



INE | INSTITUTE OF
NUTRITIONAL
ENDOCRINOLOGY

Digestion: Assessment and Overview of the Digestive System

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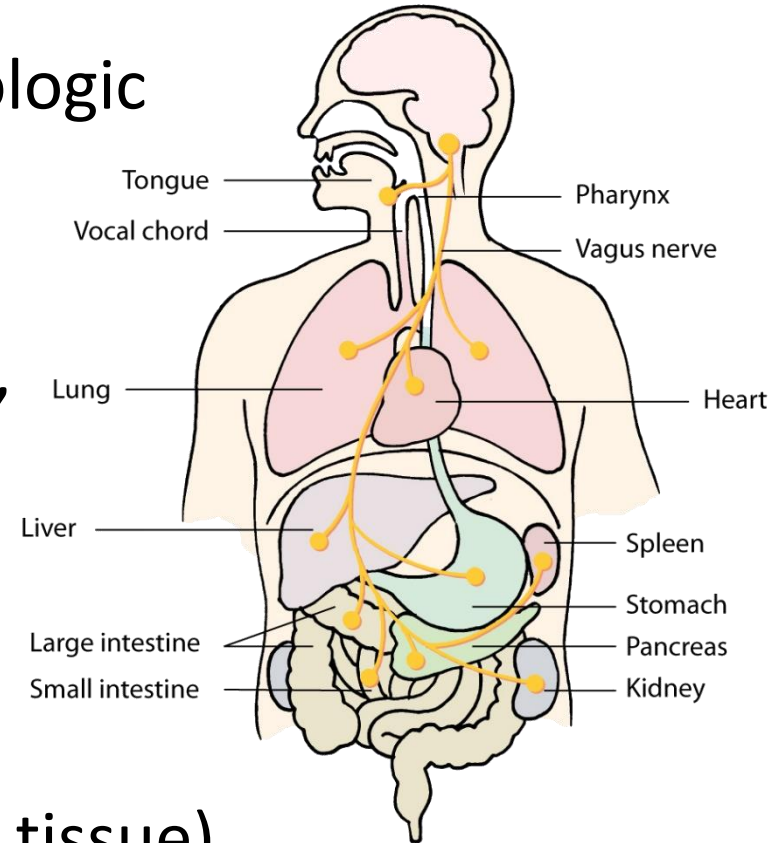


Medical Disclaimer: The information in this presentation is not intended to replace a one-on-one relationship with a qualified health care professional and is not intended as medical advice. It is intended as a sharing of knowledge and information from the research and experience of Dr. Ritamarie Loscalzo, 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.



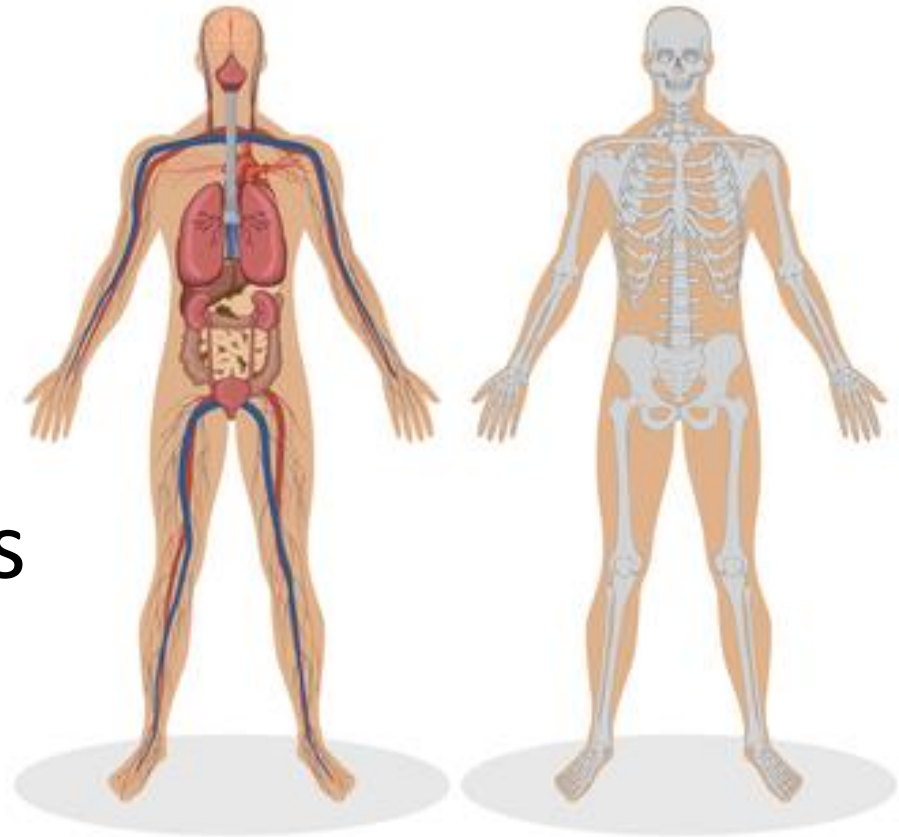
Why Study Digestion?

- ✓ **Effects on Brain:** shared embryologic tissue, connected via the Vagus nerve
- ✓ You what you digest and absorb, not just what you eat
- ✓ **Protective Barrier:** 70 percent of the immune system is located right in the gut lining
 - GALT (gut associated lymphoid tissue)
- ✓ Impact body wide
- ✓ Be able to communicate with your client's other providers

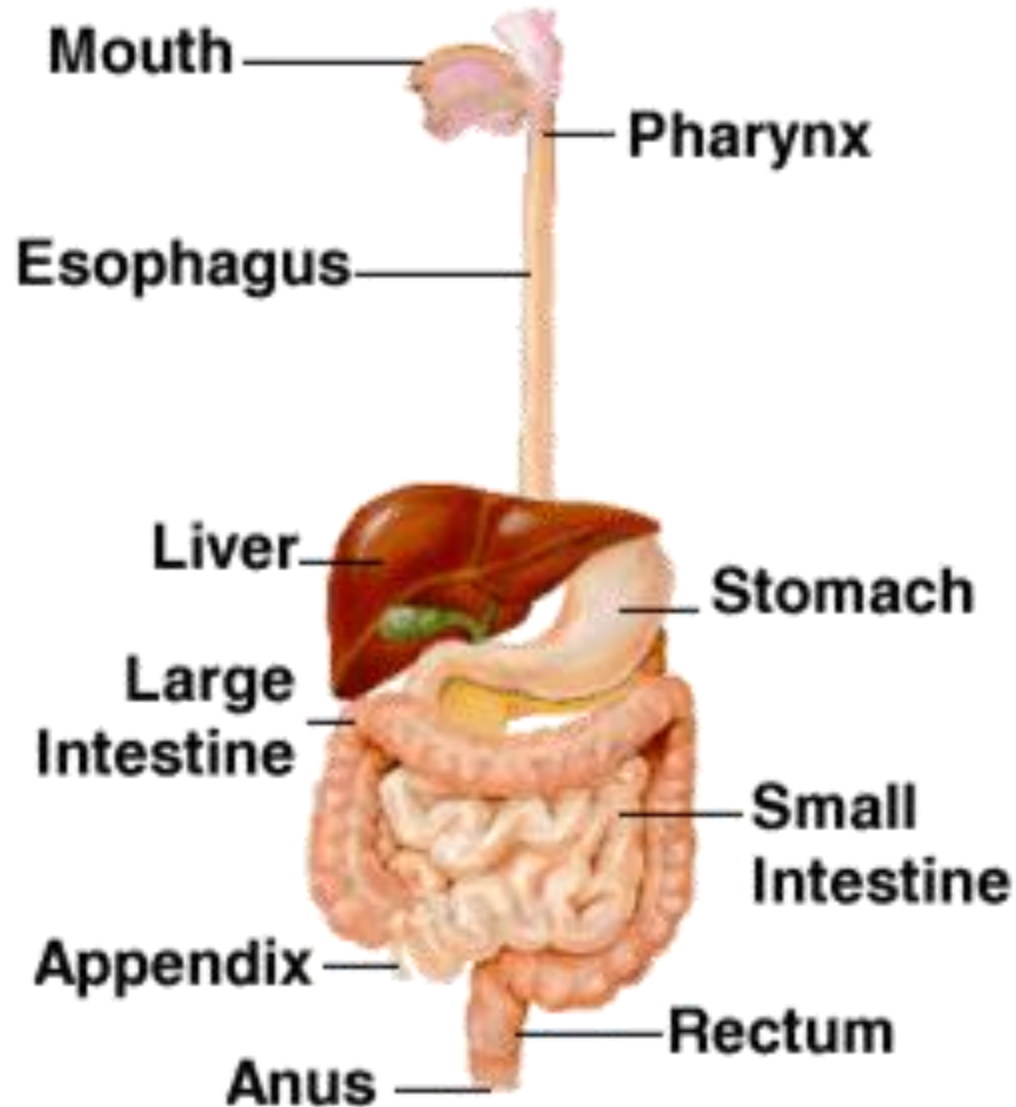


Digestion Influences Other Body Systems

1. Nutritional deficiencies
2. Inflammation
3. Toxin absorption
4. Immune stress
5. Hormone imbalances
6. Neurotransmitters



The Digestive Tract



The Digestive Tract's Job



The role of your digestive system is to **take nutrients from the foods you eat** so that the cells of your body can use them.



3 Main Functions of Digestive System

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graph TD; A[3 Main Functions of Digestive System] --- B[Digestion]; A --- C[Absorption]; A --- D[Elimination];
```

Digestion

Breaks down food into molecules your body can use

Absorption

Molecules absorbed into blood and carried through body

Elimination

Wastes eliminated from body



Assessing the Digestive Tract



- ✓ **Symptoms:** Online assessment scores
- ✓ Transit time
- ✓ **Lab:** Markers of malabsorption
- ✓ Physical signs of nutrient deficiencies due to malabsorption
- ✓ Inflammation and allergic reactions
- ✓ **Symptoms outside digestive tract:** Skin, gums, nails, lips, tongue, joints, and bones



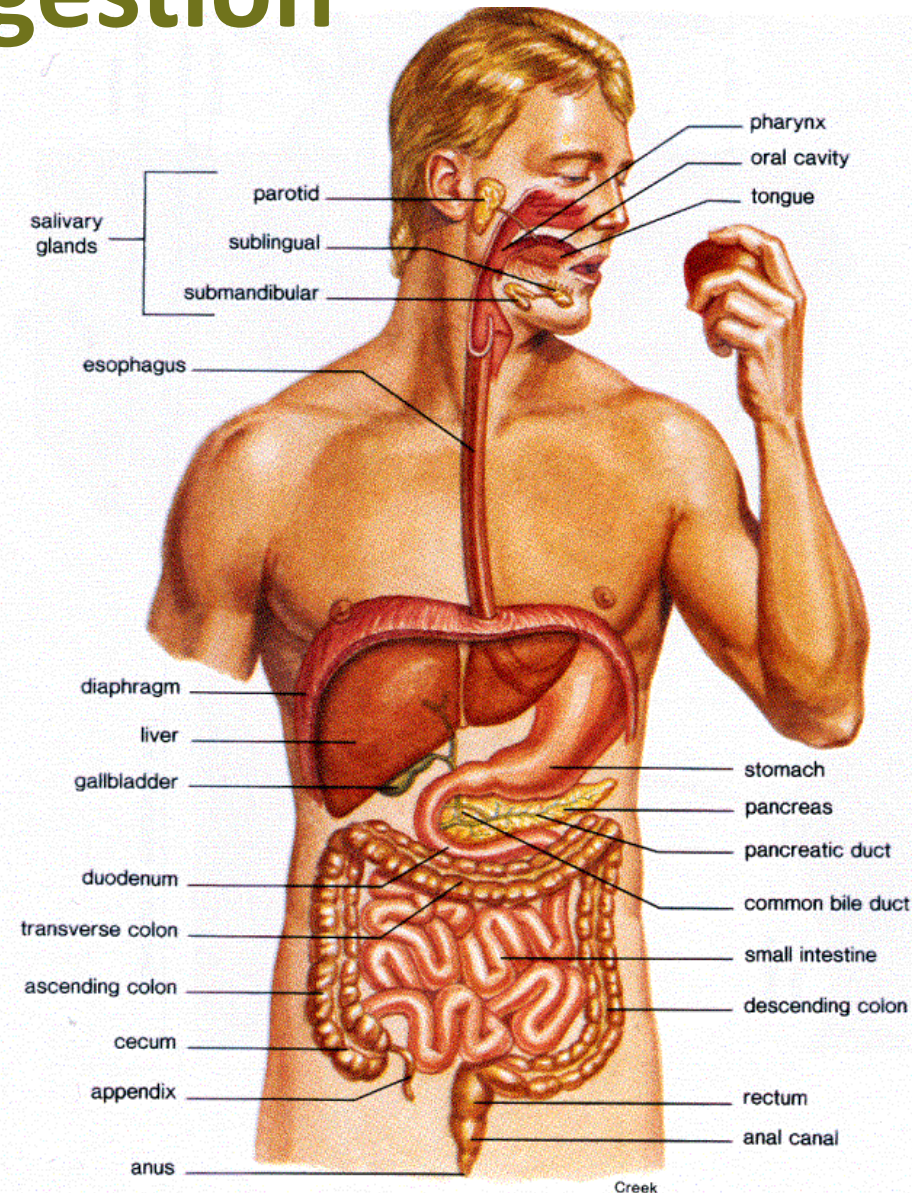
4 Stages of Food Processing

- ✓ **Ingestion** (eating): Taking in nutrients
- ✓ **Digestion**: Using physical and chemical means to break down complex organic molecules into smaller usable parts
- ✓ **Absorption**: Pulling in digested molecules into the cells of the digestive tract, then into the blood
- ✓ **Elimination**: The removal of wastes



Four Phases Of Digestion

- ✓ Cephalic phase
- ✓ Esophageal phase
- ✓ Gastric phase
- ✓ Intestinal phase



2 Kinds of Digestion:

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graph TD; A[2 Kinds of Digestion:] --> B[Mechanical]; A --> C[Chemical]; B --> D[Food ground into small pieces]; C --> E[Large food molecules broken → small molecules by enzymes];
```

Mechanical

Food ground into small pieces

Chemical

Large food molecules broken → small molecules by enzymes



Basic Anatomy of Digestion

- ✓ Mind
- ✓ Mouth
- ✓ Esophagus
- ✓ Stomach
- ✓ Small intestine
- ✓ Liver
- ✓ Gall bladder
- ✓ Pancreas
- ✓ Large intestine

