



# The Digestive System

## Accessory Organs

### Chapter 14

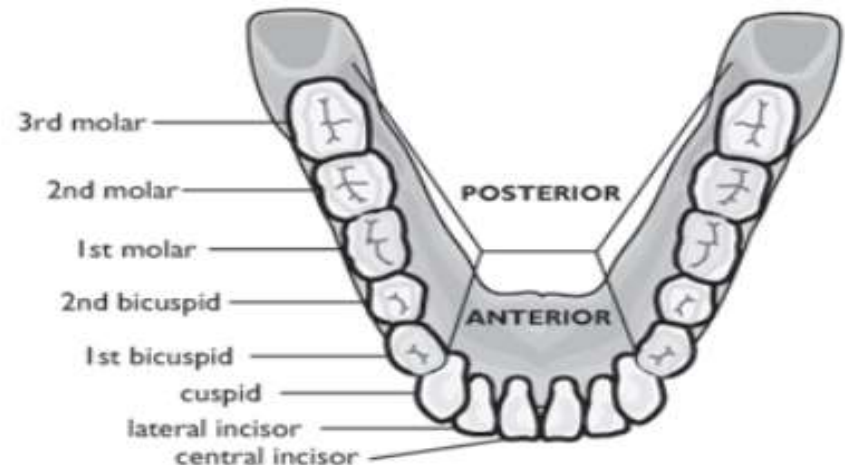
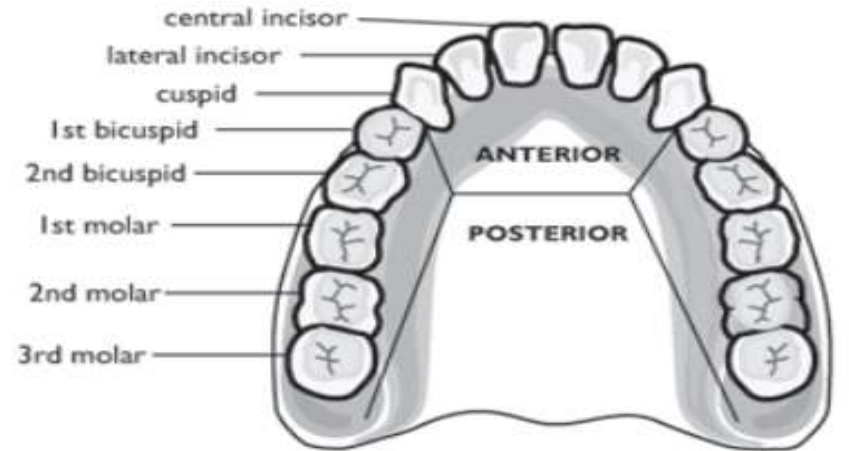
Photo Credit:

[science.nationalgeographic.com](http://science.nationalgeographic.com)

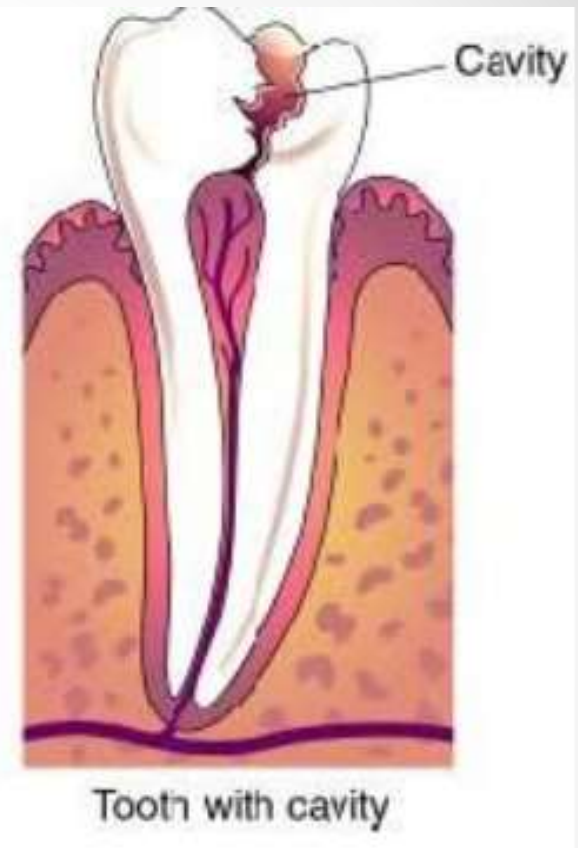
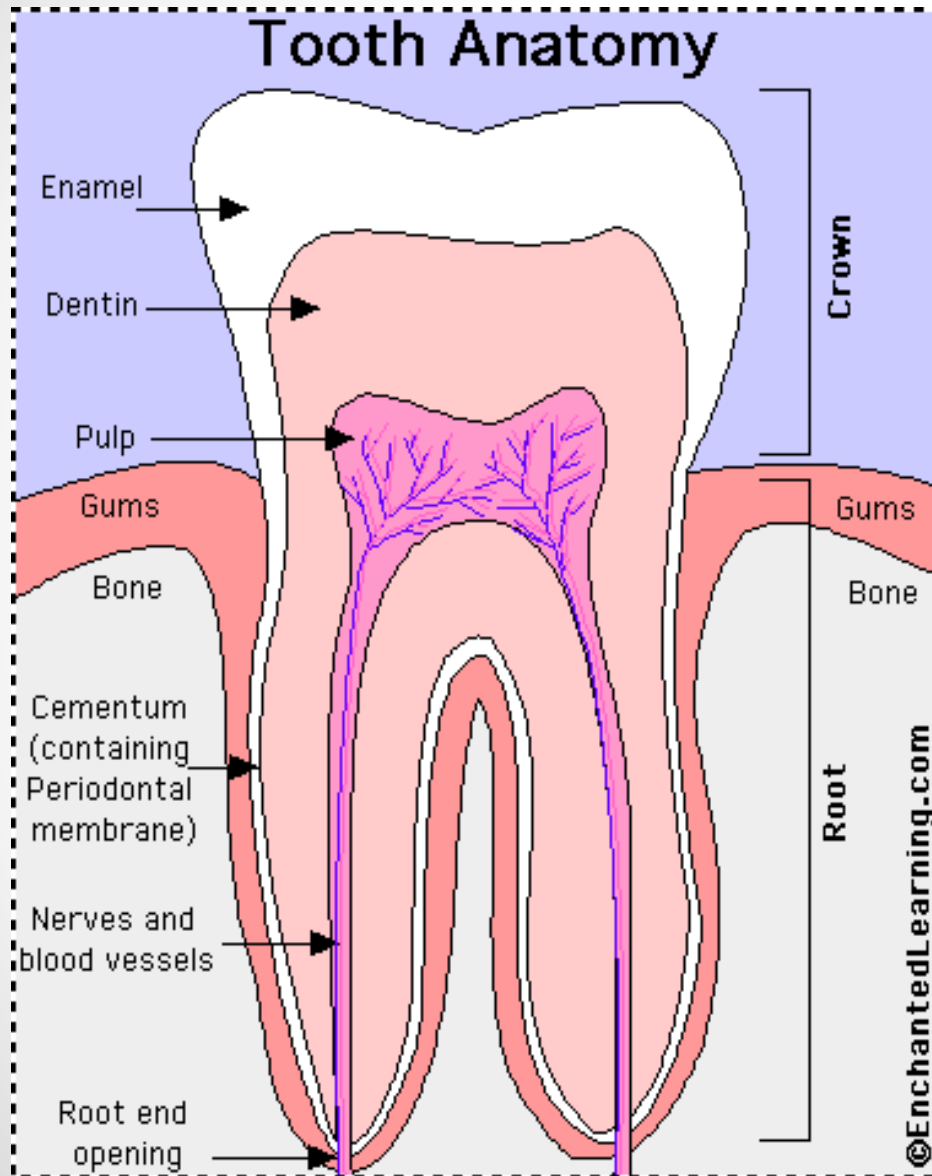
# Teeth

- We use teeth to **masticate** (chew) our food
- We usually have **two sets** throughout life – baby teeth and permanent teeth

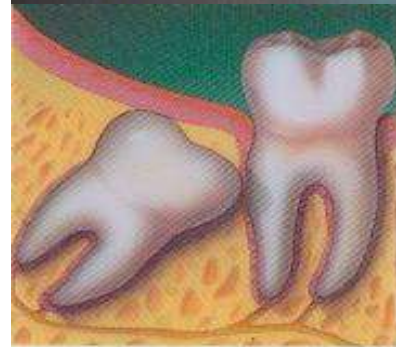
Figure 6 – Names of the anterior and posterior teeth.



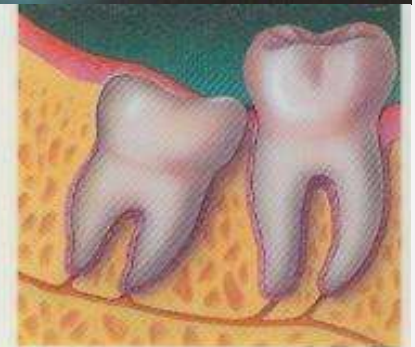
# Anatomy of a Tooth



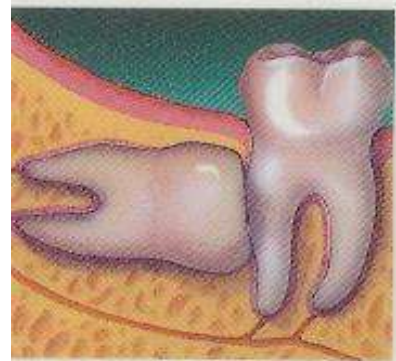
Enamel is the hardest substance in the human body!



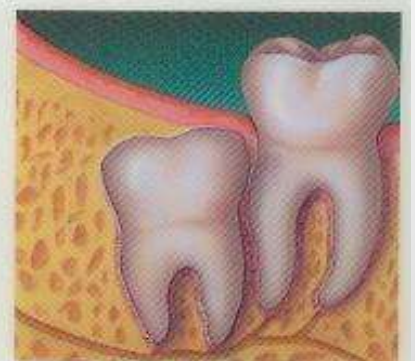
**Angular**



**Partial Eruption**



**Horizontal**



**Vertical**

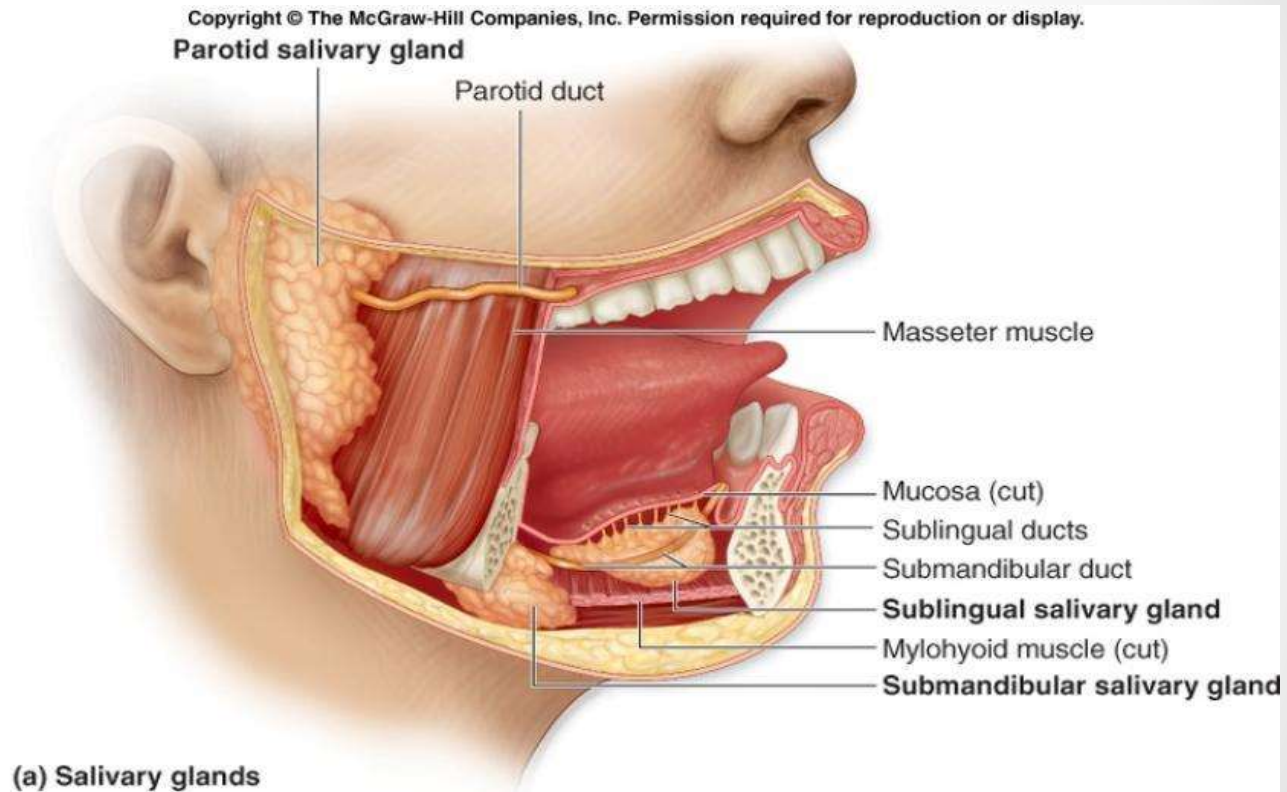
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# Salivary Glands

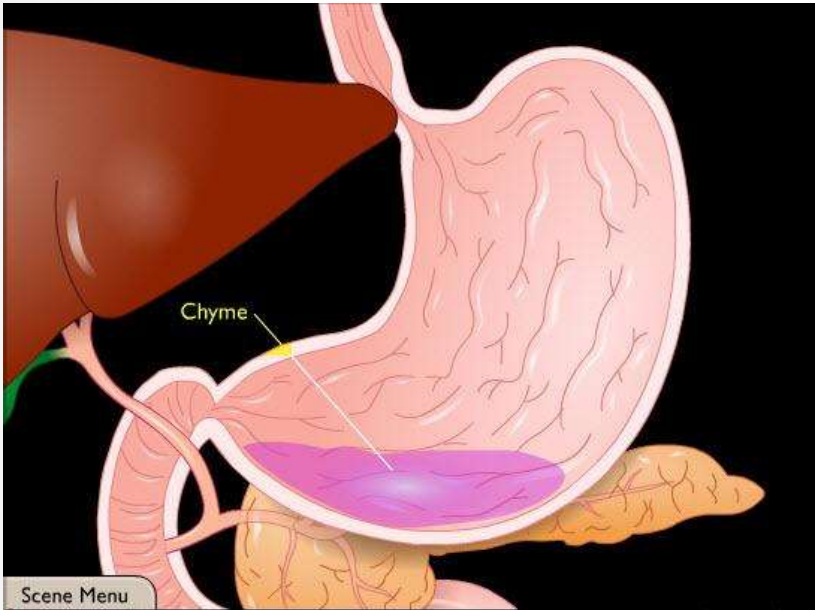
We have 3 pairs of salivary glands

1. Parotid
2. Submandibular
3. Sublingual

- produce saliva
  - enzyme **salivary amylase**
  - initiates **starch digestion**



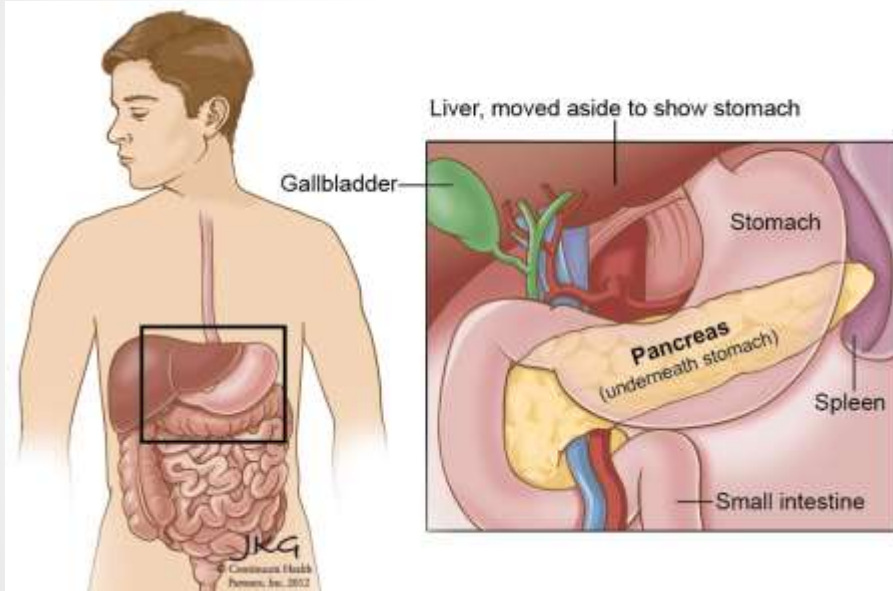
# A Look at Chyme



**Chyme** is what we call partly digested food as it leaves the stomach; it's full of good stuff...yum!

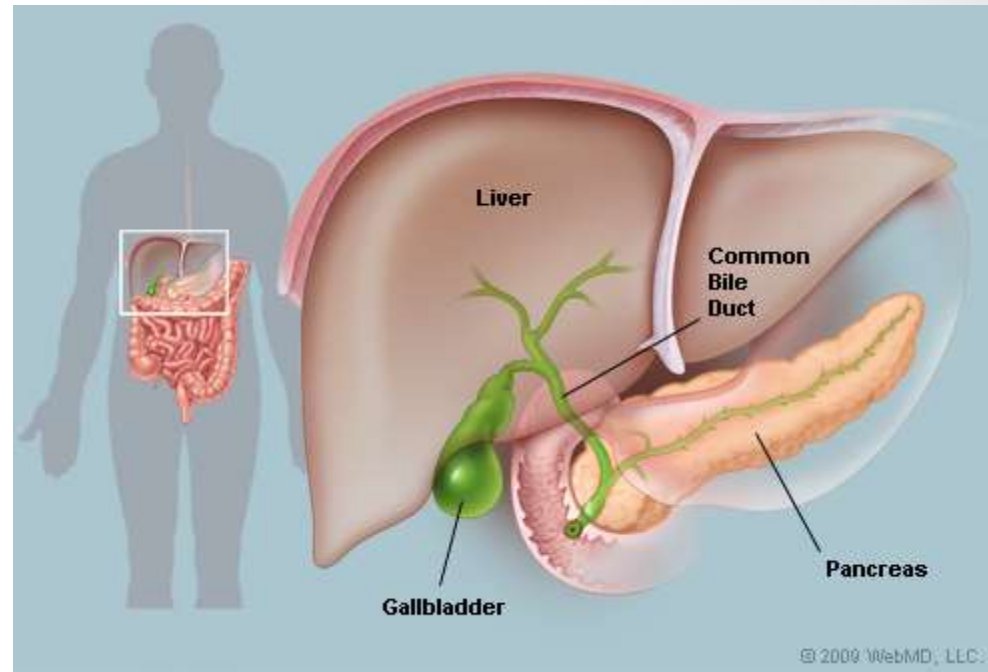
# Pancreas

- Produces **enzymes** that breaks down chyme
- Its solutions are secreted into the duodenum and **neutralize** the stomach acid
- The pancreas also has an endocrine function
  - remember insulin and glucagon?



# Liver & Gall Bladder

- The **liver** is the largest gland in the body – it has many roles in metabolism but in digestion it produces
  - **Bile** – a yellow to green solution that emulsifies fat (breaks big fat globs into little globs)
  - Bile is stored in the **gall bladder**





# Gallstones

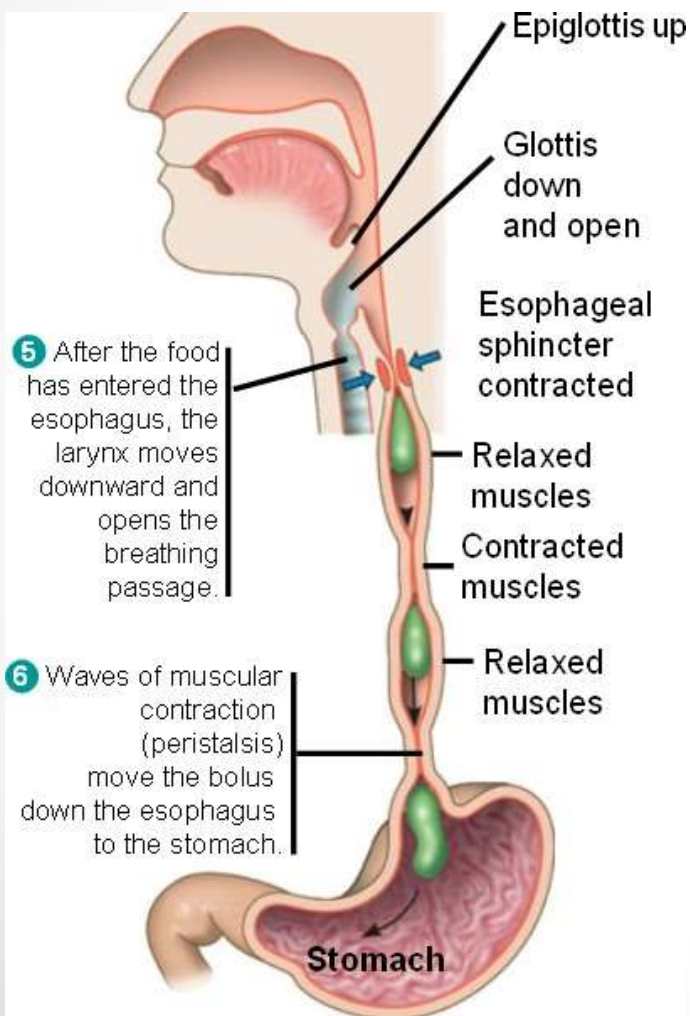


Gallstones  
can be sharp  
and cause a  
lot of pain



Cholesterol in the bile can crystallize if it is stored too long in the gall bladder or too much water is removed

# Peristalsis



- You can swallow food while “standing” on your head
- This is thanks to **peristalsis**
  - involuntary waves of contraction/relaxation of your alimentary canal
- Guess what happens when peristalsis goes backwards?