

ANATOMY OF A
CHILD'S STOMACH

FOR
DESSERT

The Digestive System

Pages 851-890

SNACKS

FOR
PENNIES AND
SMALL OBJECTS

FOR
FRUIT

FOR MORE
DESSERT

FOR NEW FOODS

FOR
VEGGIES

Visual
Study 12-13

What are the **two main groups** of the Digestive System ?

A. The Alimentary Canal - a long continuous muscular tube consisting of:

1.1. Mouth

1.4. stomach

1.2. Pharynx

1.5. Small intestine

1.3. Esophagus

1.6. Large intestine

Also known as: **gastrointestinal tract (GI)** or **gut**

Alimentary Canal

- **9 meters (20- 40 ft) in length**
- **Measures from Mouth to Anus**
- **The mouth produces DEFENSINS (antimicrobial protein)**

A&P of Saliva

98% water, pH= 6.75, contains- electrolytes, enzymes, lysozyme & uric acid

- **Cleanses**
- **Dissolves food chemicals for taste**
- **Moistens & aids in forming BOLUS**
- **Enzymes to break down starchy foods**



Where does BAD BREATH come from?

HALITOSIS forms from lack of saliva to 'rinse' the bacteria in the back of the tongue produces:

hydrogen sulfide: rotten eggs

methyl mercaptan: feces

Cadaverine: rotting corpse

Food travels from the mouth to.....

Oropharynx → laryngopharynx → esophagus

(General passage for food, fluids & air)

(carry food)



Saliva can monitor disease

1. HIV antibodies
2. Oral cancer
3. Diabetes
4. Hormone levels



The stomach must protect itself — from itself.

The inner wall of the stomach secretes roughly 2 liters (0.5 gallons) of hydrochloric acid each day, which helps kill bacteria and aids in digestion.

It is commonly used to remove rust from steel and found in cleaning supplies (toilet-bowl cleaners).

The stomach lining has a new mucus lining every 2 weeks



the office

Second main group to the Digestive System

B. Accessory Digestive Organs - found in various areas of the body:

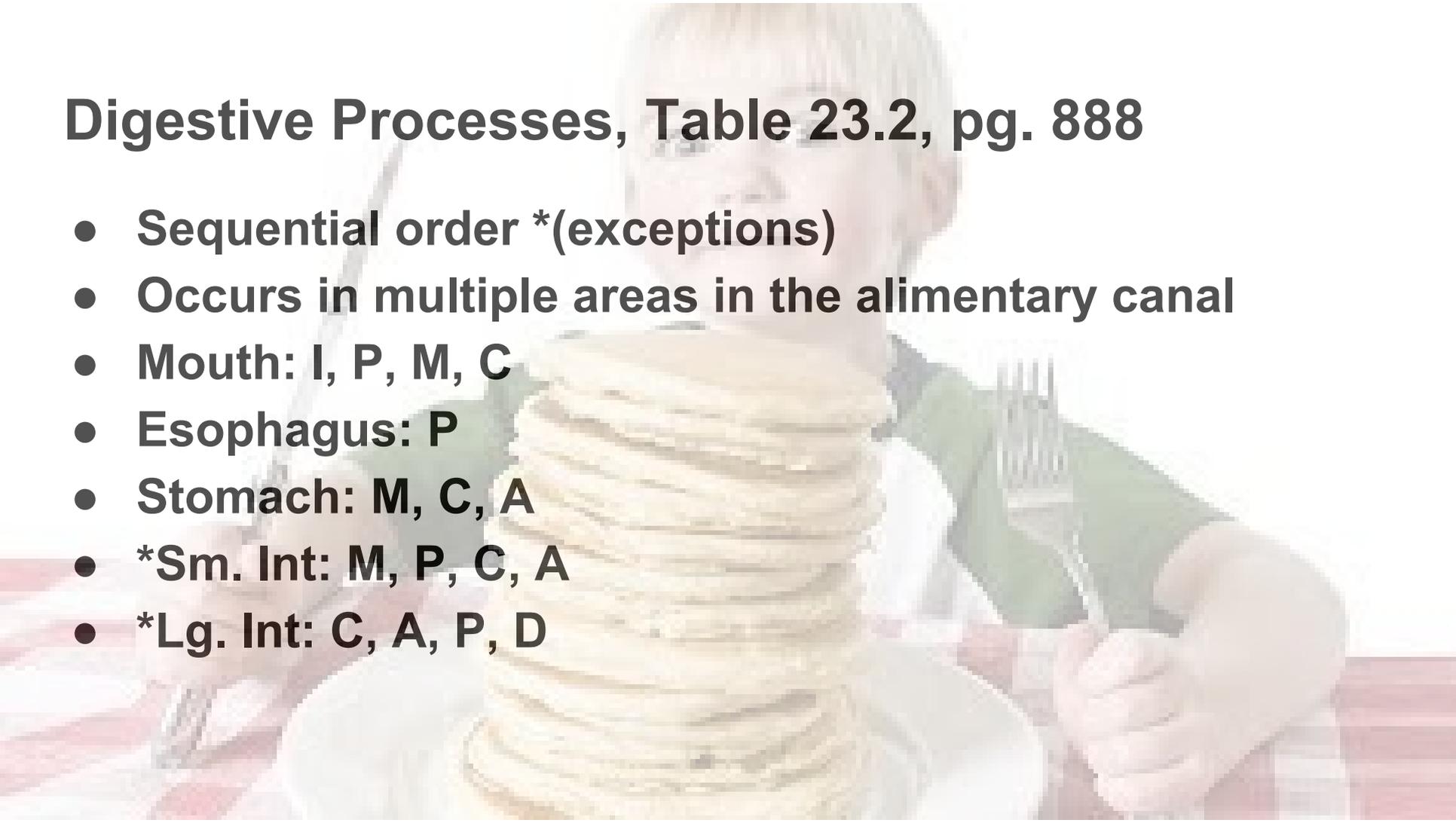
1. Teeth
2. Tongue
3. Gall bladder
4. Salivary glands
5. Liver
6. Pancreas

6 Digestive Processes

1. Ingestion
2. Propulsion
3. Mechanical digestion
4. Chemical digestion
5. Absorption
6. Defecation



Digestive Processes, Table 23.2, pg. 888

- Sequential order *(exceptions)
 - Occurs in multiple areas in the alimentary canal
 - Mouth: I, P, M, C
 - Esophagus: P
 - Stomach: M, C, A
 - *Sm. Int: M, P, C, A
 - *Lg. Int: C, A, P, D
- 
- A young child with light hair is sitting at a table, looking towards the camera. In front of them is a very tall stack of pancakes on a white plate. The child is holding a fork in their right hand. The background is a plain, light-colored wall.

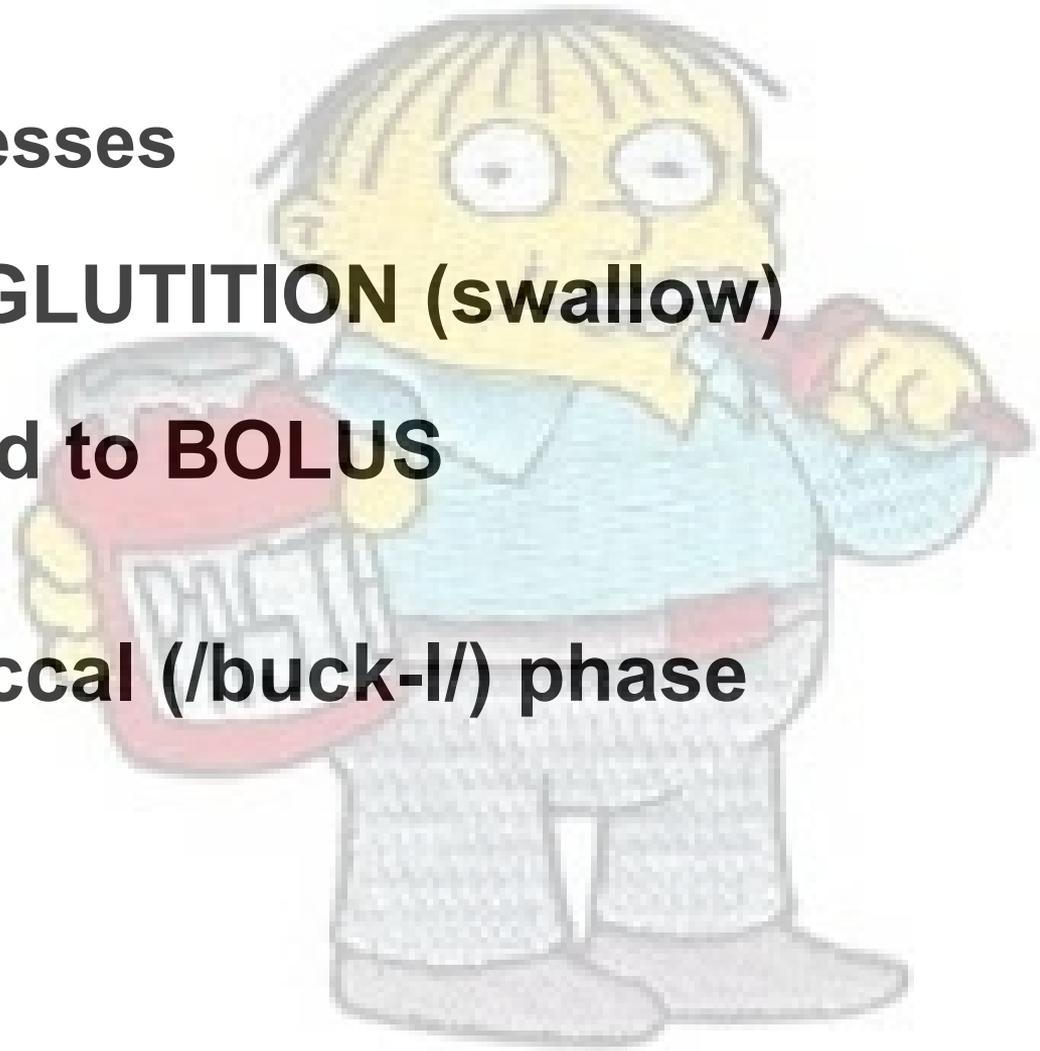
1 of 6 Digestive Processes

#1 Ingestion- MASTICATE food mixed with
Salivary Amylase → CARBOHYDRATES in the
MOUTH

2 of 6 Digestive Processes

#2. Propulsion- DEGLUTITION (swallow)

- a. Food is converted to BOLUS**
- b. Thick viscosity**
- c. Known as the Buccal (/buck-l/) phase**



3 of 6 Digestive Processes

#3: Mechanical digestion

Food in the stomach takes 4 hours, longer if it's fattier

SEGMENTATION: mixed with digestive juices while in motion

RETROPULSION: being moved from pyloric duct back to the stomach

4 of 6 Digestive Processes

#4 Chemical Digestion

- **Food → Chyme (creamy paste)**
- **PROTEINS → STOMACH with the help from PEPSIN.**
- **Complex food molecules are broken down by enzymes to monomers (amino acids, glucose, triglycerides)**

6 Digestive Processes

#4: Chemical Digestion

- **Pancreatic Acids continue to digest down in the small intestine.**
- **Carbs & proteins are partially digested**
- **3-6 hours**

Chemical Digestion

I SAID YOU'RE THE
GOOD KIND OF FAT!

LIPIDS are broken down in the small intestine
using **Lipases**



6 Digestive Processes

#5: Absorption

Digested food + minerals + vitamins pass through diffusion into the blood or lymph occurring in the small intestine

6 Digestive Processes

#6: Defecation

Eliminates indigestible substances in the form of the feces.

An illustration of a pile of brown feces. A white sign with the word 'CRAP' in green letters is stuck into the pile. Two small grey flies are flying around the pile.