

Syrian Private University

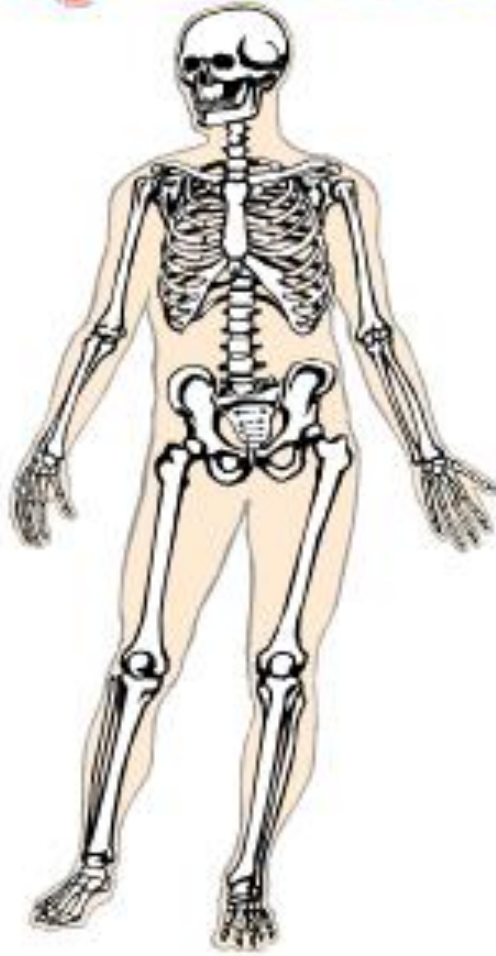
Medical Faculty

Medical Terminology

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Lecture 2

Body Structure



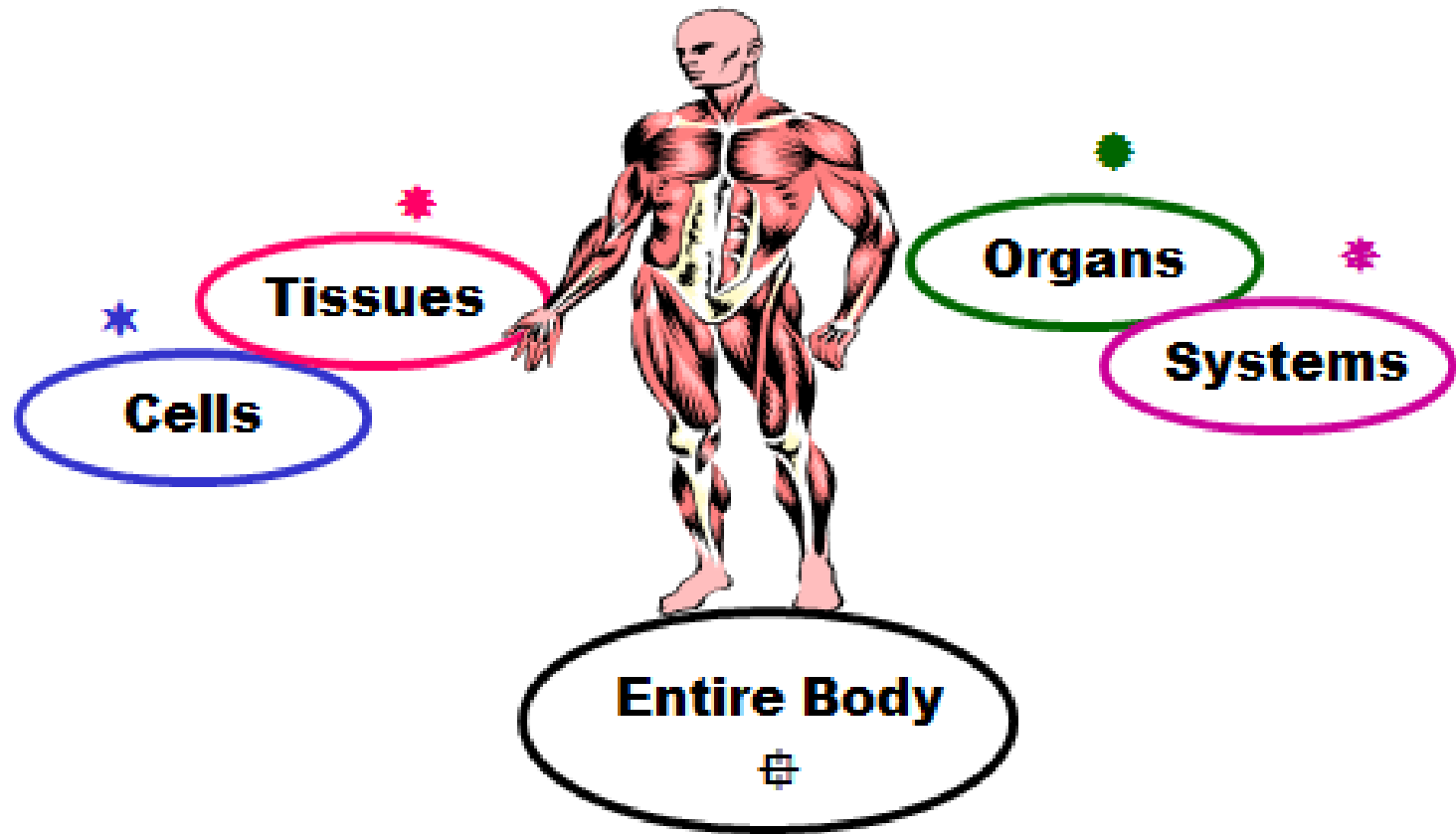
Objectives

After studying this chapter, you will be able to:

- **Define the elements of human body structure**
- **Describe the planes of the body**
- **Locate the body cavities and list organs that are contained within each cavity**
- **Recognize the combining forms that relate elements and systems of the body**

Body Structure and Organization

The body is organized from its smallest element, the cell, to the collection of systems.



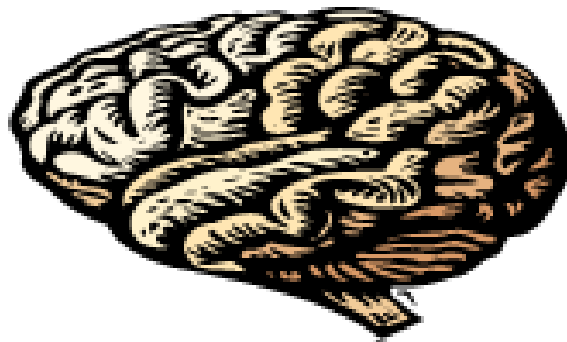
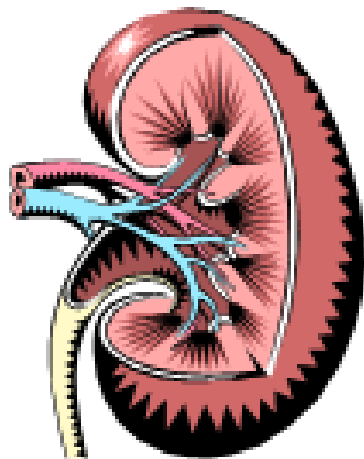
Body Structure and Organization

Organs

Groups of tissues that work together to perform a specific function are called *organs*.

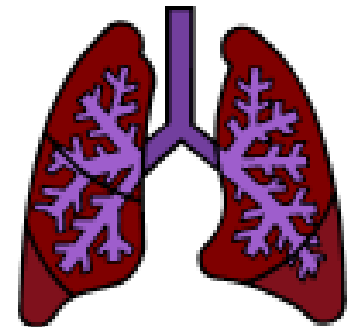
Organ Examples:

kidney



brain

lungs



Body Structure and Organization

Systems

Groups of organs that work together to perform one of the body's major functions are called

systems. Integumentary System

Consists of:

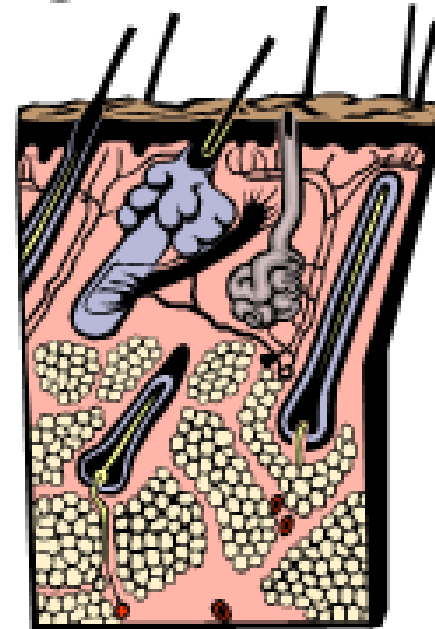
Skin

Hair

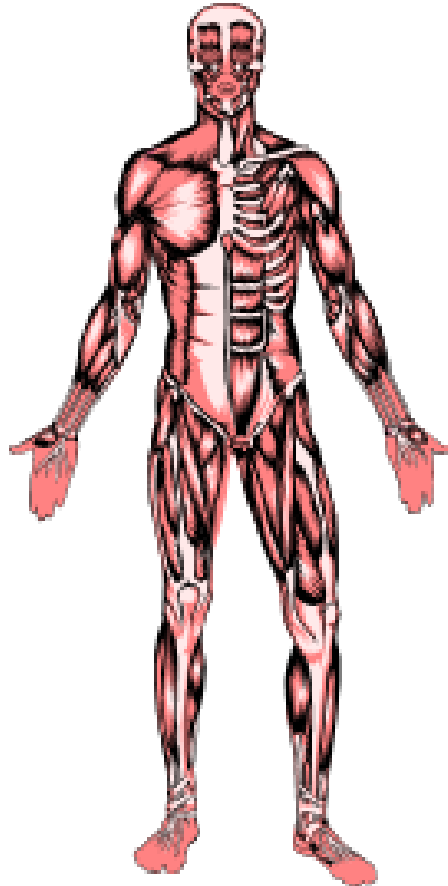
Nails

Sweat glands

Oil glands



Body Structure and Organization



Musculoskeletal System

Supports the body, protects organs and provides body movement.

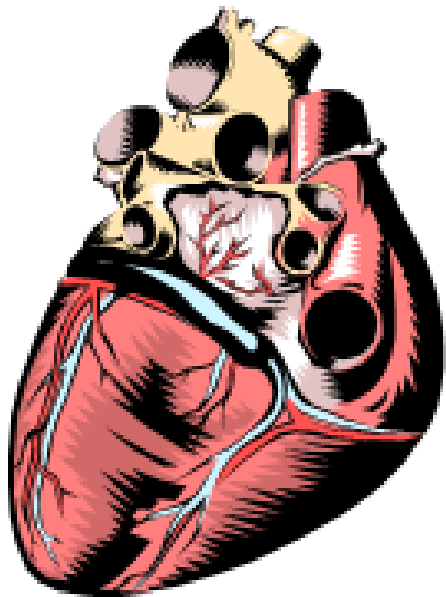
Consists of:

- **Muscles**
- **Bones**
- **Cartilage**

Body Structure and Organization

Cardiovascular System

Pumps and transports blood throughout the body. Blood carries nutrients and removes waste from the tissues.



Consists of:

- **Heart**
- **Blood Vessels**

Body Structure and Organization

Respiratory System

- Performs respiration



Consists of the lungs and the airways

Body Structure and Organization

Nervous System

Regulates most of the body's activities and sends and receives messages from sensory organs.



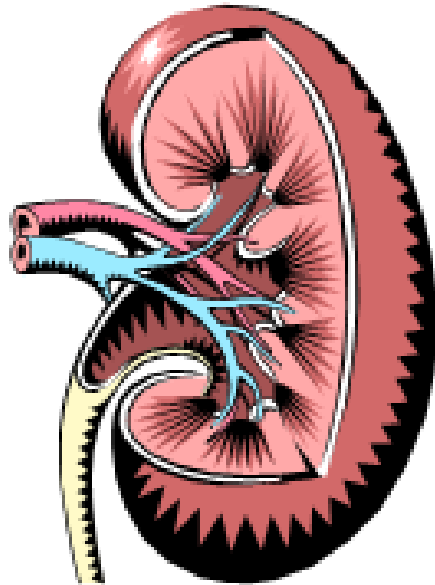
Consists of :

Brain

Peripheral Nerves

Spinal Cord

Body Structure and Organization



Kidneys

Urinary System

- Eliminates metabolic waste
- Helps to maintain acid-base and water-salt balance
- Helps regulate blood pressure

Consists of:

Bladder

Ureters

Urethra

Body Structure and Organization

Reproductive System

Controls reproduction and heredity.

Male Structures

- testes
- penis
- prostate gland
- vas deferens
- seminal vesicles

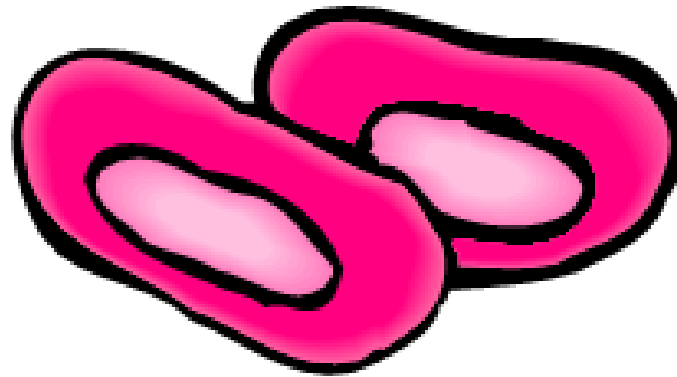
Female Structures

- ovaries
- vagina
- uterine tubes
- uterus
- mammary glands

Body Structure and Organization

Blood System

Blood transports nutrients and waste to and from body tissues.



Red Blood Cell

Body Structure and Organization

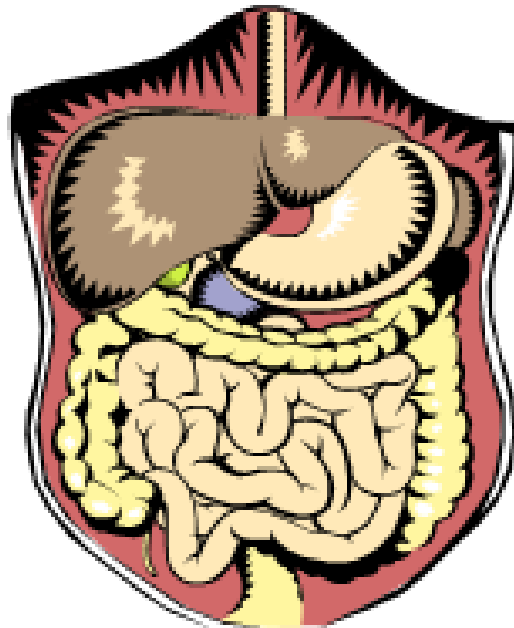
Lymphatic and Immune System

Consists of:

- Lymph
- Lymphatic Vessels
- Lymphatic Glands
- Nonspecific Defenses of the Immune System

Body Structure and Organization

Digestive System

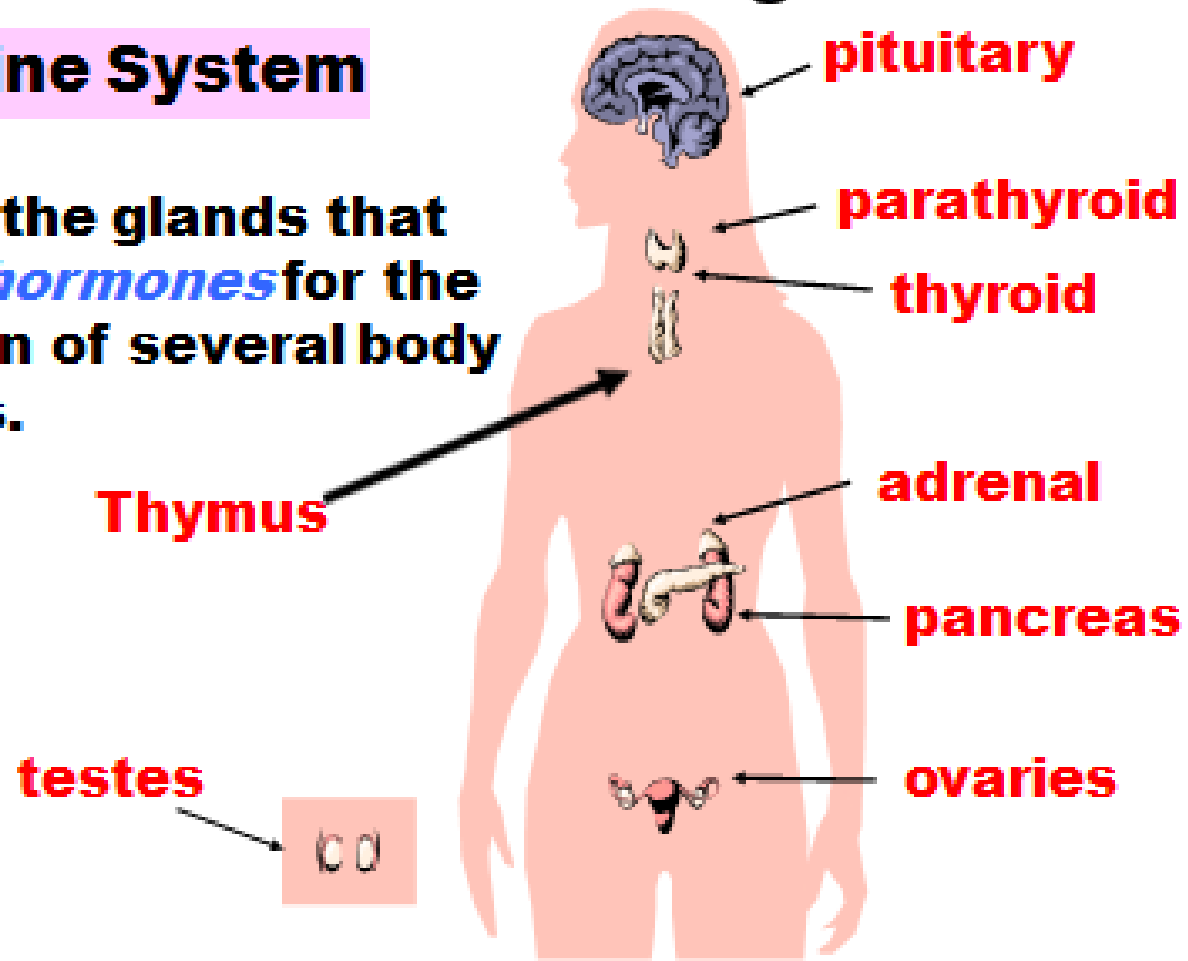


Includes all organs of digestion and excretion of waste.

Body Structure and Organization

Endocrine System

Includes the glands that secrete *hormones* for the regulation of several body activities.



Body Structure and Organization

Body Cavities

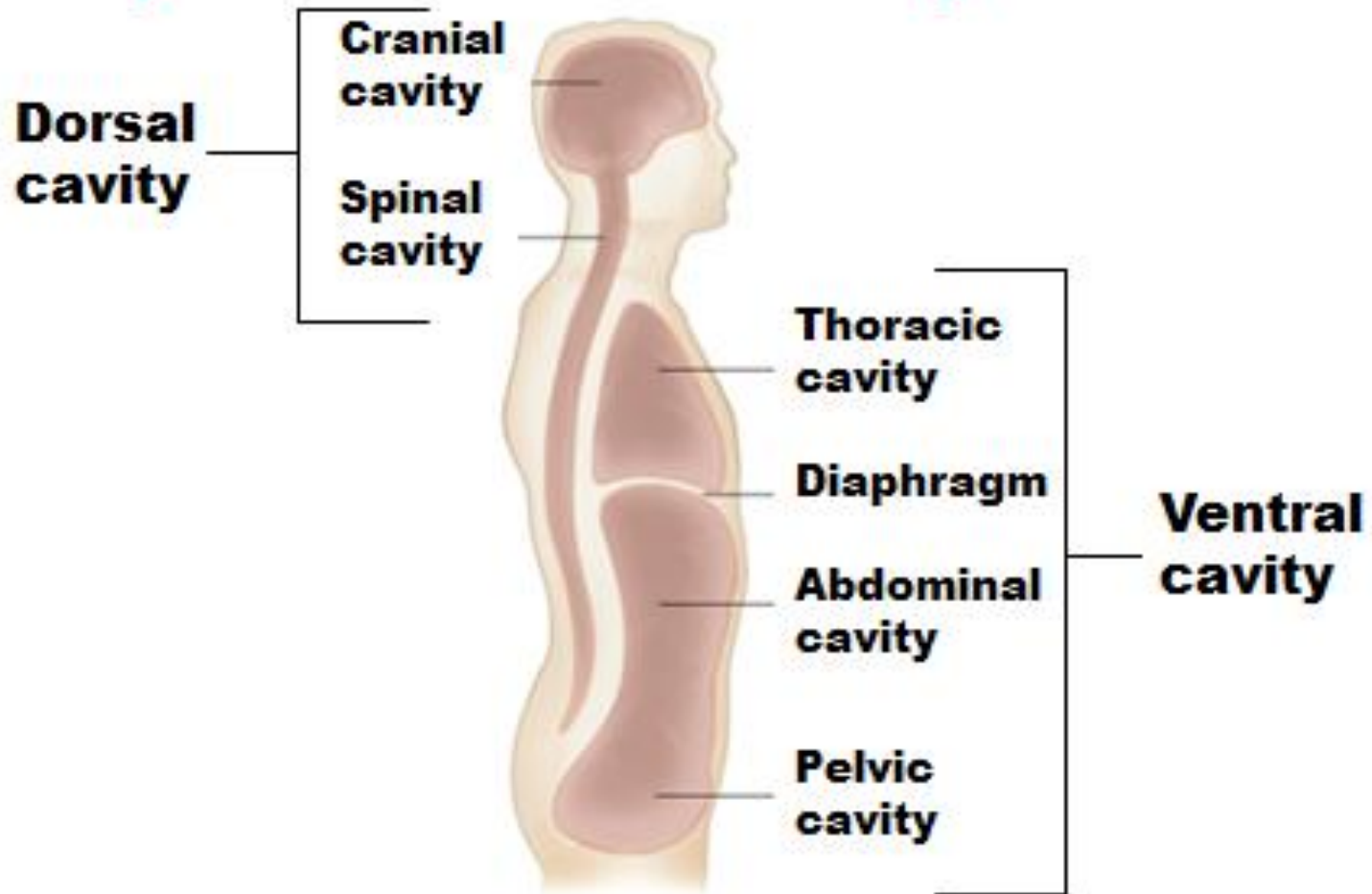
Dorsal (back side of the body)

- Consists of the *cranial* cavity and *spinal* cavity

Ventral (front side of the body)

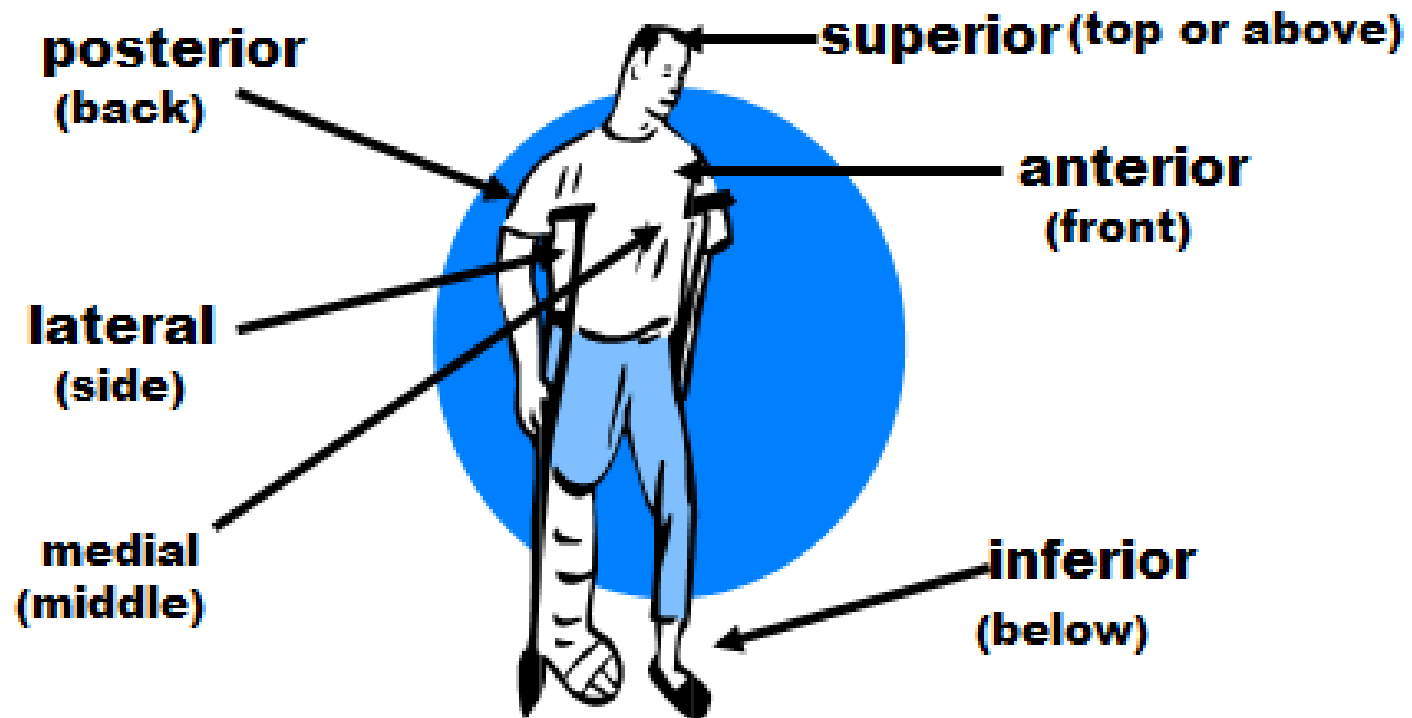
- Separated by *diaphragm* into the *thoracic* cavity and *abdominal* cavity
- Lower portion of the abdominal cavity is called the *pelvic* cavity

Body Structure and Organization

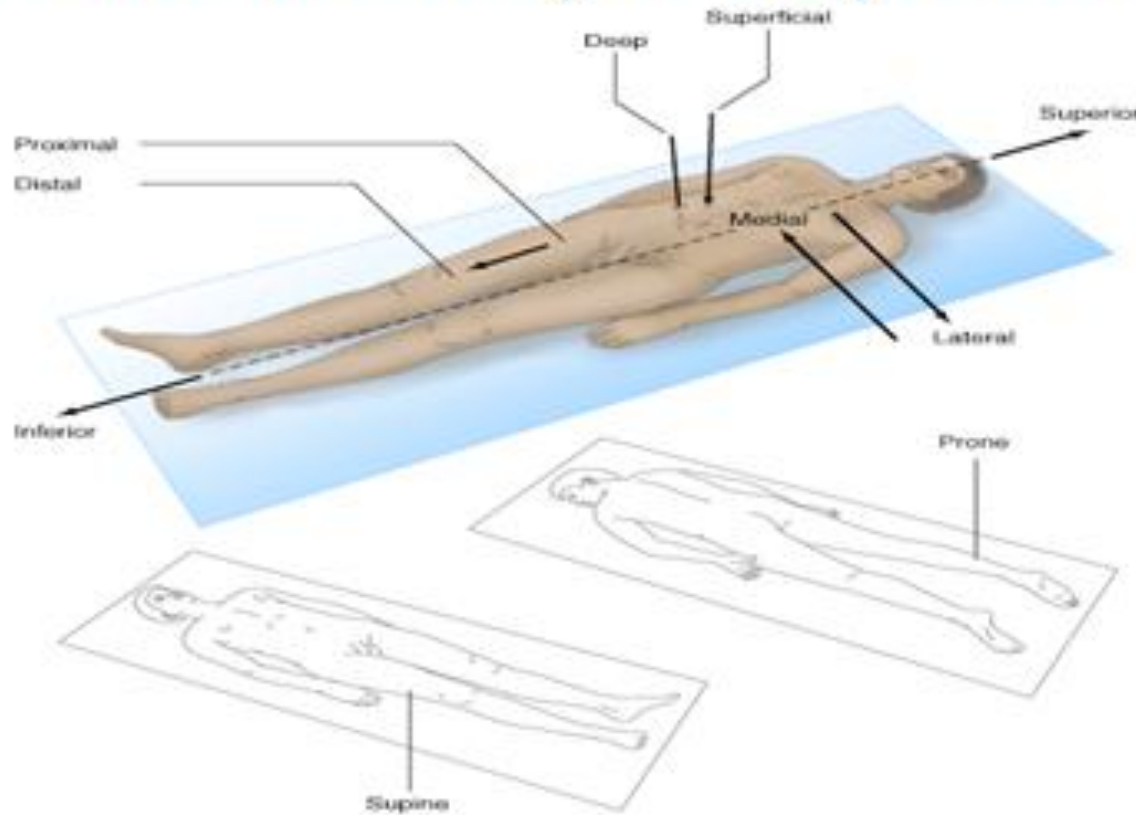


Directional Terms, Planes, and Regions

Directional terms describe a portion or position of the body.



Directional Terms, Planes, and Regions

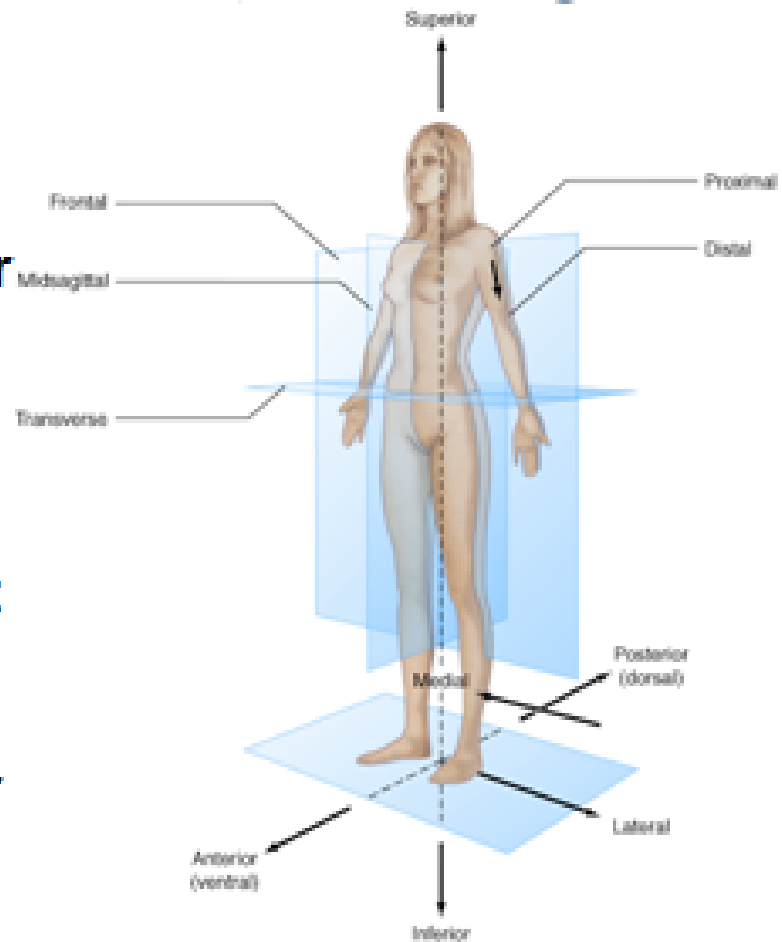


For examination purposes, patients are either lying face up (*supine*) or face down (*prone*).

Directional Terms, Planes, and Regions

Planes of the Body

- **Frontal** divides the body into anterior and posterior positions.
- **Sagittal** is the lateral position.
- **Medial** or **midsagittal** divides the body into right and left halves.
- **Transverse** divides the body into upper and lower sections.



Directional Terms, Planes, and Regions

Quadrants of the Body

Abdominopelvic Quadrants

