

Teeth, Tongue, and Spit

Mechanical digestion is accomplished by chewing (**mastication**) and mixing the food with saliva until it is softened into a ball called a **bolus**. Swallowing is referred to as **deglutition**. Difficulty swallowing is referred to as **dysphagia**.

Teeth: Adults have 28-32 teeth (depending on if they've had their "wisdom" teeth removed).

- **incisors** (4 upper; 4 lower). Good at cutting food into small bits, come in first for babies. (starting at approximately 6 months).
- **canines** (2 upper; 2 lower). Good at piercing and tearing tough food
- **premolars/bicuspid** (4 upper; 4 lower). These teeth are the last of the baby teeth to come in.
- Baby teeth = 20
- **molars** (4-6 upper; 4-6 lower). Good at grinding up food. 6-yr molars are first permanent molars to arrive. Some argue they are the most important teeth in the mouth to protect because they "hold" the spot for many other permanent teeth in the mouth. They help form a healthy "bite".

Enamel: Each tooth is covered with enamel, one of the strongest substances made by our body. This nearly impervious substance protects the tooth from decay by bacteria (such as *Streptococcus mutans*).

Nerve Supply: Teeth have a nerve supply from the Vth Cranial Nerve (the Trigeminal).

- Upper teeth are served by the maxillary branch of the trigeminal nerve
- Lower teeth are served by the mandibular branch of the trigeminal nerve

Gingiva: The gums. They recess more with age. Chronic inflammation of the gingiva is referred to as gingivitis.

Tongue innervated by the Hypoglossal Nerve (XIIth)

Taste buds send sensory taste information to the brain via CN VII (Facial) and CN IX (Glossopharyngeal). Sense of taste is processed in the parietal lobe of the brain. We have taste buds for sweet, salty, sour, bitter, and umami (savory).

Saliva is produced by three paired salivary glands, innervated by the facial (VII) and glossopharyngeal nerves (IX):

- Parotid glands
- Submandibular glands
- Sublingual glands

Saliva is a watery mixture that contains:

- amylase to begin chemical digestion of carbohydrates
- lysozyme to break down bacterial cell walls

The **esophagus** is a strong, muscular tube that pushes a "**bolus**" of food down to the stomach via **peristalsis**.