

The Human Digestive System

The digestive system

- There are Four Stages of Food Processing:
 - _____ — the taking in of food (eating)
 - _____ — the breakdown of food
 - _____ — the taking up of nutrients
 - _____ — the removal of waste materials from the body
- For absorption to occur, food has to be broken down into smaller _____ first. This occurs through 2 types of transformations:
 - _____ transformation: the nature of the substance remains the same, only its _____ appearance changes
 - Ex: Chewing
 - _____ transformation: the bonds of the molecules are broken, giving rise to a _____
 - Ex: Acids in the stomach breaking down food
- _____: A long passageway of organs, also called the alimentary canal
 - Includes:
 - _____
 - _____
 - _____
 - _____
 - _____
 - _____
- _____: The associated glands that secrete _____ that help break food down.
 - Includes:
 - _____ glands
 - Gastric glands
 - _____ glands
 - Pancreas
 - _____

Parts of the Digestive Tract

Part	Description
Mouth	<ul style="list-style-type: none"> • _____: Mechanically break down food • _____: Tastes and manipulates food • _____: flap hanging from the back of the throat • _____: Chemical Digestion of carbohydrates
Pharynx	<ul style="list-style-type: none"> • Passageway for _____ and _____. • _____: closes airway when food is swallowed
Esophagus	<ul style="list-style-type: none"> • Muscular tube _____ pharynx to stomach. • Moves food by means of _____: sequential contractions of muscles
Stomach	<ul style="list-style-type: none"> • _____ bag • Grinds food and mixes it with _____ and _____. • _____: partially digested food with the consistency of cottage cheese. • _____ control the entrance and exit of food.
Small Intestine	<ul style="list-style-type: none"> • Major site of _____ and _____ of food. • _____ tube covered in _____ (folds in the intestinal layer) which increase the _____ for absorption of nutrients.
Large Intestine	<ul style="list-style-type: none"> • Muscular tube with a smooth _____ lining. • Major site of _____ absorption. • _____: stores feces until then can be excreted from the _____.

Glands of the digestive system

Gland	Description
Salivary Glands	<ul style="list-style-type: none"> • Secretes saliva which _____ the "bolus" (mashed food) • Contains the enzyme _____ which starts the chemical digestion of _____.
Gastric Glands	<ul style="list-style-type: none"> • Line the inside of the _____ • Secrete gastric juices that contains _____ and _____ which starts the chemical digestion of _____.
Intestinal Glands	<ul style="list-style-type: none"> • Line the _____ • Secrete _____ which contains enzymes that chemically digest _____, _____ and _____. • Also _____ the acid from the stomach.
Pancreas	<ul style="list-style-type: none"> • Secretes _____ into the small intestine which contains enzymes that chemically digest _____, _____ and _____. • Secretes the hormone _____ which regulates blood sugar levels.
Liver	<ul style="list-style-type: none"> • Produces _____ which helps digest fats by _____ separating fat molecules. • Some Bile is stored in the _____

Chemical vs Mechanical Digestion

Part	Chemical Digestion	Mechanical Digestion
Mouth		
Pharynx		
Esophagus		
Stomach		
Small intestine		
Pancreas		
Liver		
Large Intestine		

What do we absorb?

Nutrient	Final Product	Site of Absorption
Carbohydrates		
Proteins		
Fats		
Water		