



Comprehensive

Health Skills
for Middle School

Third Edition



Sanderson • Zelman
Armbruster • McCarley

Presentations for PowerPoint

Comprehensive Health Skills for Middle School



The Goodheart-Willcox Co., Inc.
Tinley Park, Illinois

Chapter

7

Nutrition

SAMPLE

Essential Question



How do the foods you eat affect your overall health?

SAMPLE

Lesson

7.1

Getting Enough Nutrients

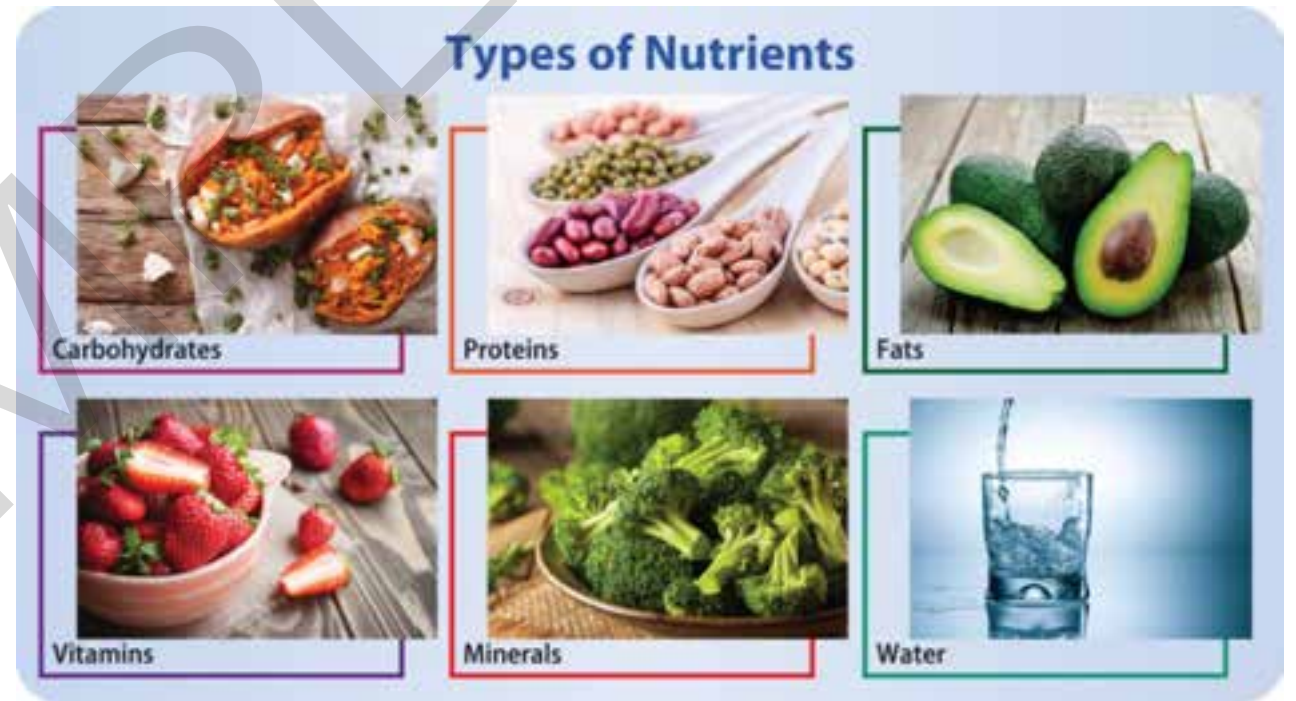
7.1 Learning Outcomes

After studying this lesson, you will be able to

- **identify** the six types of nutrients.
- **explain** the role of each nutrient in the body.
- **identify** sources of each nutrient.
- **describe** the importance of water to good health.

Types of Nutrients

- Food contains **nutrients**, chemical substances that give your body what it needs to grow and function properly
- Your body requires *macronutrients* in large amounts
 - Includes carbohydrates, proteins, and fats
- Other nutrients, called *micronutrients*, are needed in smaller amounts
 - Such as vitamins and minerals



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Carbohydrates

- **Carbohydrates** are a major source of energy for the body
 - Simple carbohydrates are sugars, found in fruits and dairy products
 - Complex carbohydrates are starches, found in grains, beans, and some vegetables such as potatoes, peas, and corn

Dietary Fiber

- The body is unable to wholly digest **dietary fiber**, a tough complex carbohydrate
- Found in fruits, most vegetables, whole grains, and nuts

Health Benefits of Dietary Fiber

Lowers cholesterol

Balances level of glucose

Adds bulk to feces

Can prevent overeating

Proteins

- The body uses **protein** to build and maintain all of its cells and tissues



Types of Proteins

- Proteins are made up of *amino acids*
 - Your body produces *nonessential amino acids*
 - You can only get *essential amino acids* through particular foods
- Complete proteins: animal-based foods, some plant-based foods such as soybeans
- Incomplete proteins: legumes, tofu, nuts and seeds, grains, some vegetables, some fruits

Proteins and Vegetarians

- Some vegetarians avoid eating all (or most) foods from animal sources, and must rely on plant-based proteins

Vegans

Eat only plant-based foods

Lacto-vegetarians

Eat dairy products but no meat, fish, poultry, or eggs

Ovo-vegetarians

Eat eggs, but no other animal-based products

Lacto-ovo vegetarians

Eat dairy products and eggs, but no meat, fish, or poultry

Fats

- **Fats** provide a valuable source of energy, particularly for muscles
 - Largely made up of fatty acids
 - Your body stores excess calories as body fat, which is important to your health and has important functions
 - Supplies energy to the body when food is unavailable
 - Acts as a cushion to protect internal organs
 - Provides a layer of insulation to help maintain body temperature

Types of Fats

- **Saturated fats**—found in animal-based foods, solid at room temperature
- **Unsaturated fats**—found in plant-based foods, liquid at room temperature
- **Trans fats**—found in processed foods and some foods from animals

Fats in the Diet

- Some fats are better for you than others
- Diets high in saturated fats may lead to health problems such as heart disease, stroke, some types of cancer, and diabetes
- Trans fats pose major health risks as well

Vitamins

- Organic substances that come from plants or animals and are necessary for normal growth and development are **vitamins**
 - Your body requires 13 vitamins from food
 - Easily provided by a balanced diet with a variety of foods



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Types of Vitamins

Water-soluble vitamins

- Dissolve in water
- Used immediately by the body or removed through urination
- Vitamin C and the B vitamins

Fat-soluble vitamins

- Absorbed with dietary fat and dissolve in the body's fats
- Stored in the body for later use
- Vitamins A, D, E, and K

Minerals

- **Minerals** are inorganic elements found in soil and water
- You absorb minerals from
 - the plants you eat
 - the water you drink
 - animal food sources that have absorbed the minerals

Types of Minerals

Major minerals

- Includes *calcium*, which the body needs to build bones and teeth
- Also includes magnesium, potassium, and sodium

Trace minerals

- Includes *iron*, which the body needs so that blood cells can carry oxygen throughout the body
- Also includes fluoride, manganese, and zinc

Water

- Water is necessary for the body to work properly and remain healthy
- Your body loses water every day through
 - urination
 - sweat
 - exhalation

Dehydration

- When the body's tissues lose too much water, this is called *dehydration*
- Drink even more water when you
 - are outside in hot weather for a long period of time
 - engage in vigorous physical activity
 - experience a fever, diarrhea, or vomiting

Replenish the water your body loses by drinking **8½ to 11½ cups of fluids per day**

Health Alert! Dehydration

People can live for several weeks or even months without taking in food, but only **a few days** without water.



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Lesson 7.1 Review (1 of 2)

- Which type of nutrients provide valuable energy for muscles?
 - fats
- Dietary _____ is a tough complex carbohydrate that the body is unable to digest.
 - fiber

Lesson 7.1 Review (2 of 2)

- Proteins with all essential amino acids are found primarily in _____-based foods.
 - animal
- How much water should you drink per day to avoid dehydration?
 - 8½ to 11½ cups

Lesson

7.2

Following a Healthy Eating
Pattern

7.2 Learning Outcomes (1 of 2)

After studying this lesson, you will be able to

- **explain** the key concepts from the *Dietary Guidelines for Americans*.
- **summarize** recommendations from the MyPlate food guidance system.

7.2 Learning Outcomes (2 of 2)

After studying this lesson, you will be able to

- **describe** how poor nutrition can impact health.
- **determine** steps to take to make healthy food choices.

Guidelines for Forming a Healthy Eating Pattern

- The ***Dietary Guidelines*** provides recommendations for forming healthy eating patterns that will promote health, reduce risk of chronic disease, and meet nutritional needs
- Recommends **nutrient-dense foods**
 - Provide vitamins and minerals, and other health-promoting components
 - Little or no saturated fats, added sugars, or sodium

Think About It...Your Favorite Food

- Think about your favorite food to eat.

Is this food rich in needed nutrients?

Is this food packed with solid fats, added sugars, refined starches, or sodium?

Is this food nutrient-dense?

Dietary Guidelines

Key Concepts Promoted by the *Dietary Guidelines*

- 1 Follow a healthy dietary pattern at every life stage.
- 2 Customize and enjoy nutrient-dense food and beverage choices to reflect personal preferences, cultural traditions, and budgetary considerations.
- 3 Focus on meeting food group needs with nutrient-dense foods and beverages, and stay within calorie limits.
- 4 Limit foods and beverages higher in added sugars, saturated fat, and sodium.

MyPlate Food Guidance System

- To help put the *Dietary Guidelines* into practice, you can use the **MyPlate food guidance system**
- Proportion of different foods you should eat in a meal



Courtesy of the United States Department of Agriculture

Food Groups

Fruits

- Good sources of fiber, vitamins, and minerals
- Fresh, frozen, canned, and dried fruits, and fruit juices

Grains

- Provide carbohydrates, vitamins and minerals, and some amino acids
- Whole grains and refined grains

Vegetables

- Important sources of nutrients and vitamins, and nutrient-dense
- Fresh, frozen, canned, dried, raw, cooked, whole, cut up, or juiced

Dairy

- Good sources of calcium, potassium, proteins, and sometimes vitamin D
- Milk products and lactose-free

Protein Foods

- Vitamins, minerals, fats, and fiber
- Meat, poultry, seafood, beans and peas, eggs, processed soy products, and nuts and seeds

Oils

- Not a food group but provide essential nutrients
- Unsaturated fats that come from fish, avocados, nuts, olives, etc.

Recommended Amounts

- MyPlate Daily Checklist
 - Outlines the amounts you should consume from each food group
 - Provides information to help you choose nutrient-dense foods
 - Affected by your age, sex, height, weight, and level of physical activity

Nutrition for People Who Are Pregnant

- Special nutritional needs that must be met for their own health and the health of the baby they are carrying
 - Avoid seafood high in mercury
 - Limit canned white tuna (albacore) to less than six ounces per week

Poor Nutrition

- **Malnutrition** results from not eating the right amounts of nutrients
- **Undernutrition** is not taking in enough nutrients for health and growth
- **Overnutrition** is consuming too much of certain nutrients or too many foods with high amounts of

added
sugar

solid
fat

sodium

refined
grains

calories

Think About It...Undernutrition and Overnutrition

- Can a person experience **undernutrition** and **overnutrition** at the same time?



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Skills Check: Making Healthy Food Choices



Choose
nutrient-dense
foods

Limit
added sugars,
saturated fats,
and sodium

Eat
breakfast
every day

Understand
nutrition
facts and
food labels

Think about
calories

Eat healthy
meals away
from home

Analyze
influences on
food choices

Prepare
nutritious
foods

Practice
food safety

Making Healthier Food Choices

- Eat more fruits and vegetables
- Choose whole fruits and vegetables more often than fruit and vegetable juices or sauces
- Make at least one-half of the grains you consume whole grains
- Avoid empty calories from foods that are high in added sugars and added fats

Understanding Nutrition Facts and Food Labels

- *Nutrition Facts labels* are included on every food sold in a package, and include
 - serving size
 - calories per serving
 - nutrients in each serving
 - how much of the recommended daily value of the nutrient is in each serving

Factors That Influence Food Preferences

Internal Factors

Genetics

Genes may influence people's preferences for different foods

Age

Food preferences change as people get older

Feelings and Thoughts

People experiencing negative feelings and thoughts tend to consume more comfort foods

External Factors

Cultural Background

People in different cultures prefer different foods and tastes

Social Environment

Advertisements online or on television, as well as your friends, can make you desire certain foods over others

Skills Check: Practice Food Safety



- Wash hands with hot, soapy water for at least 20 seconds before and after handling food
- Wash cooking equipment, utensils, and surfaces with hot, soapy water after each use
- Cook foods to the appropriate temperature, keep hot foods above 140°F and cold foods below 40°F
- Prepare and store foods properly

Lesson 7.2 Review

- True or false? A food high in protein and added sugars is nutrient dense.
 - false
- What are the five MyPlate food groups?
 - fruits, vegetables, grains, protein, dairy
- People who experience _____ take in too few nutrients for health and growth.
 - undernutrition

Lesson

7.3

Managing Your Weight

7.3 Learning Outcomes

After studying this lesson, you will be able to

- **describe** ways to determine ideal body weight.
- **explain** how weight affects a person's health.
- **identify** healthy weight-management strategies.

What Is a Healthy Weight?

- Your healthy weight range depends on



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Body Composition

- **Body composition** is the ratio of the various components—fat, bone, and muscle—that make up your body
- Factors that influence body composition include
 - Genetics—amount of body fat and where it is located
 - Eating patterns—amount and types of food you eat
 - Physical activity—what types of activities you do and how long you spend doing them

Body Mass Index (BMI)

- **Body mass index (BMI)** is a tool for assessing an individual's weight status, and is based on weight, height, age, and sex
- **Overweight** means having, for a particular height, excess body weight from fat, bone, muscle, water, or a combination of these
- Having excess body fat or excessive overweight is called **obesity**
- If a person has a body weight that is too low compared with others of the same sex and age, this is **underweight**

Body-Fat Distribution

- The location of fat deposits on your body is **body-fat distribution**

People with apple-shaped figures tend to store extra fat around their waist, or abdomen, and chest.



People with pear-shaped figures tend to store extra fat in their lower bodies around their hips, buttocks, and legs.



Body shapes: Inspiring/Shutterstock.com; Apple: Fine Art/Shutterstock.com; Pear: Arcady/Shutterstock.com

How Does Weight Affect Your Health?

- Consequences of experiencing underweight include
 - skin, hair, or teeth conditions
 - feeling tired more often
 - more likely to get sick
- Consequences of experiencing overweight or obesity include
 - increased risk of heart disease, high blood pressure, high cholesterol, and type 2 diabetes
 - respiratory, sleep, and joint conditions

Skills Check: Healthy Weight Management



- Strategies for healthy weight management
 - Set and reward realistic goals
 - Limit screen time
 - Think positively
 - Avoid unhealthy strategies such as **fad diets**
 - Eat mindfully and monitor eating
 - Enlist support

Infographic Discussion

What can you do today to improve your healthy weight journey?



Board game: Ekaterina/Shutterstock.com; Pieces: Jslavy/Shutterstock.com; Dice: d-e-n-i-s/Shutterstock.com; Award: Classica2/Shutterstock.com

Strategies to Practice Eating Mindfully

- Appreciate your food
- Portion out snacks instead of eating straight from the bag or box
- Take small bites so you can better savor the different flavors and tastes
- Do not skip meals

Support Systems for Weight Management

Counseling and Psychotherapy Services

Patient-Led Groups

Continuing support and encouragement
Most effective when used as a supplement

Commercial Groups

Many programs available in communities
and online
May offer support services such as workshops,
meetings, and online tools

Other Community Resources

Educational services in nutrition
Hospital staff dieticians

Family Support

Participating in the program(s) and making
changes in food and eating patterns together

Online Services

Support and commercial groups' websites, social
media groups, mobile apps

Physical Activity Support Services

Classes offered at the gym, personal trainers,
weight management workout plans, fitness groups

Lesson 7.3 Review (1 of 2)

- Your body composition is the ratio of fat, bone, and _____.
 - muscle
- One of the most common health conditions associated with obesity is _____ diabetes.
 - type 2

Lesson 7.3 Review (2 of 2)

- True or false? Changing habits immediately is more likely to ensure the habits become permanent.
 - false
- Which weight-loss strategy forbids eating certain types of foods?
 - fad diets

Lesson

7.4

Having a Healthy Body Image

7.4 Learning Outcomes (1 of 2)

After studying this lesson, you will be able to

- **compare and contrast** positive and negative body image.
- **identify** several factors that can influence a person's body image.
- **explain** the difference between disordered eating and an eating disorder.

7.4 Learning Outcomes (2 of 2)

After studying this lesson, you will be able to

- **describe** causes, consequences, and signs of and approaches for treating eating disorders and disordered eating.
- **demonstrate** skills for improving body image.

Body Image

- Your thoughts and feelings about how you look make up your **body image**
 - Does not describe what your body actually looks like
 - People with positive body image appreciate and value their bodies



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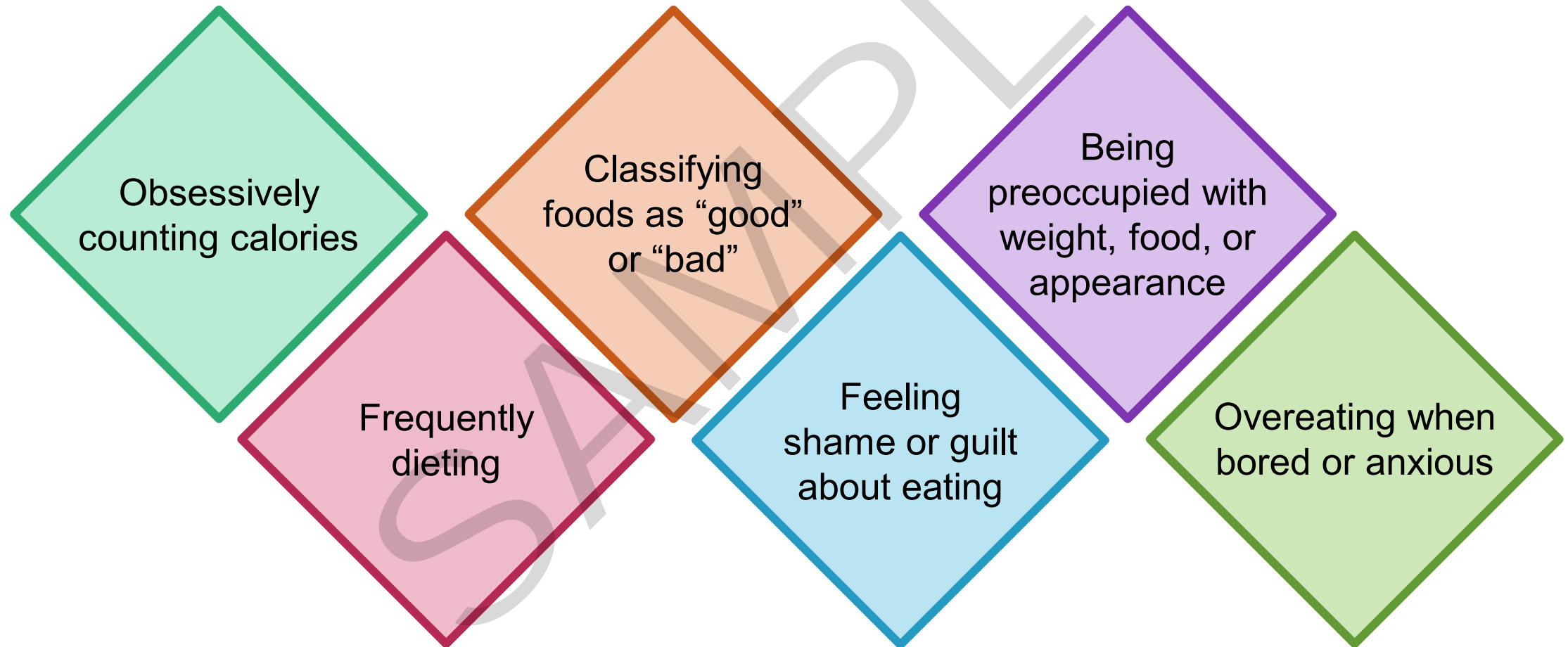
Factors Affecting Body Image

- Social environment, including the relationships in your life
- Unrealistic standards in media and society
 - Female bodies: standards for weight, figure, clear skin, little body hair, and perfectly styled hair, leads to **weight stigma**
 - Male bodies: standards for height, figure, clear skin, and full facial hair
- Race and ethnicity
- Athletic activities

Disordered Eating

- **Disordered eating** refers to irregular eating habits that show an unhealthy relationship with body image and food
- Consequences of disordered eating may include
 - development of nutritional deficits
 - lack of energy
 - development into an eating disorder if continued

Examples of Disordered Eating



Eating Disorders

- A mental illness that causes major disturbances in a person's eating behaviors is an **eating disorder**
- Risk factors for disordered eating and eating disorders include
 - Physical: close relative with another mental illness, history of dieting
 - Mental: anxiety disorder, *perfectionism*, rigidity in following rules, negative body image
 - Media: unrealistic portrayals, lack of respect for diversity, weight stigma
 - Social: bullying, teasing, social isolation, history of trauma

Types of Eating Disorders

Types of Eating Disorders

Eating Disorder	Description
Anorexia nervosa	Characterized by severely restricted eating behaviors, intense body dissatisfaction, and low body weight. <i>Atypical anorexia nervosa</i> has the same health concerns except low body weight and is more common than anorexia nervosa.
Avoidant-restrictive food intake disorder (ARFID)	Characterized by severely restricted eating behaviors without intense body dissatisfaction.
Binge-eating disorder	Characterized by repeated episodes of <i>bingeing</i> (consuming large amounts of food quickly and feeling out of control).
Bulimia nervosa	Characterized by repeated episodes of <i>bingeing</i> and <i>purging</i> (vomiting or using other methods to rid the body of food consumed).
Otherwise specified feeding or eating disorder (OSFED)	Includes eating behaviors that cause great distress, without meeting criteria for other eating disorders. Examples of OSFEDs are atypical anorexia nervosa, binge-eating disorder and bulimia nervosa of low frequency or duration, purging disorder (purging without binge-eating), and night eating syndrome (frequent episodes of eating at night).

Health Consequences of Disordered Eating and Eating Disorders

- Physical consequences include malnutrition and harmful behaviors
 - Malnutrition can lead to low bone density, dry skin, thin hair, brittle nails, weaker immune system, *anemia*, heart damage, heart failure, and death
 - Some eating disorders are characterized by **purging**, or attempts to rid the body of food
- Mental and social consequences include conflict in relationships, withdrawal from activities, and worsening mental health conditions

Treating Eating Disorders and Disordered Eating

- Eating disorders and disordered eating behaviors rarely go away without treatment
- Eating disorders are mental illnesses and should be treated by a multidisciplinary team of professionals
- It is important to take warning signs seriously
- Start the process of getting help by talking to a trusted adult or contacting the National Eating Disorders Association Helpline (1-800-931-2237 or myneda.org/helpline)

Strategies for Improving Your Body Image

- Ask yourself if images of bodies you see in the media reflect reality
- Focus on **body neutrality**—what your body can *do*, not just your appearance
- Acknowledge diversity and practice **body positivity**—appreciating and valuing your body
- Check your self-talk and develop **body compassion**—feelings of acceptance, care, and kindness toward your body
- Avoid negative influences and advocate for positive body image

Skills Check: Change Your Self-Talk



Negative Self-Talk

Body Compassion

I'll never look like influencers on social media.

This is the body I was born with, and it's attractive too.

I hate my body.

My favorite thing about my body today is my hair.

I look bad in these photos with my friends.

I look happy and loved, and that's what matters!

Negative Self-Talk

Body Compassion

My legs look gross.

I love my legs for taking me where I want to go on my bike.

This pimple makes me look like such a loser.

My skin will not always be perfect. Acne is totally normal.

I'm getting so fat!

It's natural for my body to grow as I get older.

Lesson 7.4 Review

- True or false? A person's race or ethnicity can influence the way they think about body image.
 - true
- Which eating disorder is associated with an intense body dissatisfaction?
 - anorexia nervosa