

Digestion Guided Notes

Digestion: process of _____ food into smaller, usable materials.

1. The body needs _____ and _____
 - a. Need food for _____
 - b. Need materials from _____
 - i. Those materials are called _____
2. Nutrients include:
 - a. _____: no nutritional value but needed for bodily functions
 - b. _____: building blocks, used for cell growth and repair (muscles, bones, skins)
 - c. _____: provide cells with energy (this is the glucose we use in respiration)
 - d. _____: stores energy
3. The digestive system moves and breaks down food
 - a. _____: moves food through the digestive system (contractions to push through)
 - i. Why we can swallow while on our heads

Mechanical digestion

- a. _____ breaking food into smaller pieces
- b. stomach breaks food by _____ and _____

Chemical digestion

- c. changes the _____ composition of food in mouth

Materials are broken down as they move through the digestive tract

- a. **Mouth:** both _____ and _____ digestion (teeth, saliva)
- b. **Esophagus:** muscle contractions of peristalsis move food from throat to stomach
- c. _____: both mechanical and chemical
 - i. strong muscles here mix and mash food into smaller parts
 - ii. hydrochloric acid (HCL) breaks down food _____
 1. acid could eat through stomach but we have a lining that is replaced every 3 days
 - iii. _____ also have some _____ of nutrients here

- d. **small intestine:** _____ food moves from stomach to SI
- i. most of the nutrients made available during digestion are absorbed in the _____
 - ii. structures called _____ found here, they contain folds that absorb the nutrients.
 1. Once absorbed by the villi, nutrients are absorbed by the circulatory system (talk about that later in year)
- e. **Large Intestine:** _____ and some other nutrients are absorbed here
- i. Most of the material left after water removed is _____ and moves to the rectum

Other organs in the DS

3 main organs that are part of DS but food does not pass through. Instead these aid in chemical digestion.

1. Liver
 - a. Largest internal organ in body
 - b. Located just above the stomach
 - c. Filters bloods, cleaning out toxins
 - d. Stores unneeded nutrients for later use
 - e. Produces a chemical called BILE
 - i. Bile breaks down fats
 - f. Produces important proteins, one example is a protein that helps blood clot
2. Gallbladder
 - a. Tiny pear shaped sac connected to the liver
 - b. Bile produced in the liver is stored in the GB
 - c. Bile then secreted by the GB into the small intestines
3. Pancreas
 - a. Located between stomach and small intestine
 - b. Produces chemicals that help break food down
 - i. Quickly lowers acid in small intestines and breaks down fats, proteins, and carbs.
 - ii. Without the pancreas and the chemicals it produces you would die even if you ate all the food you wanted.
 1. MUST have chemicals from pancreas for nutrients to be processed and absorbed.