

GRAND: Optimizing the Upper GI - Mind, Mouth, and Stomach - Anatomy and Physiology of the GI Tract

Optimizing the Upper GI: Mind, Mouth, and Stomach Anatomy and Physiology of the GI Tract

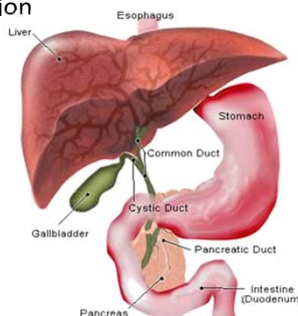
With
Dr. Ritamarie Loscalzo



Medical Disclaimer: The information in this presentation is not intended to replace a one-on-one relationship with a qualified health care professional and is not intended as medical advice. It is intended as a sharing of knowledge and information from the research and experience of Dr. Ritamarie Loscalzo, drritamarie.com, and the experts who have contributed. We encourage you to make your own health care decisions based upon your research and in partnership with a qualified health care professional.

Part 2: Optimizing Your Upper GI - Stomach Acid and Enzymes

- The structure and function of the upper GI tract
- The physiology of the upper GI tract – what it does and how it does it
- How to know when something is wrong
- How to correct what's wrong



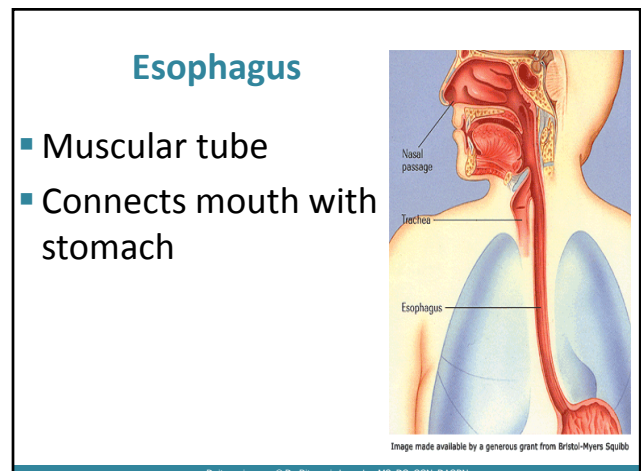
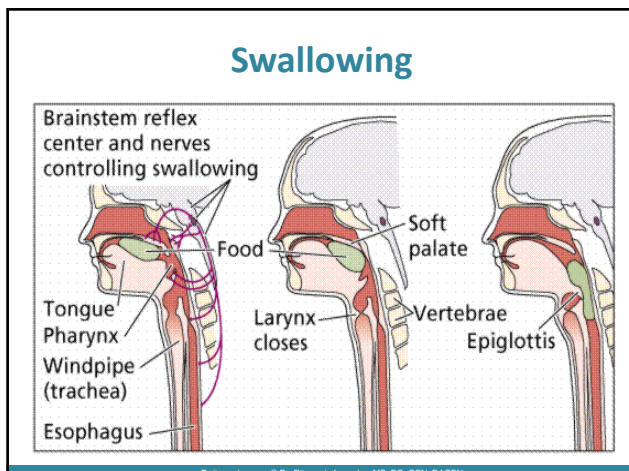
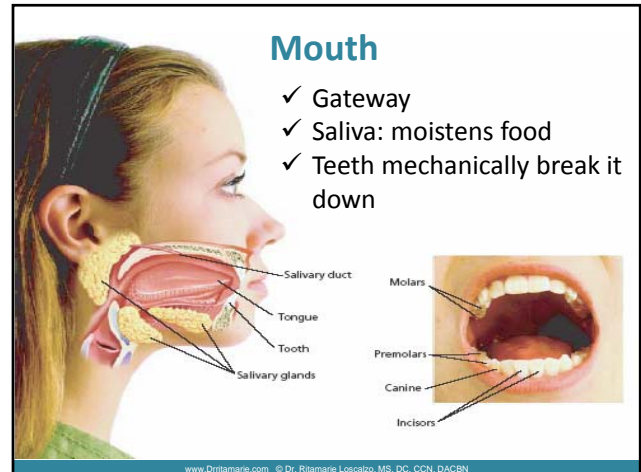
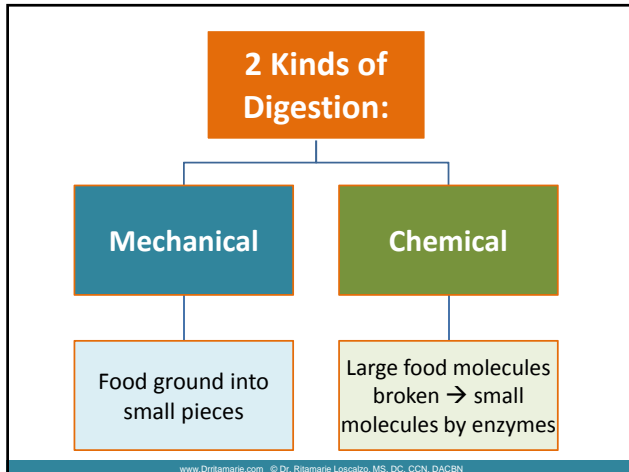
3 Main Functions of the Digestive System

Digestion
Breaks down food into molecules your body can use

Absorption
Molecules absorbed into the blood and carried through body

Elimination
Wastes eliminated from the body

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Your Stomach's Job Description

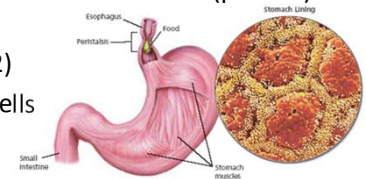
- Mix and churn the food into chyme
- Make stomach acid to start digestion of protein and minerals
- Make intrinsic factor to escort B12 into your blood
- Secrete pepsinogen to begin digestion of proteins
- Kill pathogens on food
- Nudges the other digestive organs to get ready



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Stomach Secretions

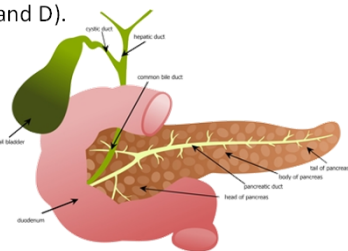
- **Mucus:** mucous cells (protects)
- **Gastrin:** epithelial cells (stimulates acid)
- **Gastric Acid:** parietal cells (activates protein and mineral digestion)
- **Pepsinogen:** mucous and chief cells (protein)
- **Intrinsic Factor:** parietal cells (B12)
- **Ghrelin:** ghrelin cells (hunger)



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Pancreas and Enzymes

- Pancreas produces enzymes to chemically break down starches, proteins, fats, and help digest all fat-soluble vitamins (E,A,K, and D).
 - ✓ Proteases
 - ✓ Amylase
 - ✓ Lipase
- Produces bicarbonate to neutralize stomach acid
- Secrete juices into duodenum
- Function not related to digestion
 - insulin, glucagon



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