

Digestive System - also called the gastrointestinal tract or GI tract (25 – 40ft long, and takes 24 -72 hours depending on the food type)

1. **Digestion**: The process of breaking food down into usable energy.
2. **Mechanical Breakdown**: type found in ***mastication*** (*chewing*), physical break down of food into smaller pieces.
3. **Chemical Breakdown**: uses chemicals known as digestive enzymes to breakdown food to its chemical parts.
4. **Alimentary canal**: digestive tube that extends from the mouth to the anus.
5. ***Mouth**: where food enters the body and digestion begins
6. ***Teeth**: The first step in mechanical digestion. Rips, Tears, and crushes the food
7. ***Salivary Glands**: Send secretions (enzymes) to food to begin changing starches into usable sugars. (cracker experiment.)
8. ***Saliva**: Liquid produced from the salivary glands responsible for lubricating the mouth and softening food.
9. **Enzymes**: Secretions from the salivary glands that contain amylase which is responsible for breaking down starches into sugars.
10. **Amylase**: the enzyme responsible for converting starches to sugars. (found in saliva)
11. **Papain**: an enzyme which is found naturally in unripe papayas & used in meat tenderizers because it helps break down the tough bands between fibers in muscle tissue, making tough meats fall apart during the cooking process.
12. ***Tongue**: Responsible for moving food around and aiming it toward the back of the mouth to be swallowed.
13. ***Esophagus**: Tube that starts at the back of the mouth and connects with the stomach.
14. **Peristalsis**: Muscular wave-like movements that move food throughout the alimentary canal.
15. ***Stomach**: An expandable saclike enlargement of the alimentary canal that stores food while it is churned and broken down with digestive juices.
16. **Chyme**: The liquid to pudding like material (used to be food) leaving the stomach and entering the small intestine
17. ***Pancreas**: Organ that aids in digestion by secreting pancreatic juices to break down food.
18. ***Liver**: Organ that detoxifies the body, produces Bile to aid in digestion, breaks down old blood cells, monitors cholesterol levels, and is the only organ that can regenerate (25% can re-grow into a full liver)
19. **Bile**: Dark green to yellowish-brown fluid Made in the liver and stored in the gall bladder, used in the digestion and absorption of lipids or (fats)
20. ***Gall bladder**: Stores and releases bile
21. ***Small intestine**: Organ in the digestive system that is responsible for absorbing nutrients (95%) and moving them into the blood stream toward the liver and then on to the body.
 - a. **Total size 1inch wide, male~ 22.5 ft, female ~23.5 ft.** (3 parts: ***Duodenum*** (first 10-15 inches), ***Jejunum*** (second section 6-8 feet), ***Ileum*** (third section 6-12 ft) the ileum is the section connected to the umbilical cord during development.)
22. ***Villi**: Microscopic, finger-like projections that contain tiny blood vessels which absorb nutrients into the blood stream.
23. ***Large intestine**: Organ that absorbs water leaving more solid material that the body cannot use. It is also known as the “colon”
 - a. **Total size 4-6 ft long, ~3 inches wide.** (5 parts) ***Cecum*** (the area where the chyme enters the large intestine), ***Ascending*** (first section going up the right side), ***Transverse*** (second section running from right to left), ***Descending*** (third section running down the left side toward the rectum), ***sigmoid colon*** (where the descending colon and the rectum meet)
24. ****Appendix**: an organ that is located at the opening to the large intestine, it no longer performs any function in the body and is therefore referred to as a *vestigial* (leftover or *functionless*) organ
25. ***Rectum**: The lowest part of the large intestine. Solid waste is held here before
26. ***Anus**: Opening through which waste (feces) leaves the body