

periodontal disease

kinds of teeth modified for specific functions

incisors – 4+4; cut, knip

canines – 2+2; holding onto prey

premolars – 4+4; cutting, crushing

molars – 6+6; chewing, grinding, crushing

each tooth is composed of several layers:

enamel

very hard
outer surface
on upper exposed crown only
resists bacterial attack
cannot regenerate if damaged

dentin

below enamel
less hard, similar to bone matrix
decays quickly if enamel is penetrated

pulp

living portion of tooth
consists of blood vessels, nerves

cementum

on root of tooth only
outer surface
holds root into socket in jaws

Salivary Glands

3 Pairs of **salivary glands**:

sublingual
submandibular
parotid

largest, below ears
mumps = acute infection of parotid gland

secrete **saliva** (enzymes and mucous for digestion)

2. Pharynx (throat)

already discussed

3. Esophagus

collapsible tube ~ 10" long

extends from pharynx to stomach

→ gets food through thorax to abdominal cavity

posterior to trachea and heart

pierces diaphragm

uses peristalsis to move food to stomach

→ can swallow up & down

drains into stomach through the cardiac orifice
surrounded by the **lower esophageal sphincter**

4. Stomach

muscular sac just below diaphragm and liver

alimentary canal expands to form stomach

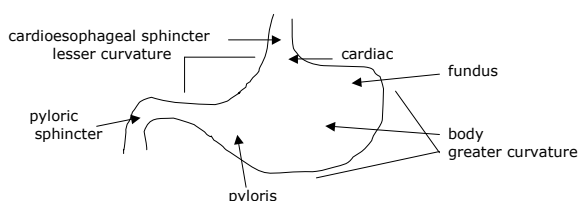
50 mL when empty; up to 1.5 L after meal

Major functions of stomach:

1. **physical digestion** – churning action
2. **chemical digestion** – esp proteins
3. limited **absorption** (some water, alcohol, certain drugs)

divided into 4 regions:

cardiac
fundus
body
pyloris



Muscle layers are very well developed in stomach

circular
longitudinal
oblique

Help to break up food by churning action

results in milky white liquid = **chyme**

sphincter muscles close both stomach openings:

cardioesophageal sphincter
(=lower esophageal sphincter)

heartburn → doesn't close properly

pyloric sphincter

colic in babies → doesn't open properly
given smooth muscle relaxers

mucosal lining of stomach is folded into **rugae** to allow for expansion with a meal

within the mucous lining of stomach are glandular tubes called **gastric pits**

→ within gastric pits are numerous microscopic **gastric glands**:

- secrete **mucous** for protection
- secretes various **digestive enzymes**
- secretes **HCl**