

Accessory Organs of the Digestive System

Bio 250 Lecture

Salivary Glands

- Saliva-producing glands
 - Parotid glands – located anterior to ears
 - Submandibular glands
 - Sublingual glands

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Salivary Glands

- Try this site:
www.entnet.org/images/sa#16F872



Teeth

- Permanent teeth
 - Replace deciduous teeth beginning between the ages of 6 to 12
 - A full set is 32 teeth, but some people do not have wisdom teeth

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Classification of Teeth

- Incisors
- Canines
- Premolars
- Molars

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Teeth

- The role is to masticate (chew) food
- Humans have two sets of teeth
 - Deciduous (baby or milk) teeth
 - 20 teeth are fully formed by age two

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Classification of Teeth

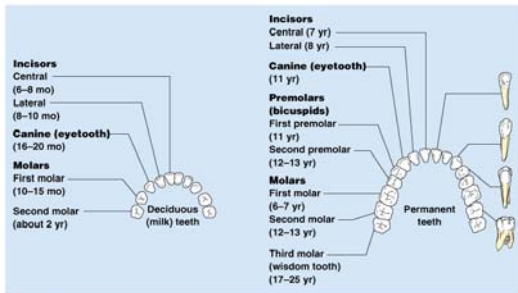


Figure 14.9

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Regions of a Tooth

- **Crown** – exposed part
 - Outer enamel
 - Dentin
 - Pulp cavity
- **Neck**
 - Region in contact with the gum
 - Connects crown to root

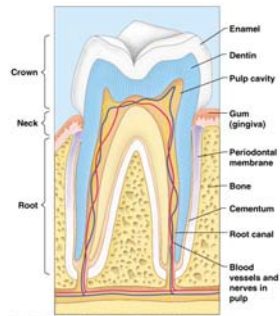


Figure 14.10

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Regions of a Tooth

- **Root**
 - Periodontal membrane attached to the bone
 - Root canal carrying blood vessels and nerves

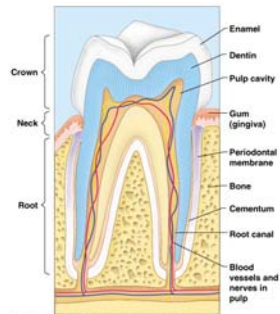


Figure 14.10

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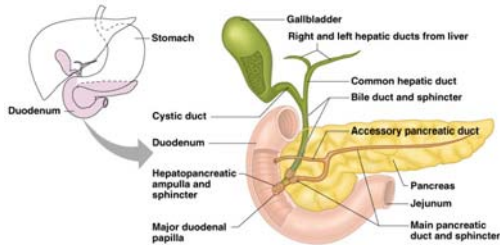
Pancreas

- Produces a wide spectrum of digestive enzymes that break down all categories of food
- Enzymes are secreted into the duodenum
- Alkaline fluid introduced with enzymes neutralizes acidic chyme
- Endocrine products of pancreas
 - Insulin
 - Glucagons

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Chemical Digestion in the Small Intestine



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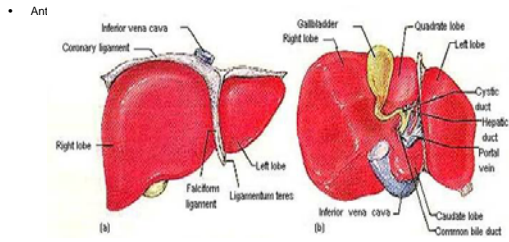
Liver

- Largest gland in the body
- Located on the right side of the body under the diaphragm
- Consists of four lobes suspended from the diaphragm and abdominal wall by the falciform ligament
- Connected to the gall bladder via the common hepatic duct

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Liver anatomy



Liver Histology

- Hepatocytes & Portal Triad



Bile

- Produced by cells in the liver
- Composition
 - Bile salts
 - Bile pigment (mostly bilirubin from the breakdown of hemoglobin)
 - Cholesterol
 - Phospholipids
 - Electrolytes

Gall Bladder

- Sac found in hollow fossa of liver
- Stores bile from the liver by way of the cystic duct
- Bile is introduced into the duodenum in the presence of fatty food
- Gallstones can cause blockages

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