



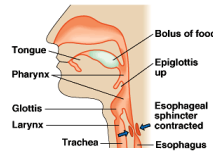
Different diets; different lives

• All animals eat other organisms


| eat mainly _____ | eat other _____ | eat _____ & _____ |
|---|---|---|
| Example: •Gorillas, cows, rabbits, snails | •Sharks, hawks, spiders, snakes | •Cockroaches, bears, raccoons, humans •Humans evolved as hunters, scavengers & gatherers |
| Digestive System Length: | | |
| WHY? | | |
|  |  | |

Mouth

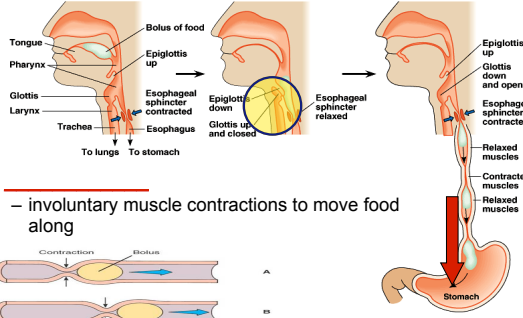
- **Functions**
 - **digestion**
 - - break up food
 - **digestion (saliva)**
 - amylase
 - **digests starch**
 - mucus
 - protects soft lining of digestive system
 - lubricates food for easier swallowing



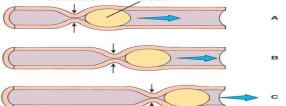
All that in spit!



Swallowing (& not choking)

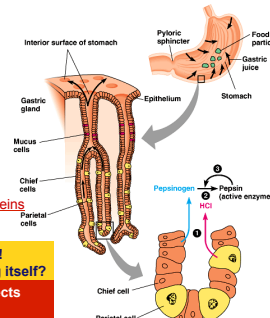


- - involuntary muscle contractions to move food along



Stomach

- **Functions**
 - can stretch to fit ~2L food
 - food**
 - HCl = pH 2
 - kills bacteria
 - digestion**
 - pepsin
 - enzyme breaks down proteins

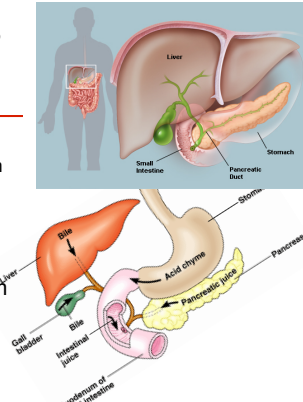


But the stomach is made out of protein! What stops the stomach from digesting itself? mucus secreted by stomach cells protects stomach lining

Pancreas

Functions:

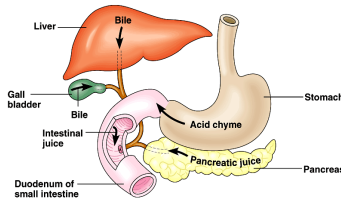
- Digestive
 - digest
 - trypsin, chymotrypsin
 - digest
 - Amylase
- Neutralizes acid from stomach



Liver

- **Function**
 - produces
 - bile stored in gallbladder until needed
 - breaks up fats
 - act like detergents to breakup fats


bile contains colors from old red blood cells collected in liver = iron in RBC rusts & makes feces brown



Small Intestine

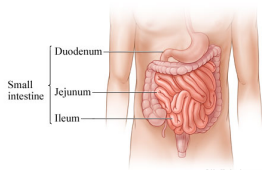
FUNCTION:

1. Most _____ digestion takes place here.
2. Simple _____ and _____ are _____ into the inner lining.
3. _____ acids and _____ go to lymphatic system.
4. Lined with _____, which increase surface area for absorption, one cell thick.



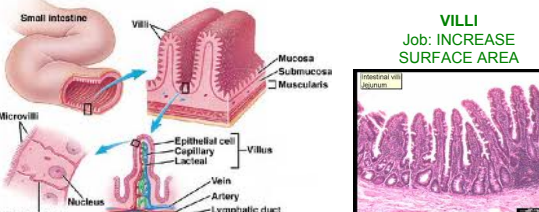
Small Intestine

- Structure
 - 3 sections
 - _____ = most digestion
 - _____ = absorption of nutrients & water
 - _____ = absorption of nutrients & water



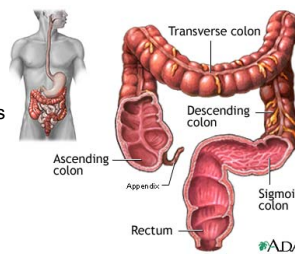
Absorption by Small Intestines

- Absorption through villi & microvilli
 - finger-like projections
 - increase _____ for absorption



Large Intestines (colon)

- Function
 - re-absorb water
 - use ~9 liters of water every day in digestive juices
 - > 90% of water reabsorbed
 - not enough water absorbed
 - » diarrhea
 - too much water absorbed
 - » constipation



BACTERIA


- Living in the large intestine is a community of helpful bacteria
 - Escherichia coli (E. coli)
 - produce vitamins
 - vitamin K, B vitamins

Friendly Bacteria

L. acidophilus, L. salivarius, L. casei, L. thermophilus, B. bifidum, B. longum, etc.

Unfriendly Bacteria

Pathogenic bacteria & fungi, such as *Candida albicans*, etc.



Rectum

- Last section of colon (large intestines)
 - eliminate feces
 - undigested materials
 - extracellular waste
 - » mainly cellulose from plants
 - » roughage or fiber
 - masses of bacteria

