

University of Cihan-Sulaimaniya
College of Science
Department of MLA
Second year student



Human Anatomy

First week

An Overview of Anatomy

- **Anatomy** - The study of the *structure* of the human body
- **Physiology** - The study of body *function*

Branches of Anatomy

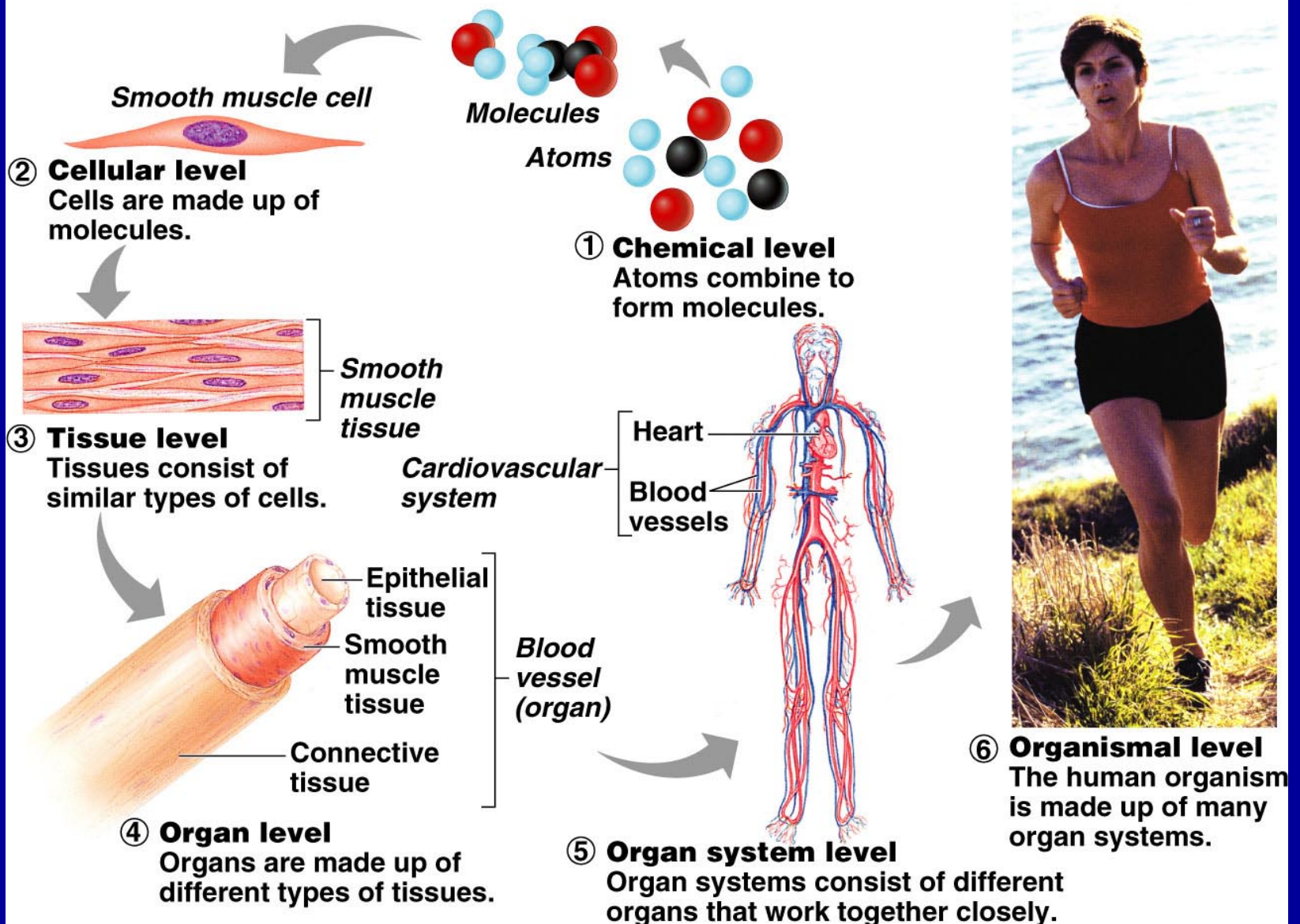
- Surface anatomy
- Gross anatomy
- Microscopic anatomy (histology) -
tissues



Structural Organization

- **Chemical level** – atoms form molecules
- **Cellular level** – cells and their subunits
- **Tissue level** – a group of cells performing a common function
- **Organ level** – a discrete structure made up of more than one tissue
- **Organ system** – organs working together for a common purpose
- **Organism** – the result of all simpler levels working together

Structural Organization



Systemic v. Regional Anatomy

- **Systemic** – study of anatomy by system
- **Regional** – study of anatomy by region



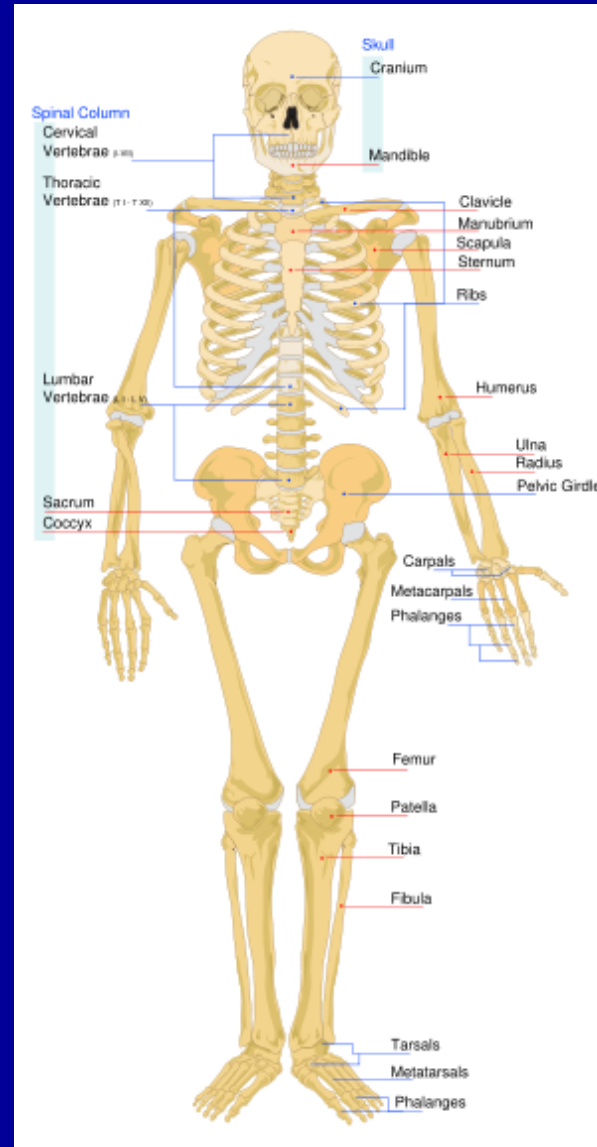
The Integumentary System

- Forms external body covering
- Protects deeper tissues from injury
- Synthesizes vitamin D
- Site of cutaneous receptors (pain, pressure, etc.) and sweat and oil glands



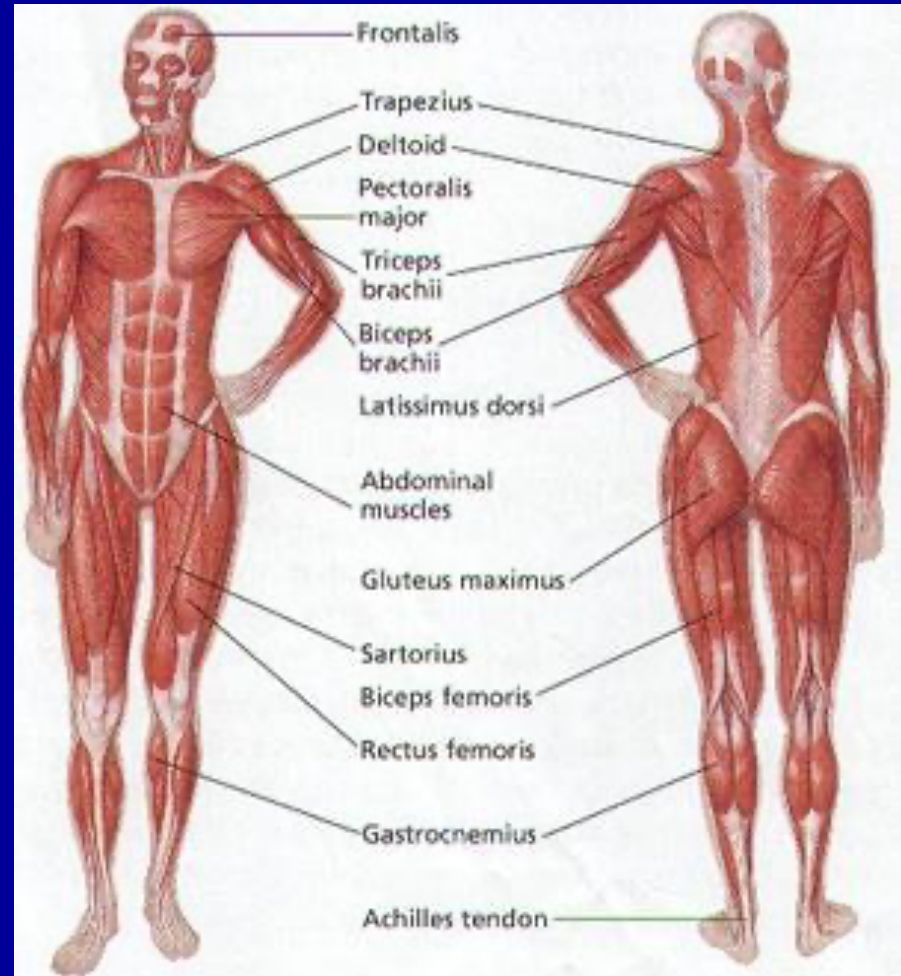
The Skeletal System

- Protects and supports body organs
- Provides a framework for muscles
- Blood cells formed within bones
- Stores minerals



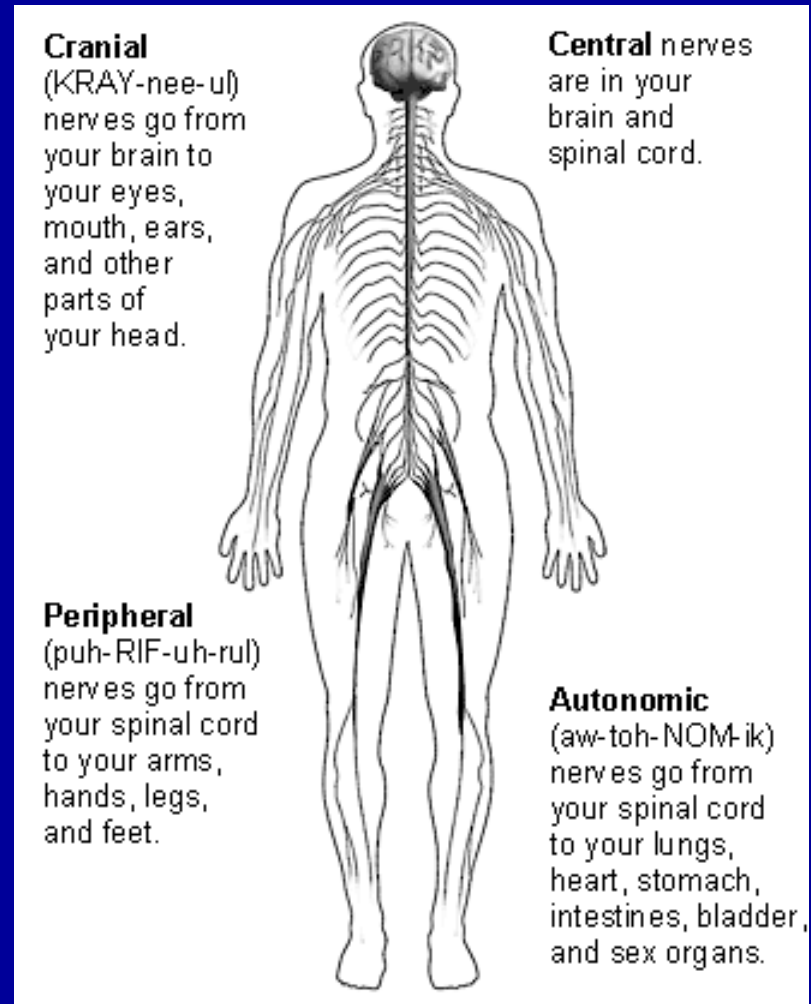
The Muscular System

- Allows manipulation of environment
- Locomotion
- Facial expression
- Maintains posture
- Produces heat



The Nervous System

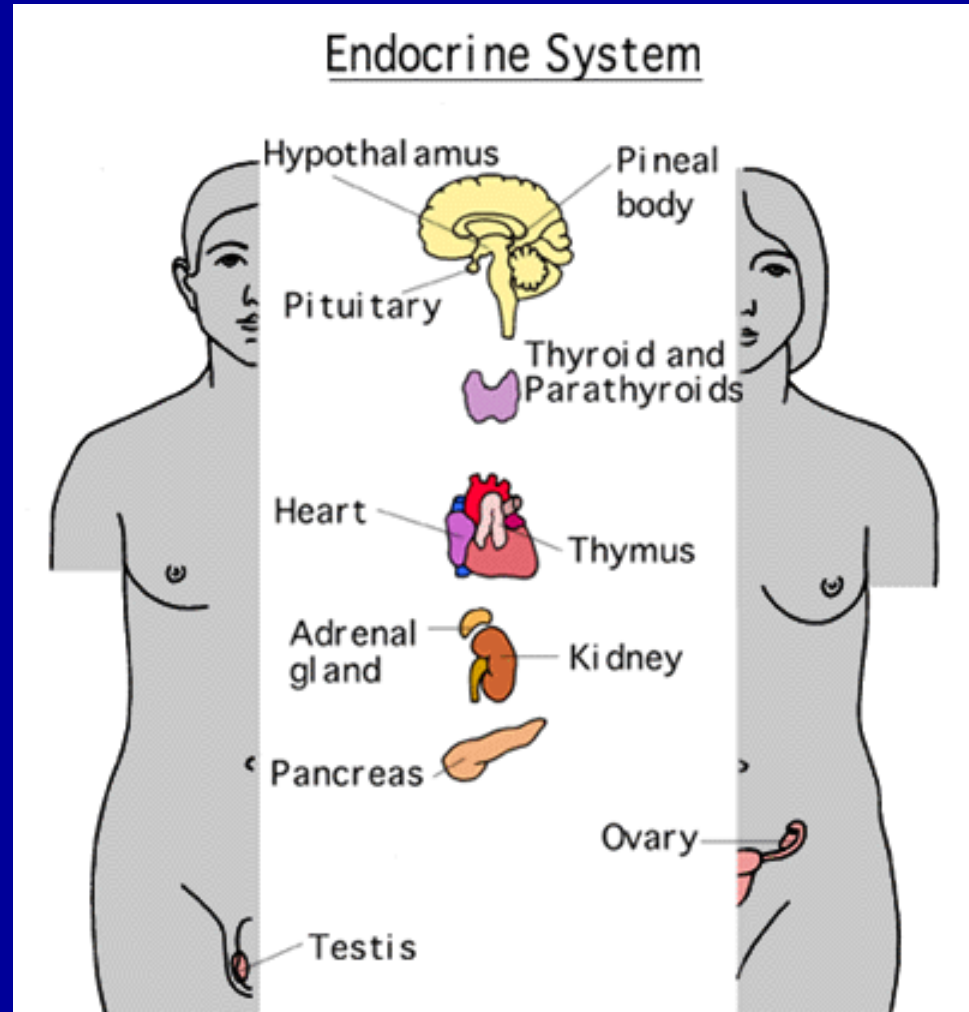
- Fast-acting control system
- Responds to internal and external changes



The Endocrine System

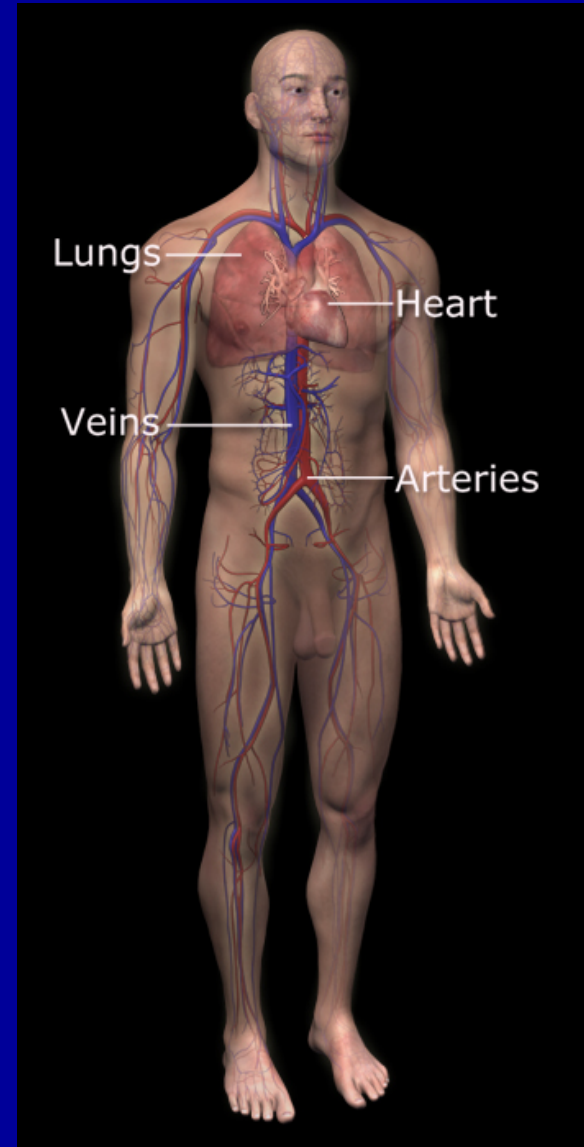
■ Glands secrete hormones that regulate:

- Growth
- Reproduction
- Nutrient use



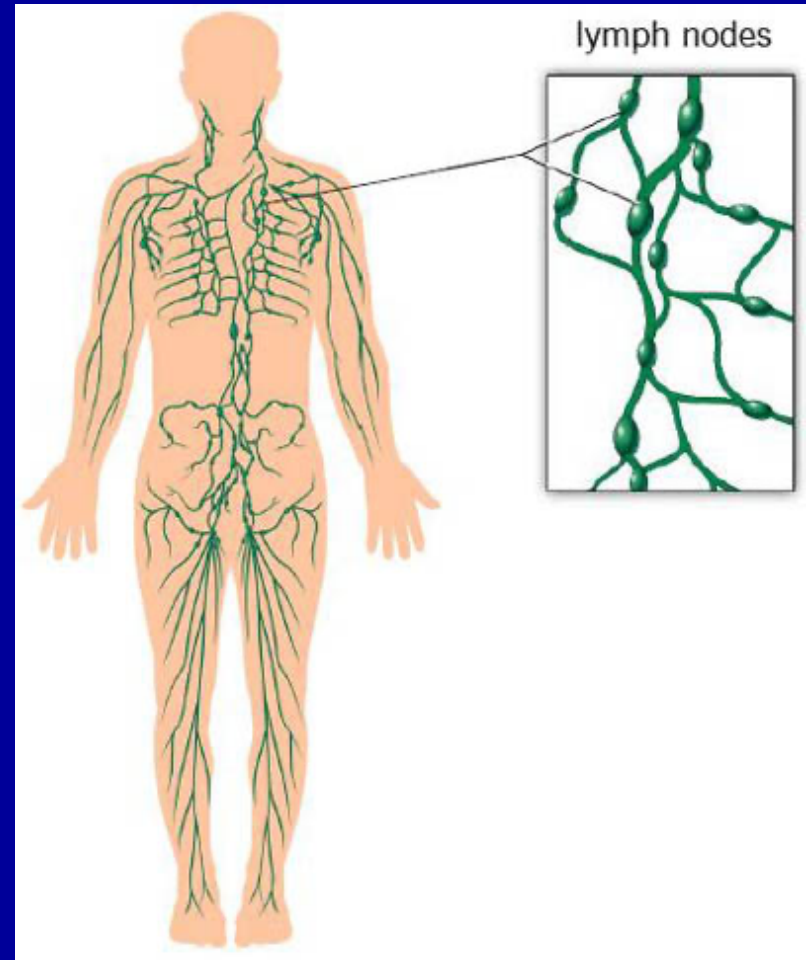
The Cardiovascular System

- Blood vessels transport blood
- Carries oxygen and carbon dioxide
- Also carries nutrients and wastes
- Heart pumps blood through blood vessels



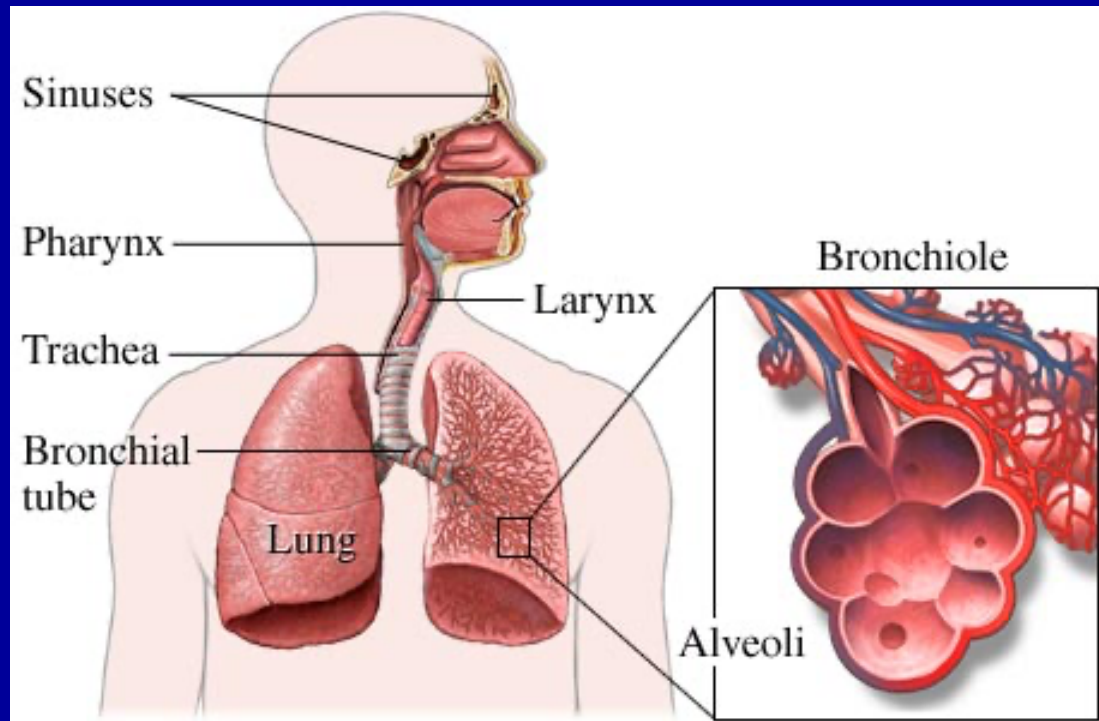
The Lymphatic System

- Picks up fluid leaked from blood vessels
- Disposes of debris in the lymphatic system
- Houses white blood cells (lymphocytes)
- Mounts attack against foreign substances in the body



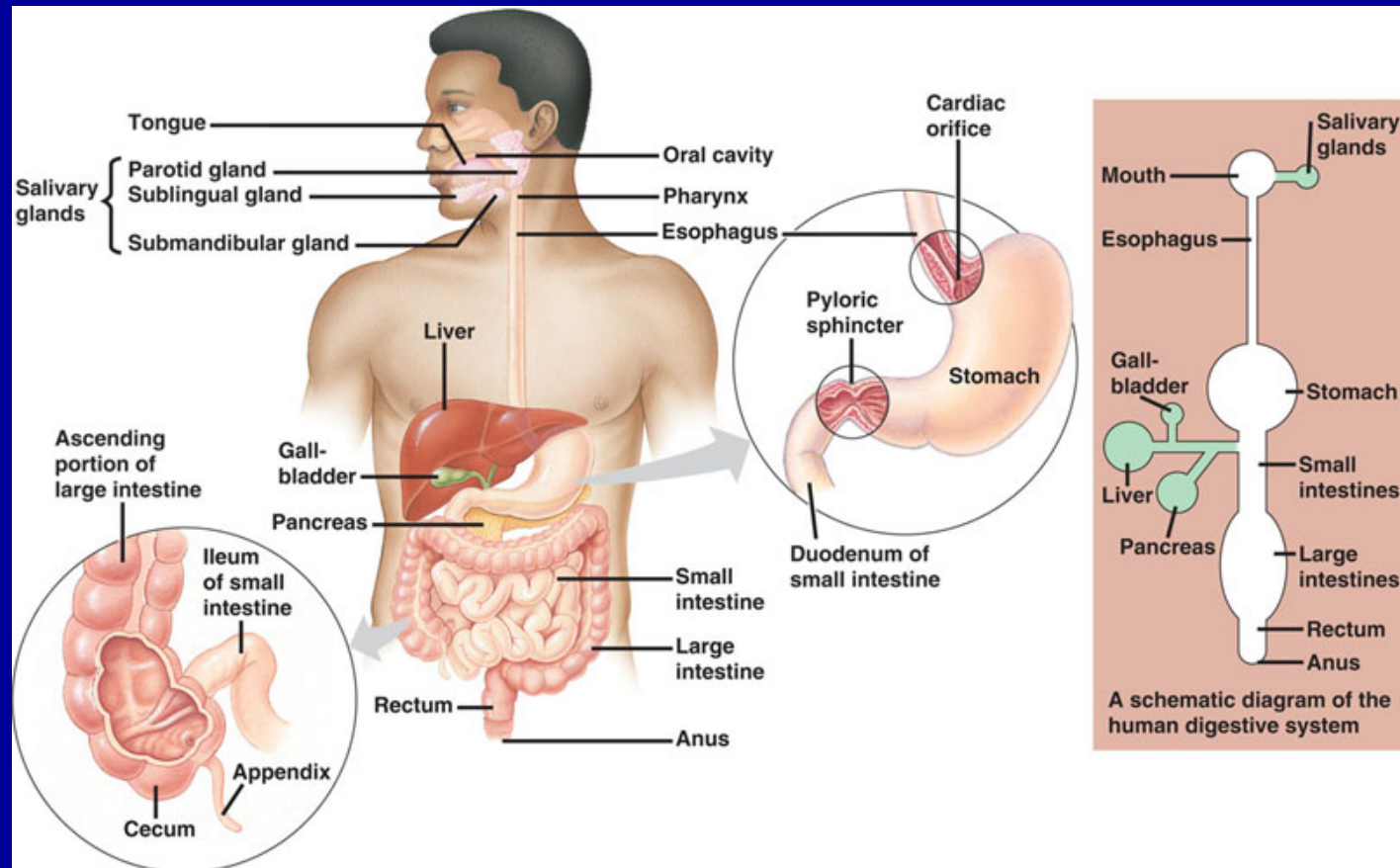
The Respiratory System

- Keeps blood supplied with oxygen
- Removes carbon dioxide
- Gas exchange occurs through walls of air sacs in the lungs



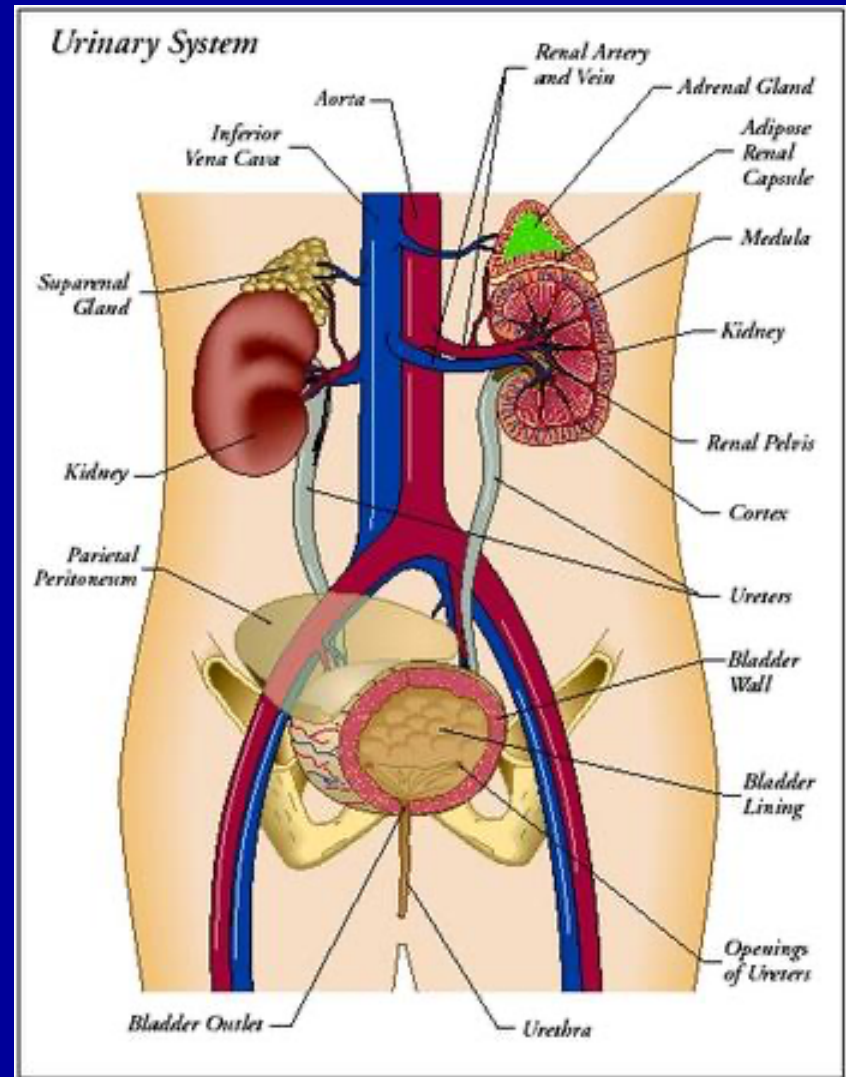
The Digestive System

- Breaks down food into absorbable units
- Indigestible foodstuffs eliminated as feces



The Urinary System

- Eliminates nitrogenous wastes
- Regulates water, electrolyte, and acid-base balance



Reproductive System

- Overall function is to produce offspring
- Testes produce sperm and male sex hormones
- Ovaries produce eggs and female sex hormones
- Mammary glands produce milk

