Ch 41.3 Notes

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Vocab

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Oral Cavity: Mouth

Salivary Glands: Glands that release saliva

Mucus: A viscous mixture of water, salts, cells, and slippery glycoproteins

Amylase: An enzyme that breaks down carbs

Bolus: A ball of saliva and food

Pharynx: Throat region

Esophagus: A muscular tube that connects to the stomach

Peristalsis: A wave of muscular contraction

Sphincter: A ringlike valve of muscle

UES: Upper Esophagus Sphincter

LES: Lower Esophagus Sphincter

Stomach: Plays two major roles in digestion

Gastric Juice: A digestive fluid that is secreted by the stomach

Chyme: A mixture of ingested food and gastric juice

Protease: The second component of gastric juice

Pepsin: A protein digesting enzyme

Pepsinogen: The inactive form of pepsin that chief cells release into the lumen

Small Intestine: The alimentary canal’s longest compartment that

Duodenum: The first 25 cm of the small intestine

Pancreas: Secretes biocarbon that neutralizes the chyme

Bile: Secreted by the liver

Liver: Secretes bile

Gallbladder: Stores bile

Villi: Finger shaped projections found on the folding in the small intestines

Microvilli: Microscopic projections found on the villi

Hepatic Portal Vein: The blood vessel that leads directly to the liver

Large Instances: Includes the colon, cecum, and rectum

Colon: Leads to the rectum and anus

Cecum: A pouch that ferments ingested material

Appendix: A finger shaped extension of the human cecum (Serves no known purpose)

Feces: The wastes of the digestive system

Rectum: The terminal portion of the large intestine where feces is stored

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Notes

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Oral Cavity

Mechanical

* Teeth
* Tongue

Chemical

* Salivary glands
* Saliva
  + Mucus
  + Buffers
  + Antimicrobial agents
  + Amylase

Bolus

Pharynx

Throat region

* Esophagus (to stomach)
* Trachea (to lungs)

Esophagus

Connects to stomach.

Peristalsis

UES

LES

Stomach

Below diaphragm

Food + gastric juice = chyme

Chemical

* Hydrochloric acid (HCl)
  + pH= 2
    - Mucus protects.
  + Parietal cells
* Pepsin- peptide bonds
  + Chief cells
* Mechanical
  + Churning
* Peristalsis
* Sphincter

Small Intestine (digestion)

Most chemical digestion here

6m/2.5cm

Duodenum

* Digestion
* Chyme 🡪 secretin 🡪 pancreas
  + bicarbonate 🡪 buffer
  + Proteases (trypsin/chymotrypsin)
* Liver/Gallbladder
  + Secreted/stored
  + Bile🡪 bile salts🡪 fat digestion

Small intestine (absorption)

Jejunum/Ileum

Nutrient absorption

Villi/microvilli

* Brush border

Hepatic portal vein

* Veins/capillaries from villi
* Then to the heart

Lipase🡪 hydrolyzes fat= fatty acid & monoglyceride🡪 + triglycerides and coated= chylomicrons

Chylomicrons go to lacteal🡪 lymphatic system

Water

Large intestine

Colon

* Water absorption

Cecum

* Fermenting ingested material
* Appendix= extension of cecum

Rectum

* Stores feces until elimination
* Inner anal sphincter
* External anal sphincter