



The Digestive System

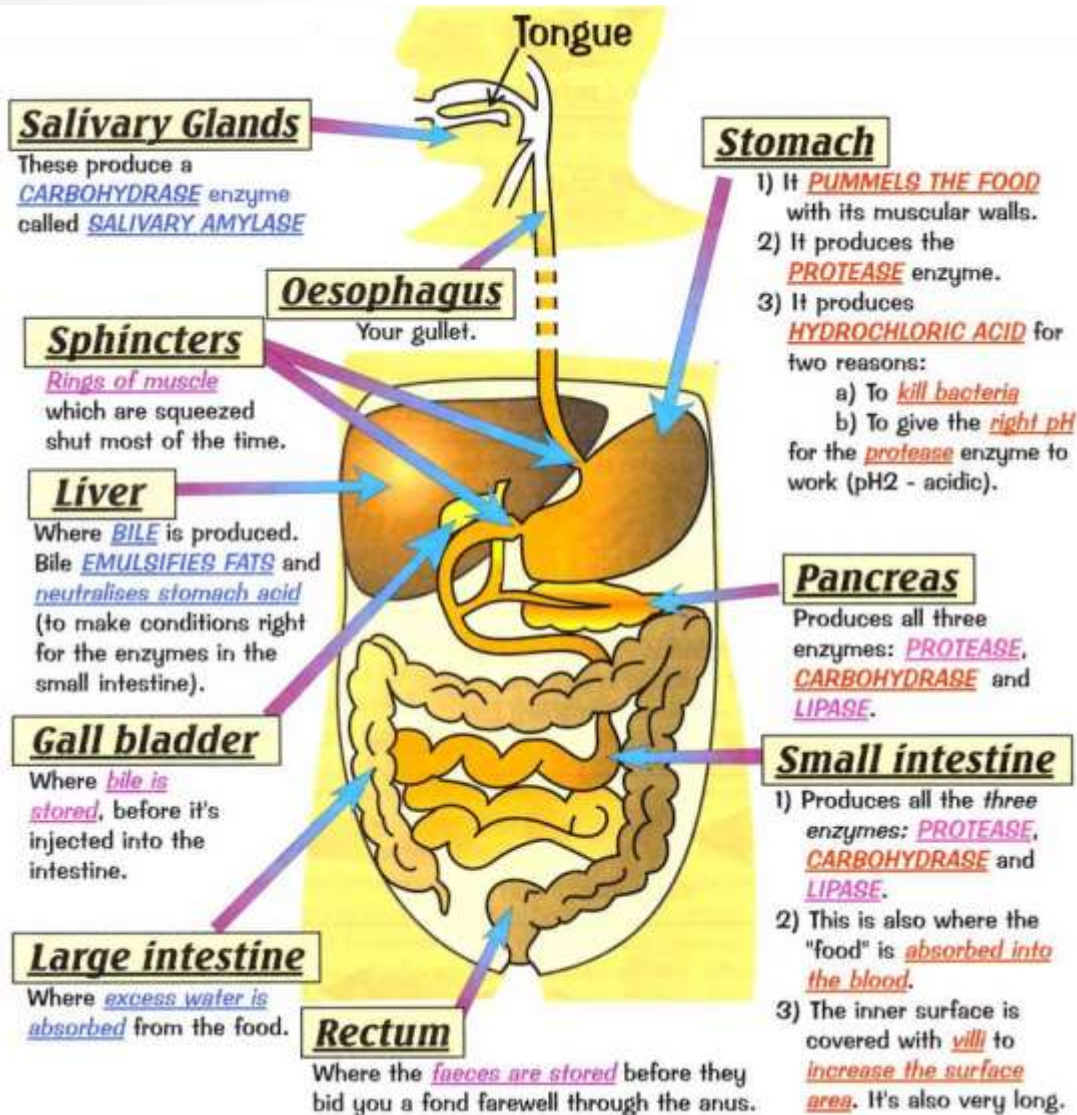
Function of...

Chapter 14

Photo Credit:

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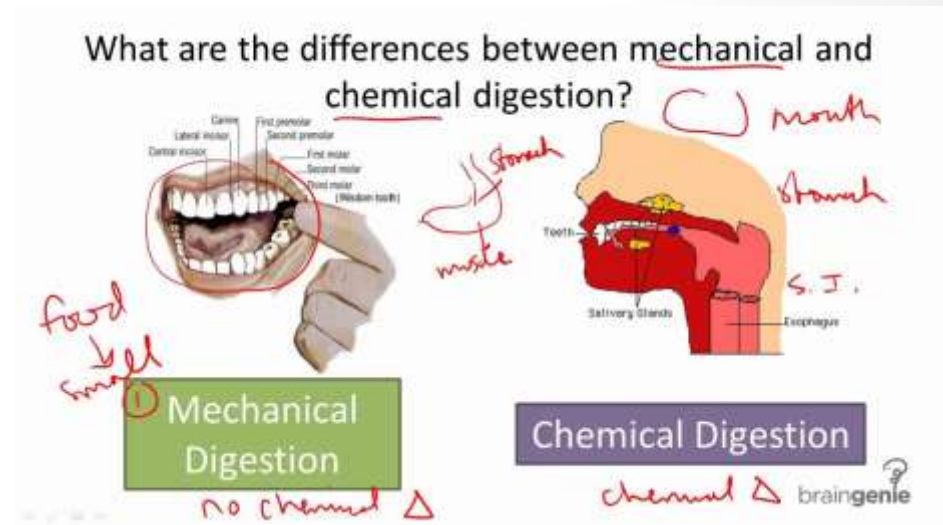
The Big Picture



Study this figure well; we can almost stop right here with the notes!

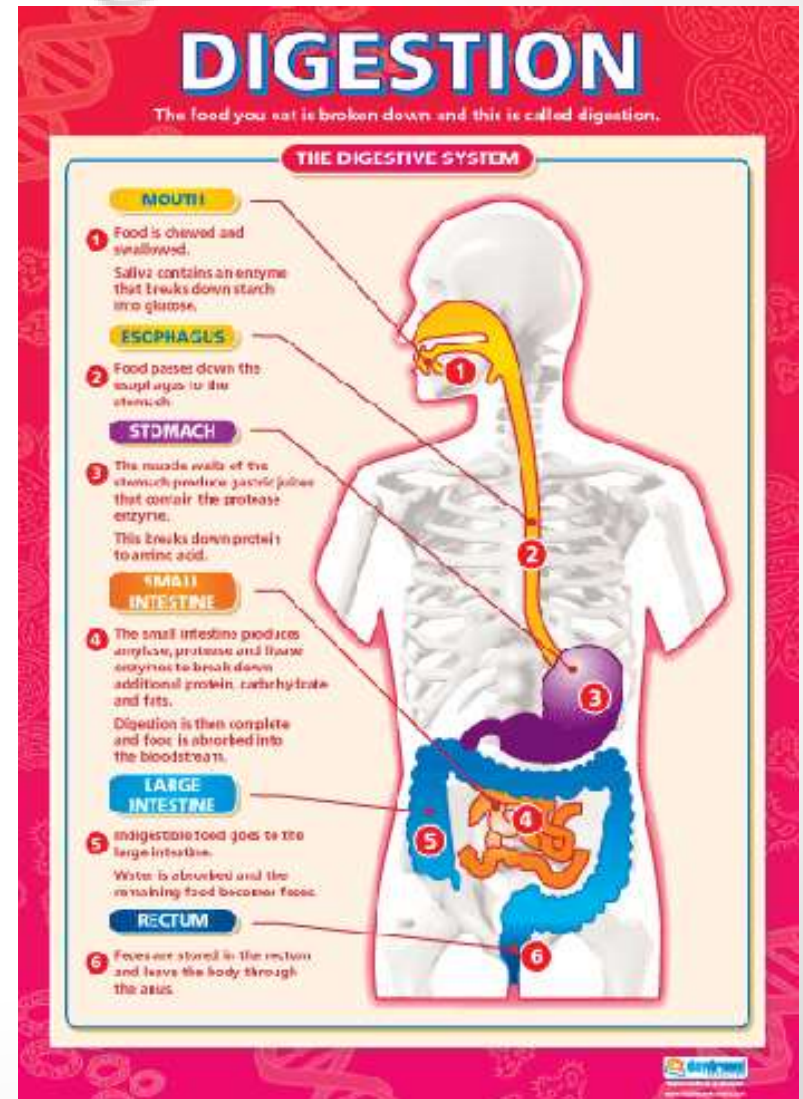
Two Types of Digestion

- Mechanical – think ripping, churning – think teeth and stomach
- Chemical – think enzymes and chemical reactions – think mouth (starch), stomach (acid), and small intestine



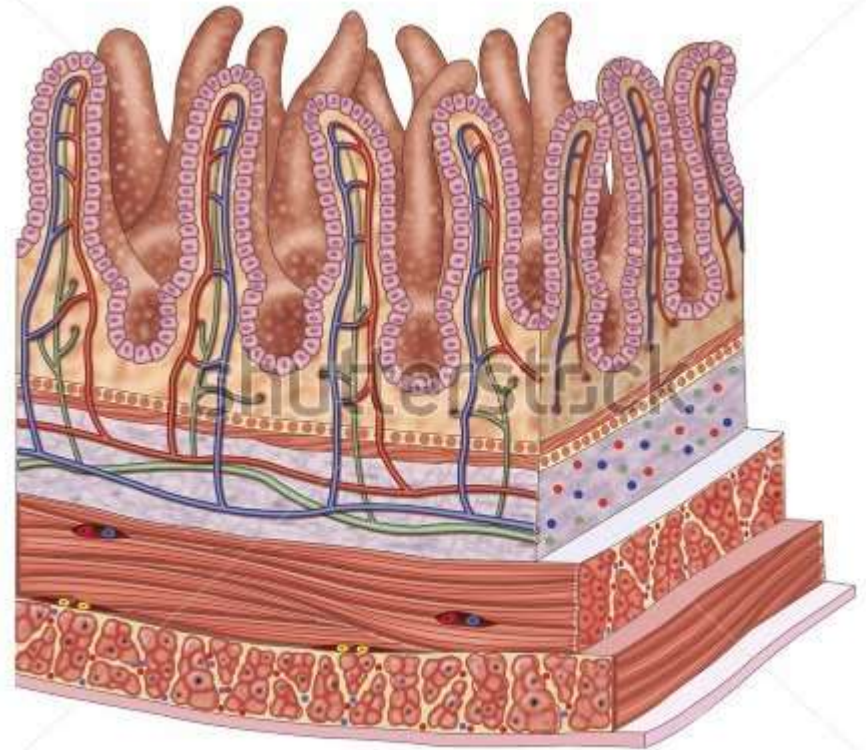
Chemical Digestion

- Mouth : **salivary amylase** - starch
- Stomach : **Pepsin** and **HCl** – protein
- Pancreas : **trypsin** – protein
- Small Intestine: **trypsin** (& other pancreatic enzymes) – protein. **Bile** & **lipase** – fat



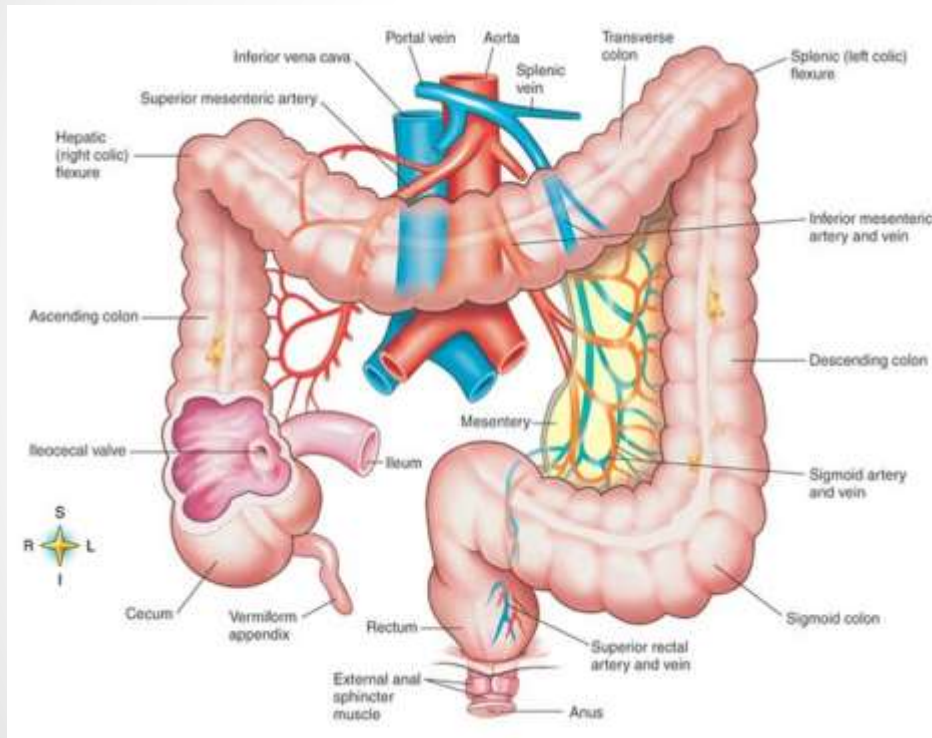
Absorption

- Now that food is broken down to molecular size, it needs to be sent to the blood stream
- The major site for absorption is the **small intestine**
- The **villi** are loaded with capillaries and that's where the action happens



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Elimination



- The **large intestine** is the player here
- **No** enzymes but a lot of symbiotic **bacteria**, which make vitamin K and some B for us
- Water is **absorbed** here to produce the end product – **feces**
- What you see here is what you ate hours ago!

A Word on Farts

- Also called flatus
- Produced by large intestine bacteria breaking down what little nutrients are left
- Mostly CO₂, methane, and hydrogen sulfide
- About 500 ml/day
- Certain foods cause more gas production; carbohydrate-rich foods like beans, certain green vegetables

