

# Weight Management

# Weight Management

- Is incredibly complex
- Scientists and health professionals do not agree on:
  - How to lose weight
  - How to maintain weight
  - why some people are overweight and obese.
  - Why people lose weight and gain it back

# Weight Management

- **What you weigh:**
  - **Depends upon:**
    - **Your Genes**
    - **Your Hormones**
    - **Environment You Live in**
    - **Learned Eating Habits**

# Weight Management

- Identical Twins separated at birth
  - Identical Twins born with same genes
    - Identical Twins adopted to different families at birth
      - Weight reflects adopted family or birth family?
        - Birth family

# Hormones affect your weight

- A hormone is a chemical messenger in your body that controls and regulates body functions
- Estrogen & Testosterone (sex hormones)
  - affect fat distribution on body
- Ghrelin
  - Circulates in blood just before meals to stimulate hunger
  - Decreases after eating
- Leptin
  - Suppresses hunger but obese people seem to be resistant to leptin
  - High fructose diet may contribute to leptin resistance

# Food environment may affect what you weigh

- Never before in history
  - has food (junk food, fast food) been so available, so cheap, so addictive
- We are surrounded by foods that are cheap, delicious, addictive
  - artificially added sugar, high fructose corn syrup, salt, fat makes refined junk foods very addictive
  - Hard to stop eating
    - **no satiety**

# What is satiety?

- Satiety
  - Feeling pleasantly full after eating

Satiety after eating leads to loss of interest in continuing to eat

But if foods do not provide satiety, keep eating

Junk foods do not provide satiety

# Foods can provide satiety or addiction

- Which would provide more satiety?
- An apple (100 calories)
  - Has fiber for satiety, use teeth for chewing
- Potato Chips (100 calories)
  - No satiety, salt makes it addictive
- Cupcake (100 calories)
  - No satiety, sugar makes it addictive



# Eating habits affect your weight

- Portion size has grown
- Snacking is now acceptable
- Overeating is no longer seen as gluttonous
- People no longer cook
- Mealtime no longer important
- Meals from a drive through is okay
- Americans want cheap food that tastes good
- People eat on the run

# Obesity vs overweight

- Obesity:
  - Carrying 25-40 lbs more than “healthy weight”
- Overweight
  - Carrying 10- 20 lbs more than “healthy weight”

# Over fat?

- Is the extra weight made up of muscle or fat?
  - Are you over fat?
  - Where are you carrying your fat?

# Tools to determine body weight

- Body Mass Index (BMI) not accurate measure.
- Calculated from person's weight and height
- Not accurate if person is:
  - Muscular
  - Heavy bone mass
- Does not reflect fat distribution on body.

# Body Mass Index

- Problems using body mass index:
  - Does not reflect fat distribution on body
  - Does not take into consideration people who are muscular
  - Does not take into consideration large boned people

# Assessing body fat

- Measuring weight circumference
  - To determine abdominal obesity
- Waist measurement of
  - > 35 inches for women
  - >40 inches for men
    - Increased risk of heart disease
    - Increased risk of type 2 diabetes
    - Increased risk of premature all cause mortality

# Hunger vs Appetite

Hunger and appetite affect what you eat, how often you eat, when you eat.

- **Appetite** is psychological desire for food
- **Hunger** is physiological need for food, subsides as feeling of satiation sets in
  - Satiation or satiety is feeling pleasantly full

# Are you eating from hunger or appetite?

- After dinner you sit down to watch TV with your favorite popcorn
- You just ate lunch, you leave the restaurant and while walking back to your car, you smell the scent of freshly baked cookies. You see the bakery across the street and cross the street to buy some cookies.
- You didn't eat breakfast this morning so when the clock strikes 12 noon, you go down to the cafeteria to eat your lunch.



# Examine your eating behavior

- Which style of eating do you prefer?
  - Snacking through the day
  - Eating 3 meals a day
- Mindless Eating
  - Not paying attention to the foods you are eating
    - Eg. Watching TV while eating meals
    - Eating on the run
  - Tend to eat more
  - Less pleasure from eating
  - Don't know when you are full

# Behavior modification tools

- Behavior modification to create new habits:
  - Use small plates to eat on
  - Eat slowly and taste the food
  - Always leave small amount of food over
  - Put utensils down between bites and chew, chew, chew
  - Sit down and relax and only eat
  - Enjoy food through your senses
    - Visually appealing, aroma
  - Plan meals in advance

# Behavior modification tools

- Have a large salad, glass of water or bowl of soup before your meal
- Don't keep junk foods in your house
- Learn to cook
- When grocery shopping:
  - Make a list and stick with it
  - Don't shop while hungry
  - Buy best quality of food you can afford...because you are worth it

# Behavior modification tools

- Plan ahead for the week:
  - Plan breakfast – have ingredients in house, fast, quick, nutritious
  - Plan lunch – pack lunch, plan to have ingredients in house, bag to pack lunch in, freezer pack, thermos
  - Plan dinner – cook for the week, have recipes, pick up ingredients on way home

# Surgical treatment for obesity

Gastric bypass:

stomach is closed off and small pouch left to hold  $\frac{1}{4}$  cup of food at a time

Gastric banding:

silicone band is placed around top of stomach to greatly reduce its size

# Eating Disorders

Psychological illnesses that involve specific abnormal eating behaviors

# Eating disorders

## **Anorexia nervosa**

- Self-starvation
- Excessive weight loss
- Intense fear of being “fat”
- Distorted body image: see themselves as fat when underweight
- Health consequences: electrolyte imbalance (low blood potassium) can be fatal

# Eating disorders

## **Bulimia nervosa:**

Involves binge eating and purging

- Purging is self-induced vomiting, excessive exercising, abuse of diet pills, laxatives
  - Vomiting can cause tears in esophagus, tooth decays, broken blood vessels in eyes
- Potentially fatal electrolyte imbalance can also result from bulimia



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