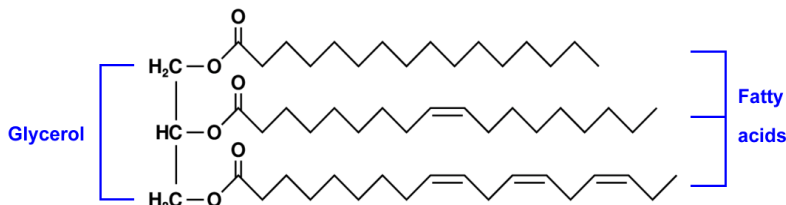


Vocabulary: Digestive System



Vocabulary

- **Absorption** – the taking in of one substance by another.
 - In the *digestive system*, absorption refers to the passage of *nutrients* and water through the walls of the small and large intestines.
- **Amino acid** – an organic molecule containing a carboxyl and an amino group.
 - Amino acids combine in long folded chains to form *proteins*.
 - Proteins must be broken down into amino acids before they can be absorbed.
- **Carbohydrate** – organic molecules containing hydrogen, carbon, and oxygen.
 - Carbohydrates are a major source of energy in the diet.
- **Chemical digestion** – chemical breakdown of nutrients through the action of *enzymes* and other substances.
- **Chyme** – a thick liquid of partially digested food produced by the stomach.
- **Complex carbohydrate** – a long carbohydrate molecule formed by chains of *sugars*.
 - Complex carbohydrates are also called polysaccharides.
 - Examples of complex carbohydrates are *starch*, glycogen, and cellulose (fiber).
- **Digestion** – the breakdown of food into simpler components that can be absorbed and used by the body.
- **Digestive system** – a group of organs that work together to break down and absorb nutrients from food, as well as eliminate the resulting wastes.
- **Elimination** – the process by which wastes are removed from the body.
- **Enzyme** – a molecule, usually a protein, which catalyzes a chemical reaction.
 - Digestive enzymes break down nutrients into simpler chemicals.
- **Fat** – organic molecule consisting of three *fatty acids* attached to a glycerol “backbone.”



- Fats are used to maintain healthy skin and hair, as insulation against cold weather, as an essential component of cells, and as a source of energy.

- Fatty acid – a component of a fat molecule, along with glycerol.
 - Fats must be broken down into fatty acids and *monoglycerides* before absorption.
- Fiber – plant material in food that is difficult to digest.
 - Fiber helps food move smoothly through the digestive system.
 - Fiber is classified as *soluble* and *insoluble*.
 - Soluble fiber is digested by bacteria in the large intestine. The resulting Calories are absorbed through the walls of the large intestine.
 - Insoluble fiber passes through the digestive system without breaking down.
- Food calorie – a unit used to measure the energy in foods.
 - The food calorie (Cal) is equal to 1,000 gram calories (cal).
 - Food calories are known as kilocalories (kcal) in many parts of the world.
- Mechanical digestion – physical breakdown of foods.
 - Examples of mechanical digestion include chewing in the mouth, churning in the stomach, and emulsification of fats by bile.
- Monoglyceride – a molecule that results from the breakdown of fats, consisting of a fatty acid attached to the glycerol backbone.
- Nutrient – a substance that is used by the body for energy, growth, or other processes essential to life.
- Peristalsis – wavelike muscle contractions that push food through the digestive system.
- Protein – an organic molecule consisting of a long chain of amino acids folded into a particular shape.
 - Proteins are essential building blocks of muscles, skin, bone, hair, and most other body structures.
 - Enzymes are proteins that help digest foods.
- Starch – a common complex carbohydrate used as a source of energy.
- Sugar – a simple carbohydrate that may be a *monosaccharide* or a *disaccharide*.
 - Monosaccharides consist of single carbohydrate units.
 - Glucose and fructose are examples of monosaccharides.
 - Disaccharides consist of two linked carbohydrate units.
 - Sucrose and lactose are examples of disaccharides.
- Villus – tiny, finger-like projection in the wall of the small intestine.
 - Nutrients and water are absorbed through the thin walls of the villi.

