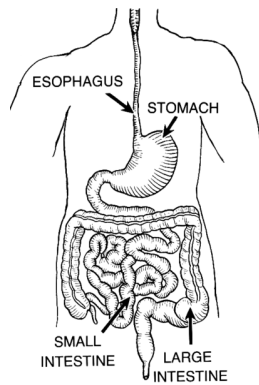


Sept 27, 2019

- The Digestive Process

Warm-Up

It takes approximately hours for **food** to entirely digest.



List Organs in order
that are involved in
digestion

mouth
tongue
teeth
throat (pharynx)
epiglottis
esophagus
stomach

liver gallbladder
pancreas

small intestine
large intestine
rectum
anus

Nutrition Facts

Serving Size 1 cup (8 fl oz) (265g)

Amount Per Serving

Calories 228 Calories from Fat 77

% Daily Value*

Total Fat 9g 13%

Saturated Fat 5g 24%

Trans Fat

Cholesterol 29mg 10%

Sodium 191mg 8%

Total Carbohydrate 28g 9%

Dietary Fiber 0g 0%

Sugars 22g

Protein 10g

Vitamin A 50% • Vitamin C 46%

Calcium 33% • Iron 20%

*Percent Daily Values are based on a 2,000 calorie diet.
Your daily values may be higher or lower depending on your calorie needs.

NutritionData.com



Nutrients are substances the body needs for energy, building materials, and control of body processes.

- Examples of Nutrients include:

- 1) sugars (carbohydrates)
- 2) fats (lipids)
- 3) proteins
- 4) vitamins
- 5) minerals
- 6) water

recall this from the wellness unit

- Sugars, fats, and proteins must be broken down into smaller, usable forms.

Chapter 5 DIGESTION



Digestion is the breakdown of foods into smaller components, which can be used by the body.

Two types of digestion

- Mechanical- physically breaking down food (large pieces are broken into smaller ones). It does not change the actual substances in the food
- Occurs in the mouth and stomach

i.e. chewing and grinding



- Chemical- food molecules are broken down into their chemical components
 - > Occurs mainly in the small intestine.

i.e. potatoes contain starches that as you chew are broken down into smaller sugars like glucose that are used by the body



chemicals called **enzymes** help with the chemical digestion of food. They speed up the digestion of food they combine with the large molecules in food and break them into smaller molecules.

Enzymes are very specific and can only break down one specific kind of food molecule.

i.e. enzymes that break down fat have no effect on carbohydrates.

Salivary amylase Carbohydrate
mouth

Enzyme	What is digests	Where it is made
Amylase	carbohydrates	pancreas
Trypsin	proteins	pancreas
Lipase	lipids	pancreas, small intestine
Maltase	carbohydrates	small intestine
Peptidase	proteins	small intestine

pepsinogen proteins Stomach

Globe Biology Text
Questions pg 363 #1, 2, 3

Think and Discuss p. 363

1. What is the function of enzymes?

Enzymes function to speed up the digestion process. Enzymers are part of the chemical digestion of food.

2. What is the difference between mechanical digestion and chemical digestion?

Mechanical digestion is the physical breakdown of food, where as chemical digestion uses chemicals like enzymes to break the food down.

3. Why must food undergo chemical digestion before it can be used by the body?

Because the particles are too large to be digested if they are not broken down first into their individual components.