

SESSION 3

PEDIATRIC SESSION

USE OF ADJUNCTIVE THERAPIES AND OBESITY MEDICATIONS IN DIABETES



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EPIC DIABETES CONFERENCE

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EMPOWERING PATIENTS
FOR
INDIVIDUALIZED CARE



OUTLINE

- ❖ Why does treating weight matter?
- ❖ How do we describe risk?
- ❖ Who should we treat?
- ❖ How can we treat?
 - ❖ Medications
 - ❖ Lifestyle

Risks Associated with Excess Weight

- ❖ Cardiac Risk Factors
 - ❖ High blood pressure
 - ❖ Abnormal cholesterol and other lipids
 - ❖ Cardiac autonomic dysfunction
 - ❖ Abnormal signaling of nervous system to the heart
- ❖ Insulin resistance
 - ❖ Daily insulin needs
 - ❖ Obesity-related complications



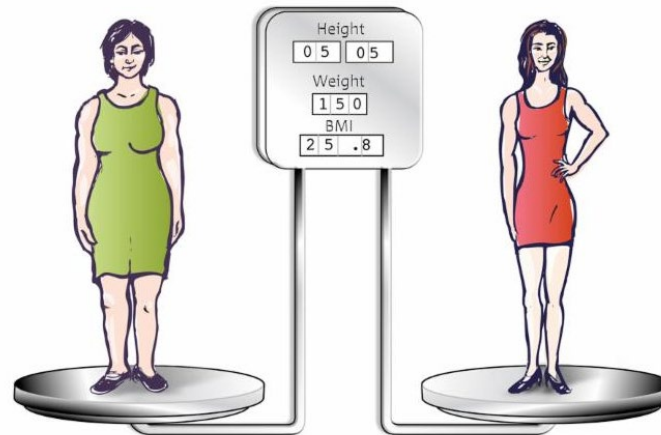
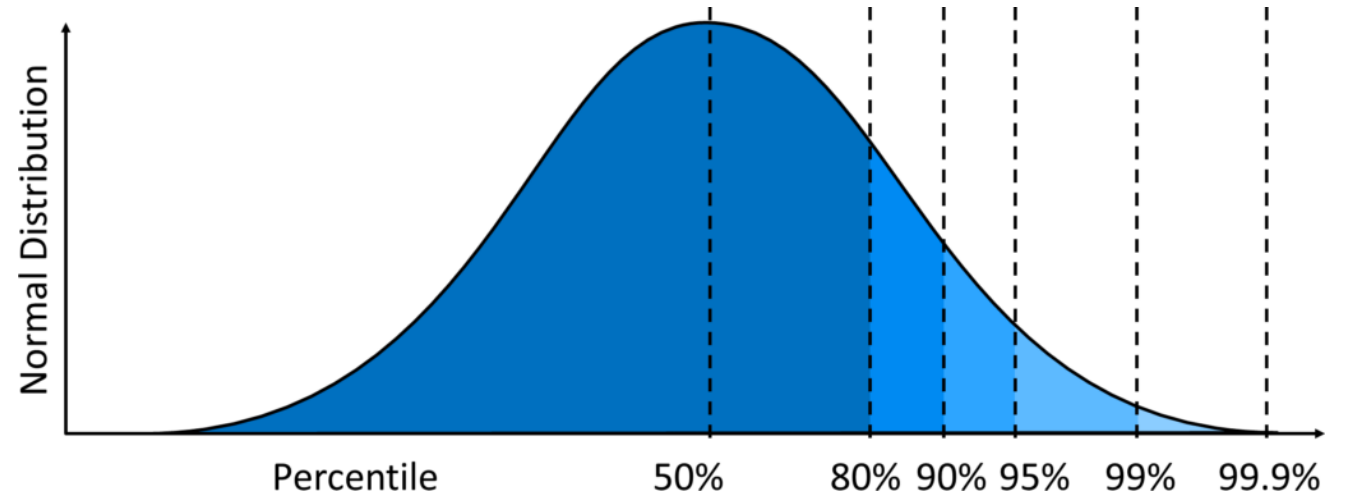
The language we use

- ❖ Many terms used to talk about weight can be stigmatizing
- ❖ Stigma and blame are hurtful and de-motivating
- ❖ Obesity is a chronic disease with many contributing factors
- ❖ Obesity and Overweight are diagnostic categories
- ❖ Focus on health
- ❖ Person-centered language:
 - ❖ “A person living with diabetes” instead of “a diabetic”
 - ❖ “A child with elevated BMI” instead of “an obese child”



Let's talk about Body Mass Index (BMI)

- ❖ BMI is weight for height (kg/m^2)
- ❖ "Normal" is based on historical data
- ❖ BMI is distributed into normal curve by age and gender
- ❖ BMI categories are used to track health outcomes
 - ❖ Overweight BMI 85th to 94th percentile
 - ❖ Obese BMI 95th percentile or greater
- ❖ BMI categories are used to target interventions
- ❖ BMI is not a perfect measure
 - ❖ It can overestimate risk in muscular people



At Risk Higher Risk



Who should we treat?

Lifestyle advice for everyone regardless of weight status!

- ❖ Promote and maintain healthy weight
- ❖ Promote increased exercise
- ❖ Less sedentary time

Patients with higher risk:

- ❖ Increased focus and additional tools
 - ❖ Lifestyle intervention
 - ❖ Medications
 - ❖ Bariatric surgery



Oral medications

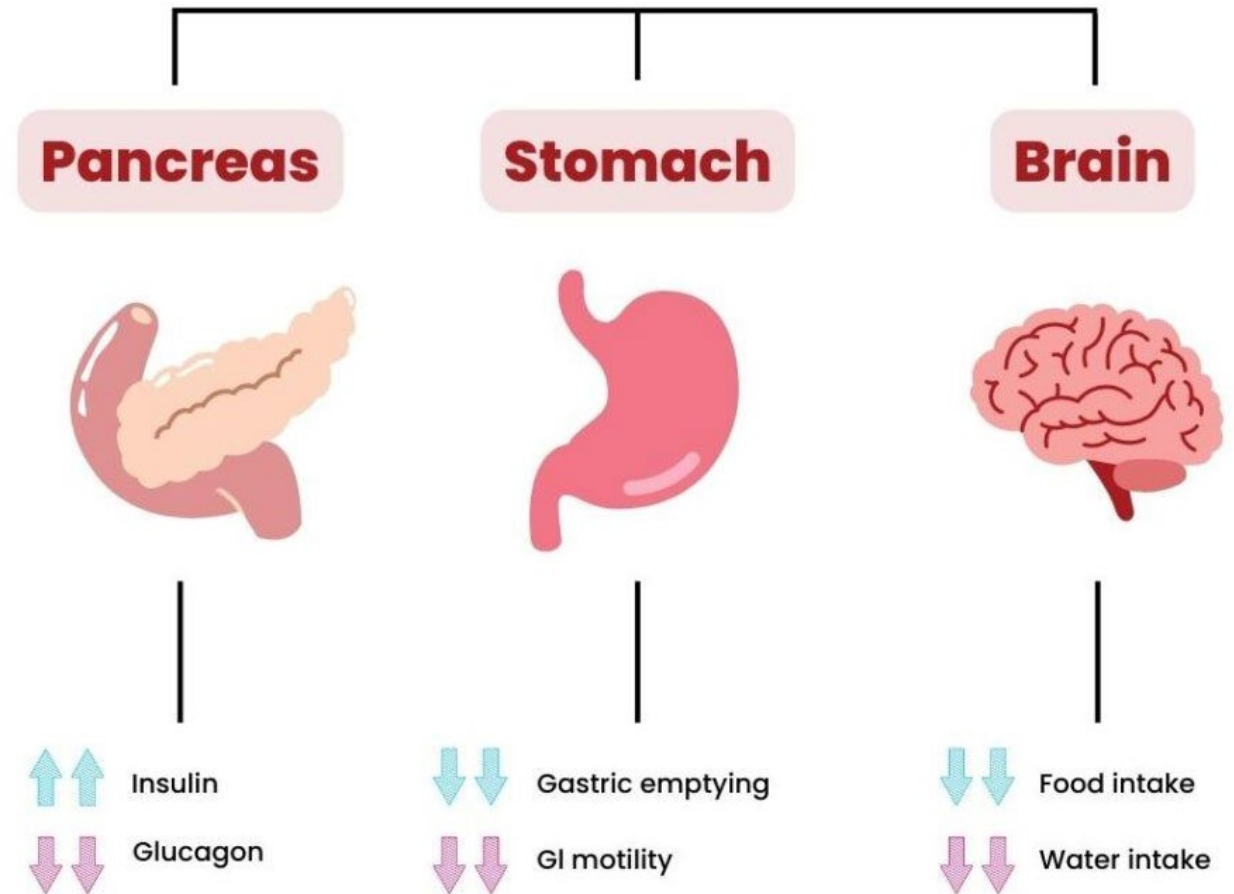
Medication	Ages	How you take it
Phentermine/Topiramate <i>Qsymia</i> ®	≥ 12 y	Daily pill
Phentermine	≥ 16 y	Daily pill, short term
Topiramate	≥ 2 y	Once/twice daily pill
Naltrexone/Bupropion <i>Contrave</i> ®	≥ 18 y	Once/twice daily pill
Orlistat <i>Alli</i> ®/ <i>Xenical</i> ®	≥ 18 y	Capsule with meals
Semaglutide <i>(Rybelsus</i> ®)	≥ 18 y	Daily pill



Injectable medications

Medication	Ages	How you take it
Exenatide <i>Bydureon BCise</i> ® <i>Byetta</i> ®	≥ 10 y ≥ 18 y	Weekly Twice a day
Dulaglutide <i>Trulicity</i> ®	≥ 10 y	Weekly
Liraglutide <i>Saxenda</i> ® <i>[Victoza</i> ®]	≥ 12 y ≥ 10 y	Daily Daily
Semaglutide <i>Wegovy</i> <i>[Ozempic</i> ®]	≥ 12 y ≥ 18 y	Weekly Weekly
Tirzepatide <i>Zepbound</i> ® <i>[Mounjaro</i> ®]	≥ 18 y ≥ 18 y	Weekly Weekly

GLP-1 Agonists



Safety with weight loss medications

- ❖ Risk for hypoglycemia
 - ❖ CGM
 - ❖ Glucagon
 - ❖ Reduce insulin dose (up to 20 or 30%)
 - ❖ Slow increase in dose of medication
- ❖ Risk for ketosis (check ketones)
 - ❖ Injectable medications often associated with nausea
- ❖ Drink lots of water
- ❖ Attention to quality foods in diet
- ❖ Close follow-up
- ❖ Plan for long-term care



Notes on treatment

- ❖ Bariatric surgery (usually after medications)
- ❖ Treatment with medication/surgery **MUST** include lifestyle plan
- ❖ Medications are like “power steering”



Lifestyle Management of Obesity/Overweight

- Nutrition Recommendations
- Physical Activity Recommendations
- Family Based Treatment
- Sleep and Sleep Hygiene



Treatment of Obesity- American Academy of Pediatrics Guidelines 2023

- Intensive health behavior and lifestyle treatment
 - Most effective:
 - Face to face, engages the whole family
 - Nutrition, Physical activity and behavior change lessons
 - At least 26 hours over 3 to 12 months
- Children's Hospital Colorado- Lifestyle Medicine Clinic
 - MD, NP or PA, RD, Exercise Specialist, Psychologist

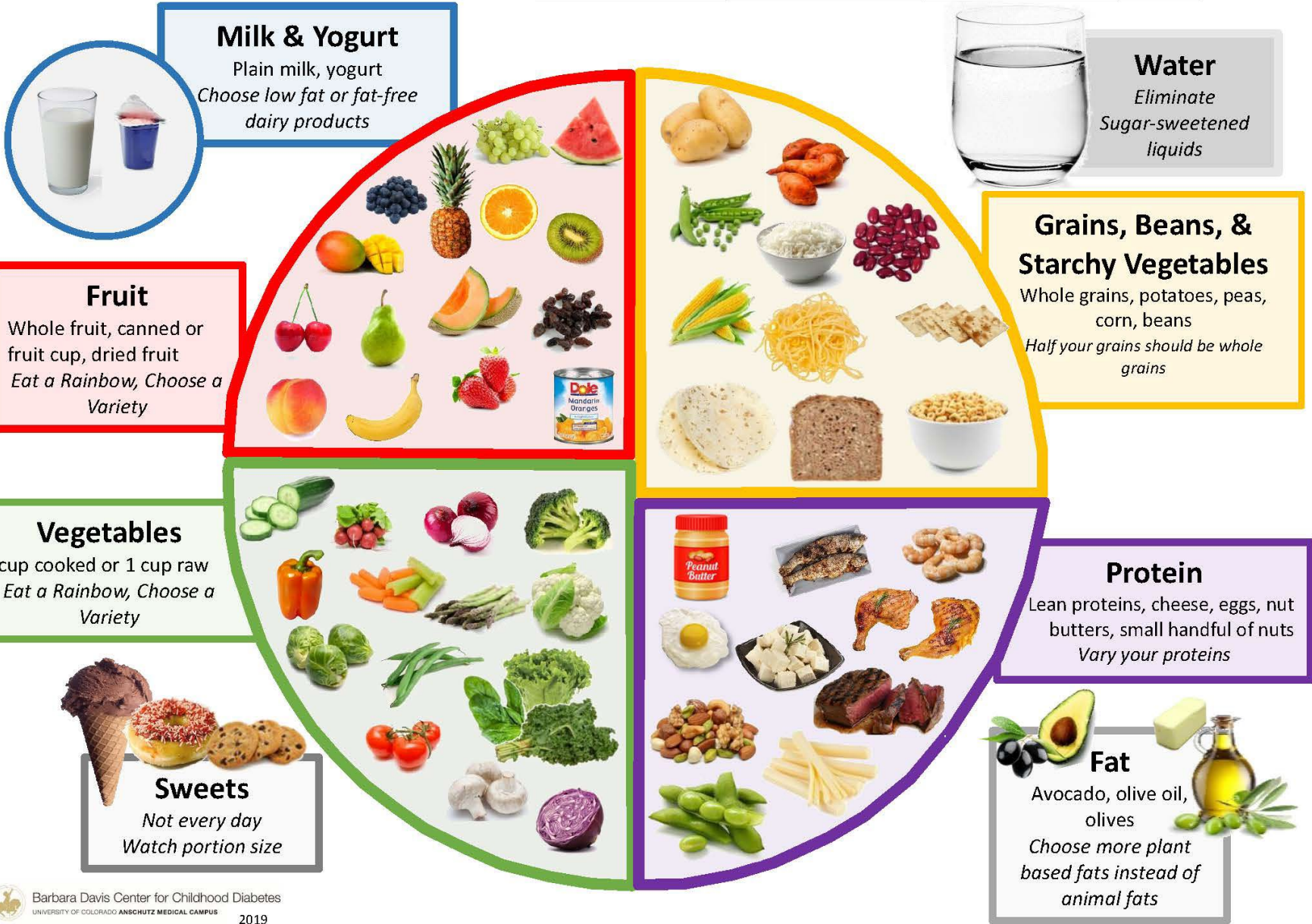


Healthy Eating Guidelines

- Elimination of sugar sweetened beverages- sodas, sports drinks, fruit drinks, etc
- Limit *added sugar* to no more than 25 gm (6 tsp) per day (American Heart Association)
- Reduce processed foods/ fast foods
- Increase fruits and vegetables
- Portion Control- using Healthy Plate/ USDA MyPlate as a guide



Healthy Plate



Eating on a Schedule

- Follow a schedule of 3 structured meals per day
- Eat as a family on the same schedule
- Turn off the TV and electronic devices at mealtimes
- Breakfast skipping is associated with overweight and obesity and with lower quality of dietary intake throughout the day



Family Involvement

- **The family's dietary preferences** and lifestyle habits play a crucial role in influencing the child's weight
- **Parent feeding practices and modeling**
 - Parent eating behavior
 - Type and amounts of foods and beverages in the home
- **Parent's feeding style**- when parents respond to the child's cues of hunger and satiety, it's protective against excessive weight gain



Feeding Styles



INDULGENT

Child eats whatever and whenever they want

UNINVOLVED

Parents don't food shop regularly and often don't cook or prepare meals

AUTHORITATIVE

Parents provide a selection of healthy food, and the child decides how much and what they will eat

AUTHORITARIAN

“Clean Plate Club” The rules around food are controlled by the parents without regards for the child's hunger or preferences



Physical Activity



- 2-5 yo: Active Play
- 6-17 yo: **60** minutes of **moderate** to **vigorous** physical activity per day
 - **Moderate intensity activity**- walking briskly, bicycling leisurely, baseball
 - **Vigorous intensity activity**- jogging, running, bicycling \geq 12 mph, hiking, soccer
- Combination of cardiovascular/aerobic and muscle and bone-strengthening activities (3+ days per week of each)
- Consider active games on screens for those who are resistant to other activities
- Reduce sedentary behavior/screen time- 1 hour limit for 2-5 year olds, parent-monitored plan for media use in older children



Determine "How Hard You Are Working" to Estimate Risk for Low or High Glucose Levels



Sleep and Weight

- Obesity is associated with shorter sleep duration
 - Increased calorie consumption/poor diet quality
 - Decreased physical activity from fatigue
 - Potential hormonal and metabolic alterations leading to hunger
- Inadequate sleep is associated with
 - Decreased insulin sensitivity/insulin resistance
 - Hyperglycemia
 - High blood pressure
 - Dyslipidemia



Sleep Hygiene



- Appropriate amount of sleep for age
 - 3-5 year olds- 10-13 hours (including naps)
 - 6-12 year olds- 9-12 hours
 - 13 to 18 year olds- 8-10 hours
- Insufficient sleep is common- affects 30% of toddlers, preschoolers and school age children
- Light emitting screens increase brain arousal, reduces sleepiness at bedtime
 - Light suppresses melatonin release
- Beds should be for sleeping only- no screens, no food



Summary

- ❖ Excess weight increases risk for cardiovascular and other diseases
- ❖ Excess weight can make diabetes harder to manage
- ❖ Diabetes can make weight management difficult
- ❖ Overweight should be treated as a chronic condition
- ❖ A variety of medications can be used
- ❖ Lifestyle management is a cornerstone for all treatment plans
- ❖ Prioritize good sleep

