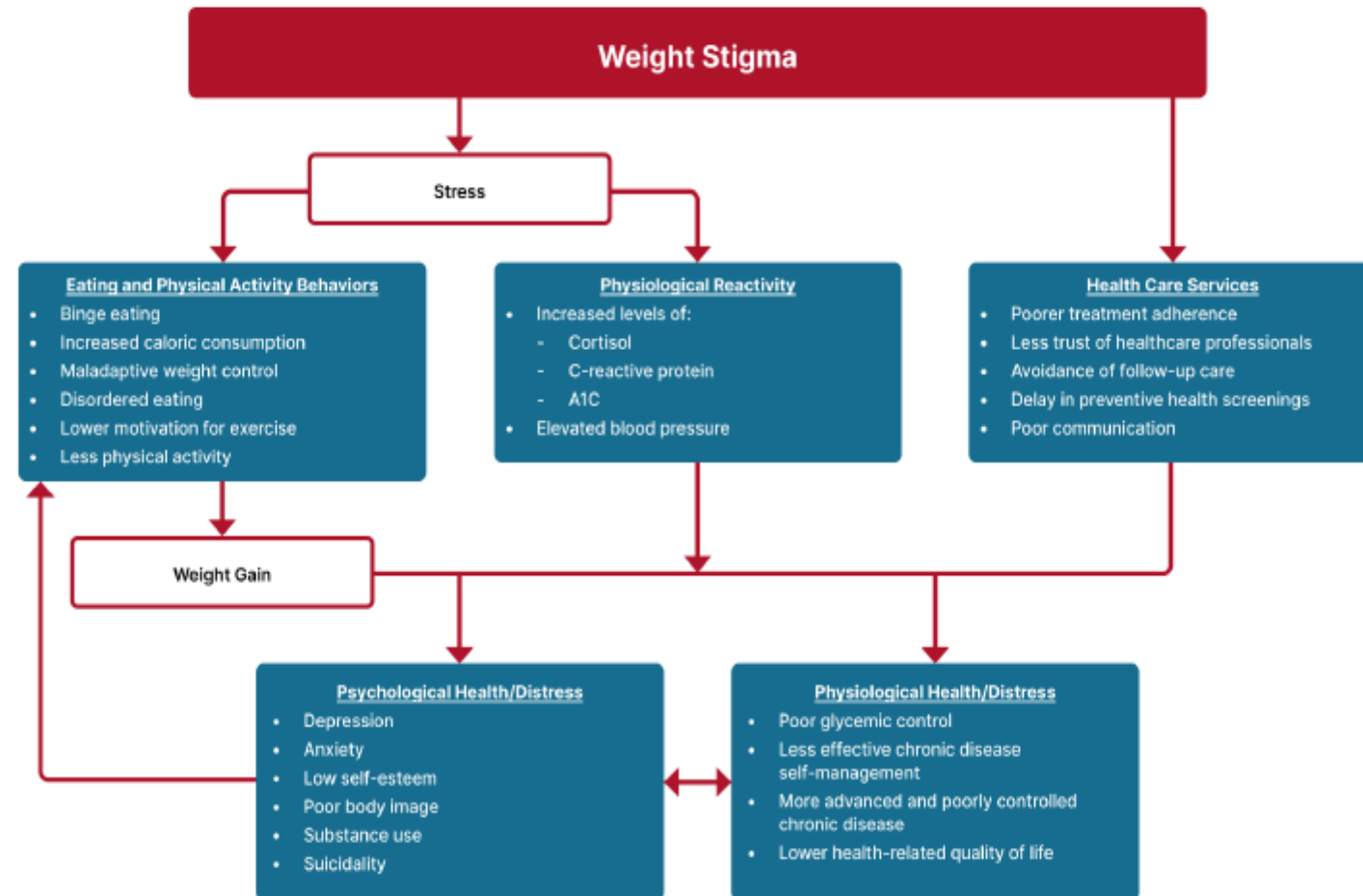


Figure 1 Health consequences resulting from experiences of weight stigma (adapted from Puhl et al [11]).

What can we do?

Addressing Weight Stigma

- ✓ Recognize complex interaction among genetic, biological, behavioral, social and environmental factors that affect weight
- ✓ Evoke empathy
- ✓ Empathetic and empowering counseling techniques / motivational interviewing
- ✓ Adapting practice environment to be inclusive
 - ✓ Waiting room with armless seats
 - ✓ Weight sensitive reading material and displays
 - ✓ Privacy around obtaining anthropometric measurements
- ✓ Emphasizing a weight-neutral approach to care

Weight Neutral Approach

- Ensure optimal health and well-being is provided to everyone, regardless of their weight
- Weight is not viewed as a behavior
- Appreciate that bodies naturally come in a variety of shapes and sizes
- Education is not focused on changing weight or size
- Process-focus (rather than end-goals)
- Focus on “non-scale victories”
- Ask permission to discuss weight
- Shared decision making - everyone may have different goals for their care

Language Matters

- Use people first language
- Emphasize that obesity is a medical condition
- Avoid: language that implies individual blame

Use this, not that...

Language that devalues people	Respectful person first language
Diabetic	Person with diabetes
Obese/fat/husky/chubby person	Person living with obesity
Extreme / Morbid / Super obese	Obesity class (I, II, III)
Weight loss failure	Treatment nonresponse

Addressing behaviors linked with obesity



Eating
patterns



Sleep



Screens



Activity

Healthy Eating???

Mediterranean

PLATE METHOD

Vegan

DASH diet

MIND diet

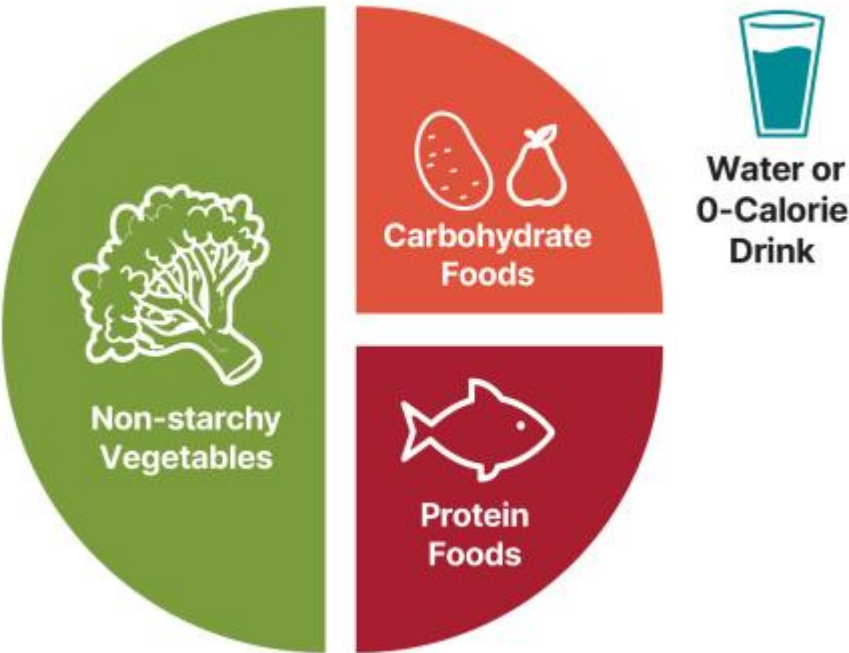
Plant-based

Consistent carbohydrate

Macros

Low carbohydrate

LOW FAT



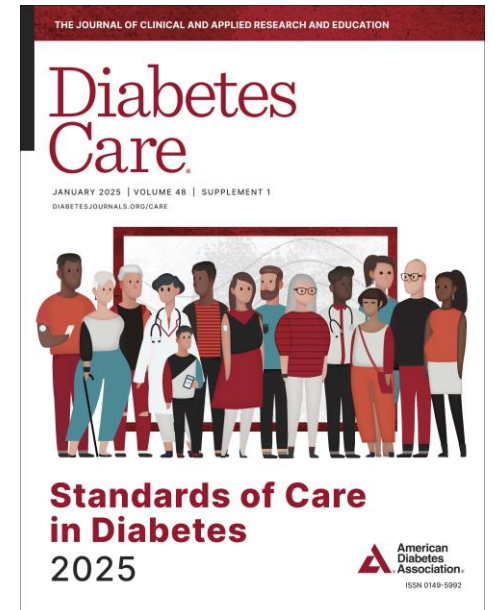
INTERMITTENT FASTING

Healthy Eating Habits

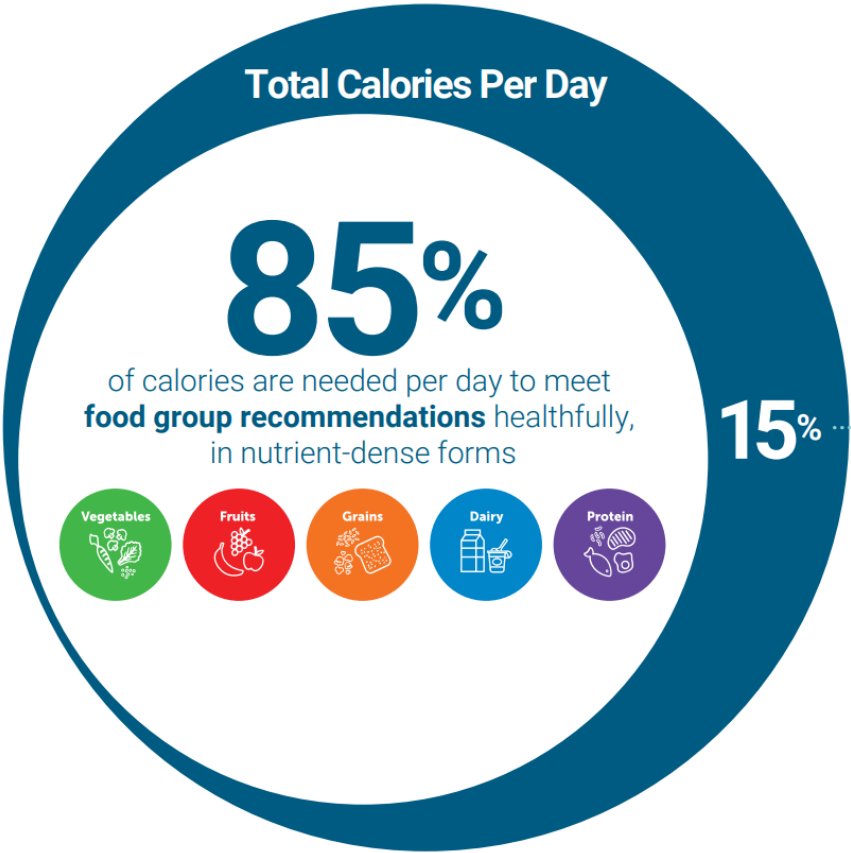


Standards of Care in Diabetes - 2025

- There is no one-size-fits-all eating pattern for individuals with diabetes, and meal planning should be individualized
- There is no ideal percentage of calories from carbohydrate, protein, or fat for people with diabetes
- Simply put, people eat food, not nutrients, and nutrition recommendations need to be applicable to what people actually eat



Healthy Eating Habits



Focus on

- Non-starchy vegetables
- Whole fruits
- Legumes
- Whole grains
- Nuts and seeds
- Lean or plant-based proteins
- Low-fat dairy
- Fiber



Minimize

- Red meat
- Processed meats
- Saturated fats
- Sugar-sweetened beverages
- Sweets/added sugar
- Refined grains
- Ultra-processed foods



ADCES7 Self-Care Behaviors™ HEALTHY EATING



MAKING HEALTHY CHOICES: GETTING STARTED

EAT THESE FOODS MORE OFTEN		LIMIT THESE FOODS	
NONSTARCHY VEGETABLES	leafy greens, green beans, cucumbers, carrots, cauliflower, brussel sprouts and more.	ADDED SUGAR	candy, calorie containing drinks, baked goods and desserts.
LEAN PROTEIN	fish (salmon, tuna, cod, catfish, sardines, trout and others), chicken, turkey, eggs, nuts and soy foods	HIGH FAT MEATS	beef, skin from poultry, ribs, bacon, sausage, deli and processed meats like salami, bologna and hot dogs.
HEALTHY FATS	plant-based oils like vegetable, olive or canola.	FOODS HIGH IN SATURATED FAT	butter, lard, tropical oils (coconut, palm) ice cream and desserts.
FRUIT	small piece like apple, orange, peach or pear. small cup of berries.	SALTY SNACKS	potato chips, french fries, pickles, canned soups and table salt.

Healthy Eating Habits

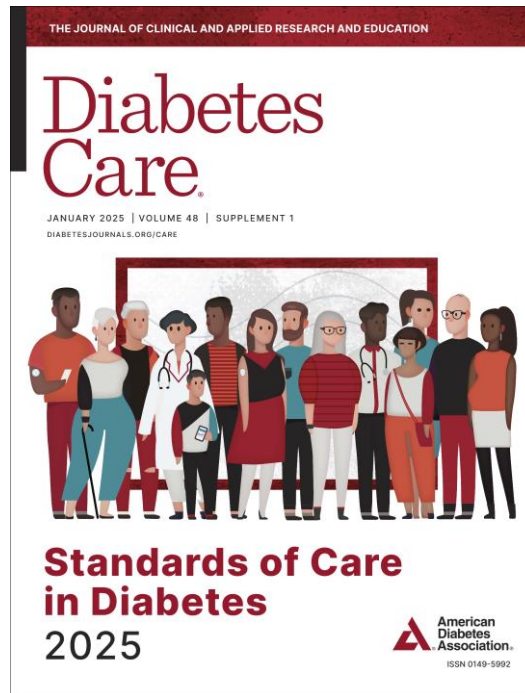


Table 5.3—Nutrition behaviors to encourage

- Vegetables—especially nonstarchy vegetables that are dark green, red, and orange in color; fresh, frozen, or low-sodium canned are all acceptable vegetable options.
- Legumes—dried beans, peas, and lentils.
- Fruits—especially whole fruit—fresh, frozen, or canned in own juice (or no added sugar) are all acceptable fruit options.
- Whole-grain foods—where culturally appropriate, whole-grain versions of commonly consumed foods such as 100% whole-wheat breads or pastas, and brown rice. When not culturally appropriate, focus more on portion control.
- Foods with at least 3 g of fiber per serving, which generally indicates a food higher in fiber.
- Water should be the primary beverage of choice.
- For individuals who do not prefer plain water, no-calorie alternatives are the next best choice. Options include adding lemon, lime, or cucumber slices to water; sparkling no-calorie water or flavored no-calorie waters; no-calorie carbonated beverages, etc.
- Plant-based proteins can include legumes (e.g., soybeans, pinto beans, black beans, garbanzo beans, dried peas, and lentils), nuts, and seeds.
- Meats and poultry should be from fresh, frozen, or low-sodium canned and in lean forms (e.g., chicken breast and ground turkey).
- Heart-healthy wild-caught fatty fish such as salmon, tuna, sardines, and mackerel. Fresh, frozen, or low-sodium canned are all acceptable options.
- Use herbs (e.g., basil, fennel, mint, parsley, rosemary, and thyme) and spices (e.g., cinnamon, garam masala, ginger, pepper, and turmeric) to season foods instead of salt or salt-containing preparations.
- Incorporate onions, garlic, celery, carrots, and other vegetables as a base for preparing various homemade foods.
- Cook with vegetable oil (e.g., canola and olive) in place of fats high in saturated fat (e.g., butter, shortening, lard, and coconut oil).
- Meal prep by planning out meals for the week, grocery shopping with a list, and cooking on a day off so there are ready-to-eat and ready-to-reheat homemade meals waiting in the fridge or freezer.
- Include family or roommates in meal preparation; share the responsibilities of grocery shopping and cooking.

Healthy Eating – Focus on Small Changes



Cereal with Added Sugars

Cereal with Minimal Added Sugars



Fruit Products with Added Sugars

Fruit (e.g., canned in 100% juice)



Fried Vegetables

Roasted Vegetables



High-sodium Snacks

Vegetables



High-sodium Meats

Ground Lean Meats



Beverages with Added Sugars

Unsweetened Beverages

— Dietary Guidelines for Americans, 2020-2025



Eating Environment



- ✓ Healthy lifestyle, not a diet
- ✓ Include the whole family
- ✓ Be a good role model
- ✓ Structured, regular mealtimes
- ✓ More meals at home
- ✓ Family mealtimes, eating together
- ✓ Screen free eating
- ✓ Portion sizes
- ✓ Don't skip breakfast



Sleep



AAP Recommendations

- Make sufficient sleep a family priority
- Keep to a regular daily routine
- Be active during the day
- Avoid overscheduling
- Monitor screen time
- Turn off screens 30-60 minutes before bedtime



*The American Academy of Pediatrics (AAP) has issued a Statement of Endorsement supporting these guidelines from the American Academy of Sleep Medicine (AASM).
Source: Paruthi S, Brooks LJ, D'Ambrosio C, Hall W, Kotagal S, Lloyd RM, Mellow B, Minski K, Nichols C, Quan SF, Rosen CL, Troester MM, Wise MS. Recommended Amount of Sleep for Pediatric Populations: A Statement of the American Academy of Sleep Medicine. J Clin Sleep Med. 2016 May 25. pii: jc-00158-16. PubMed PMID: 27250809.

Screens



- Turn off screens during family meals and outings
- Learn about and use parental controls
- Avoid using screens as babysitters or to stop tantrums
- Turn off screens 30-60 minutes before bedtime



Create your Family Media Use Plan:
[HealthyChildren.org/MediaUsePlan](https://www.aacap.org/Families_and_Youth/Facts_for_Families/FFF-Guide/Children-And-Watching-TV-054.aspx)



WHAT IS A FAMILY MEDIA USE PLAN?

A Family Media Use Plan helps parents balance their children's online and off-line lives. Because every family is different, the American Academy of Pediatrics has a new tool to help you create a personalized plan that works within your family's values and busy lifestyles.



**Younger Than
1½ to 2 Years**
Avoid media use
(except video chatting).

Preschoolers
No more than 1 hour
per day of high-quality
programming

Grade-schoolers & Teens
Don't let media displace other important activities.
☀ 1 hour of exercise daily ☀ Family meals
☀ A full night's sleep ☀ "Unplugged" downtime

All Ages
Co-view media with your kids
(enjoy it with them) to help them
learn from what they are doing,
seeing, and saying online.
Be their media mentor!

Create your family's plan at [HealthyChildren.org/MediaUsePlan](https://www.aacap.org/Families_and_Youth/Facts_for_Families/FFF-Guide/Children-And-Watching-TV-054.aspx).

By creating a Family Media Use Plan, parents can help children and teens balance their media use with other healthy activities.

Physical Activity



- ❖ Aim for your child to get 60 minutes of physical activity a day (doesn't have to be all at once)
- ❖ For every one hour of moderate-to-vigorous activity there is a 10% decrease in the risk of developing obesity
- ❖ Make physical activity more fun; try new things
- ❖ Ask kids what activities they like best—everyone is different
- ❖ Plan active outings like walking, hiking, or biking
- ❖ Turn chores into games



Physical Activity – Free online workout ideas



Younger kids

- Cosmic yoga
- Danny Go
- Coach Corey Martin
- Coach Brenda Baker
- GVO kids
- Go Noodle

Teens/adults

- Mad Fit
- Yoga with Adriene
- Body fit by Amy
- Fitness Blender
- Yoga with Sherry Zak Morris
- Lauren Fitters
- Heather Robertson
- Kaleigh Cohen Strength



Putting it all together

Multifaceted interventions

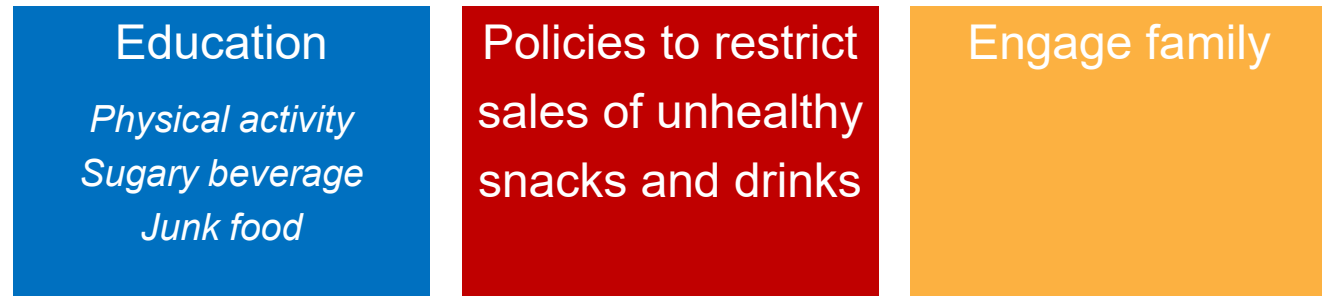
- ✓ Effective programs incorporate multiple interventions
- ✓ Single component interventions not as successful

The 5-2-1-0 approach

- **5** fruits and vegetables a day
- **2** hours or less of screen time per day (or a healthy, balanced limit you've set in your family media plan)
- **1** hour of physical activity a day
- **0** limit sugar-sweetened drinks

Study

- Single interventions may not prevent obesity on their own but they may help, especially if combined with other interventions
- Study: Effectiveness of a multifaceted intervention for prevention of obesity in primary school children in China



- Results: (after 1 year)
- 27% reduction in obesity prevalence amount children in intervention schools compared with a 6% reduction amount children in control schools

Goal setting with kids/families

SMART Goal



S – Specific



M – Measurable



A – Achievable



R – Relevant



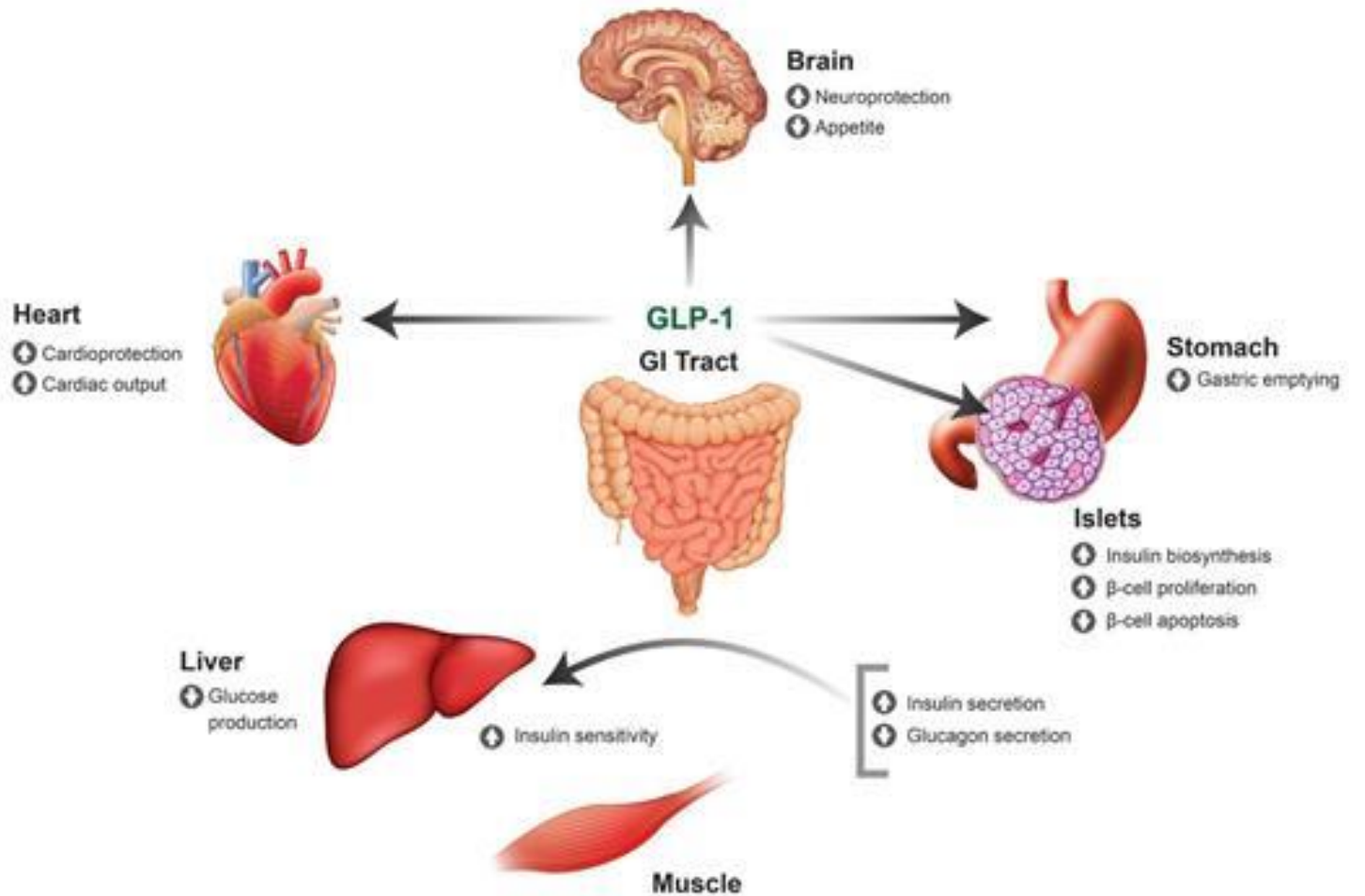
T – Time

Always individualized, typically 1 or 2 goals based on conversation and their lifestyle

- Eating without a screen (TV/phone/ipad)
- Decreasing vs eliminating
- Focus on healthy habits instead of decreasing unhealthy habits
- Creative ways to increase fruit and vegetable intake

Medication

GLP-1 Mechanism



GLP-1 and GIP Receptor Agonists for Type 2 diabetes

Class/Main Action	Name	Dose Range	Considerations
GLP-1 RA - Glucagon Like Peptide Receptor Agonist "Incretin Mimetic" - Increases insulin release with food - Slows gastric emptying - Promotes satiety - Suppresses glucagon	exenatide (Byetta)	5 and 10 mcg BID	Side effects: nausea, vomiting, weight loss, injection site reaction. Report signs of acute pancreatitis or intestinal blockage (ileus) and stop med. Black box warning: Thyroid C-cell tumor warning (avoid if family history of medullary thyroid tumor). <i>*Significantly reduces risk of CV death, heart attack, and stroke.</i> <i>§Approved to reduce risk of CKD</i> <i>†Approved for pediatrics 10-17 yrs</i> Lowers A1C 0.5 – 1.6% Weight loss: 4-6% body weight loss.
	exenatide XR [†] (Bydureon)	2 mg 1x a week Pen injector - Bydureon BCise	
	liraglutide* [†] (Victoza)	0.6, 1.2 and 1.8 mg daily	
	dulaglutide* [†] (Trulicity)	0.75, 1.5, 3.0 and 4.5 mg 1x a week pen injector	
	semaglutide* [§] (Ozempic) (Rybelsus) Oral tablet	0.25, 0.5, 1.0 and 2.0 mg 1x a week pen injector 3, 7, and 14 mg daily in a.m. Take on empty stomach with sip of water	
GLP-1 & GIP Receptor Agonist Activates receptors for GLP-1 (see above) & Glucose-dependent Insulinotropic Polypeptide (GIP).	Tirzepatide (Mounjaro)	2.5, 5.0, 7.5, 10, 12.5 and 15 mg 1x a week prefilled single dose pen Increase dose by 2.5 mg once monthly to reach targets.	Side effects: nausea, diarrhea, injection site reaction. Report pancreatitis, signs of intestinal blockage. Black box warning: Avoid if family history of medullary thyroid tumor. Lowers A1C ~ 1.8 - 2.4% Weight loss: 7-13% body weight loss at max dose.

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GLP-1 and GIP Receptor Agonists for weight loss

Wegovy
(semaglutide)-
approved for
12 years and
older

- Approved for obesity treatment in June 2021
- Approved for 12 years and older in December 2022

Zepbound
(tirzepatide)-
approved for
18 years and
older

- Approved for obesity treatment in November 2023

STEP-TEENS 2022

Double blind randomized trial evaluating Semaglutide 2.4mg/week in addition to lifestyle changes in 201 adolescents with obesity over 68 weeks

- BMI lowered 16.7% in Semaglutide and increased 0.6% in placebo
- Weight loss 15.3kg in Semaglutide group, increased 2.4kg in placebo
- Wt loss of >5% of weight was 73% of Semaglutide group, 18% of placebo

Recommendations for future research/consideration:

- Weight loss rapidly rebounds after Semaglutide withdrawal implying ongoing therapy ongoing therapy to maintain weight loss
- Animal studies suggest Semaglutide may not be safe during pregnancy and manufacturer guideline is to discontinue 2 months before planning to become pregnant
- Balanced research with both sexes and adequate representation of ethnic minorities especially those more affected by obesity burden

Lifestyle Considerations with GLP-1s

1. Patient-centered initiation of therapy
2. Careful baseline nutritional assessment
3. Management of gastrointestinal side effects
4. Personalized, nutrient-dense, minimally processed diets
5. Prevention of micronutrient deficiencies
6. Adequate protein intake and strength training to preserve lean mass
7. Leveraging a good diet to maximize weight reduction
8. Promoting other lifestyle changes around activity, sleep, mental stress, substance use, and social connections to maximize long-term success

What is Sutter Doing?

Sutter Pediatric Prediabetes and Weight Management Program

LIFE@Sutter

- Program started in May 2025
- RD, CDCES working 2 days per week just on this program, increasing to 3 days per week October 2025
- 118 patients/families currently enrolled ages 6-18 years old
- Many insurance companies require 6 months of weight management counseling prior to approving a GLP medication for weight loss



Thank You



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