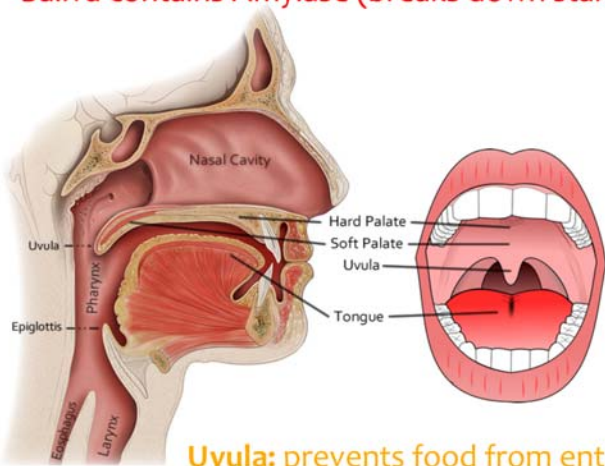
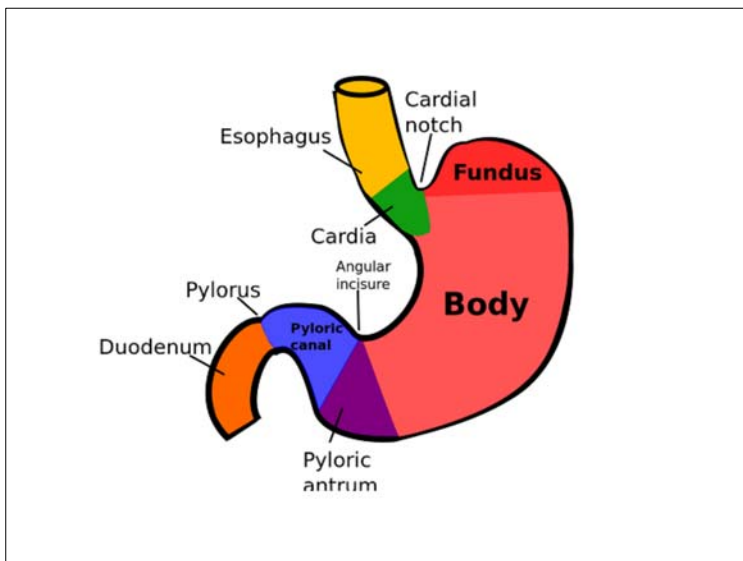
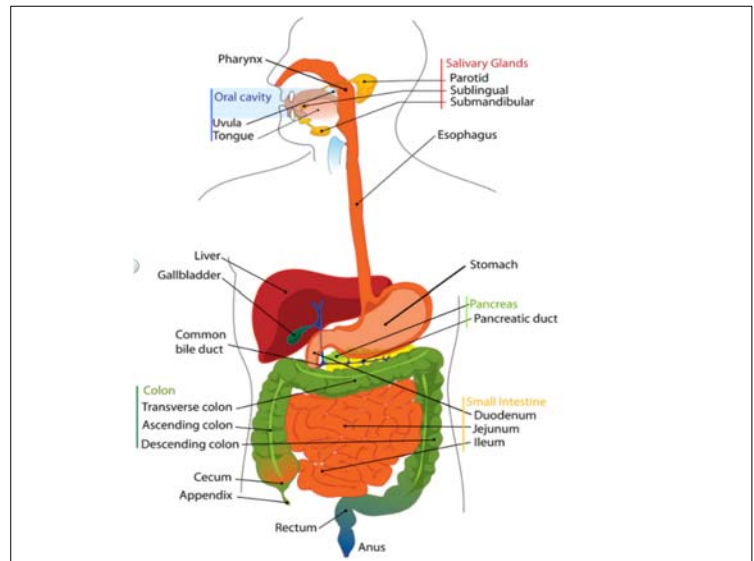


Saliva contains Amylase (breaks down starch)



Uvula: prevents food from entering nasal cavity; Vocals, produces saliva



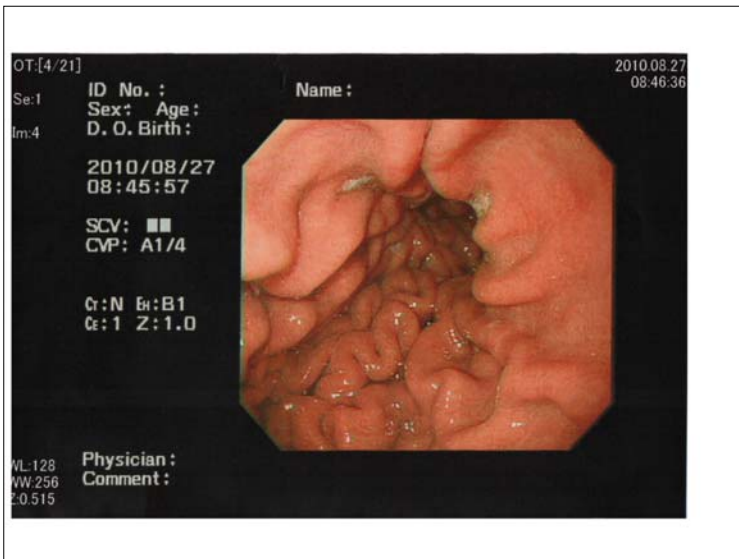
**Bolus:** small round ball of food; covered in saliva (from mouth to esophagus)



**Peristalsis:** wave-like movement of digestion

(folds; allow for expansion)

**Chyme:** semifluid mass of partly digested food expelled by the stomach into the duodenum.



### Small Intestine:

**Duodenum:**

- neutralizes the acidic gastric juice
- mechanical processing and digestion of chyme.
- mixing bile and pancreatic enzymes.
- absorbs water, electrolytes and nutrients

**Jejunum:**

- Most of the food absorption is done in this part of the digestive tract.
- Simple sugars, water soluble vitamins (except vitamin C and some Bs) and amino acids made from the food is passed from the villi into the blood stream

**Ileum:**

- absorbs vitamin B12 and bile salts and whatever products of digestion that were not absorbed by the jejunum
- Secretes protease and carbohydrase enzymes responsible for the final stages of protein and carbohydrate digestion into the lumen of the intestine

About 30% of the weight of feces is bacteria. These bacteria are "good" bacteria and billions of them live in your colon all the time. They make vitamin K and B12 which is absorbed by the colon wall, break down amino acids and make nitrogen, live off of fiber which makes gas. These bacteria are harmless as long as they don't spread to the rest of your body.

The undigestible food waste passes to the **large intestine** where the fluids and salts are absorbed.

The **colon** soaks up to 50 fluid ounces of water/day

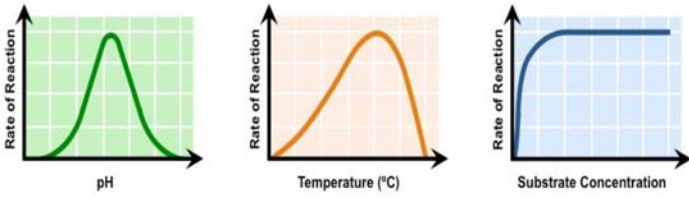
**The anus has voluntary and involuntary sphincter muscles which can tell the difference between gas and solid contents.**

**Liver:** Produces bile (yellowish-green fluid) which aids in the digestion and absorption of fats. It also stores glucose, iron and vitamins A, B12, D

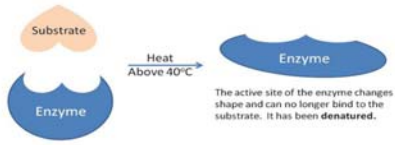
**Gallbladder:** Stores bile produced by the liver and release it into the duodenum when food that contains fat needs to be broken down and absorbed

**Pancreas:** Secretes pancreatic enzymes amylase and lipase which pass through the pancreatic duct into the small intestine (the duodenum)

### FACTORS THAT AFFECT ENZYME ACTIVITY:



What happens when factors exceed enzyme range?



**ENZYME DENATURES**