

GENERAL HUMAN ANATOMY

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THE DEFINITION OF ANATOMY

❖ Anatomy

- Greek=to cut up, or dissect
- The science that deals with the **structure** of the body

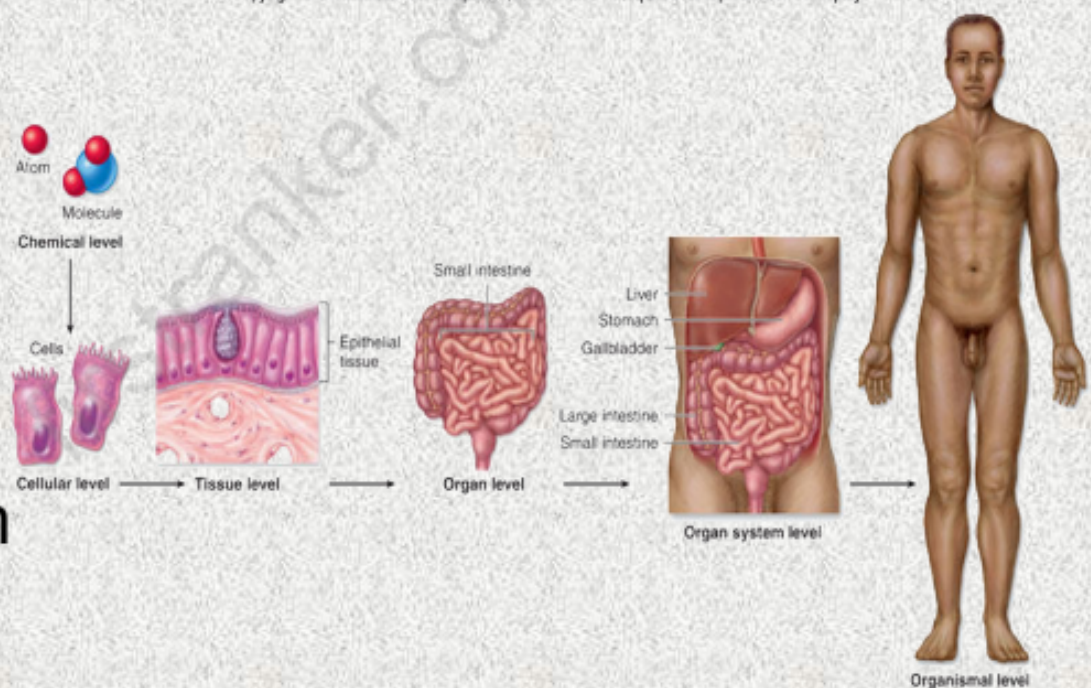
❖ Kinds:

- Gross Anatomy
- Microscopic Anatomy
- Developmental Anatomy
- Comparative Anatomy

STRUCTURAL LEVELS OF ORGANIZATION

- ❖ Chemical
- ❖ Cellular
- ❖ Tissue
- ❖ Organ
- ❖ System
- ❖ Organism

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Anatomical Terminology

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- ❖ **Anatomic position** is a specific body position in which an individual stands **upright** with the **feet parallel** and **flat** on the floor.
- ❖ The head is **level**, and the **eyes look forward** toward the observer.
- ❖ The **arms are at either side** of the body with the **palms facing forward** and the **thumbs pointing away** from the body.



Coronal plane

Transverse plane

Sagittal plane

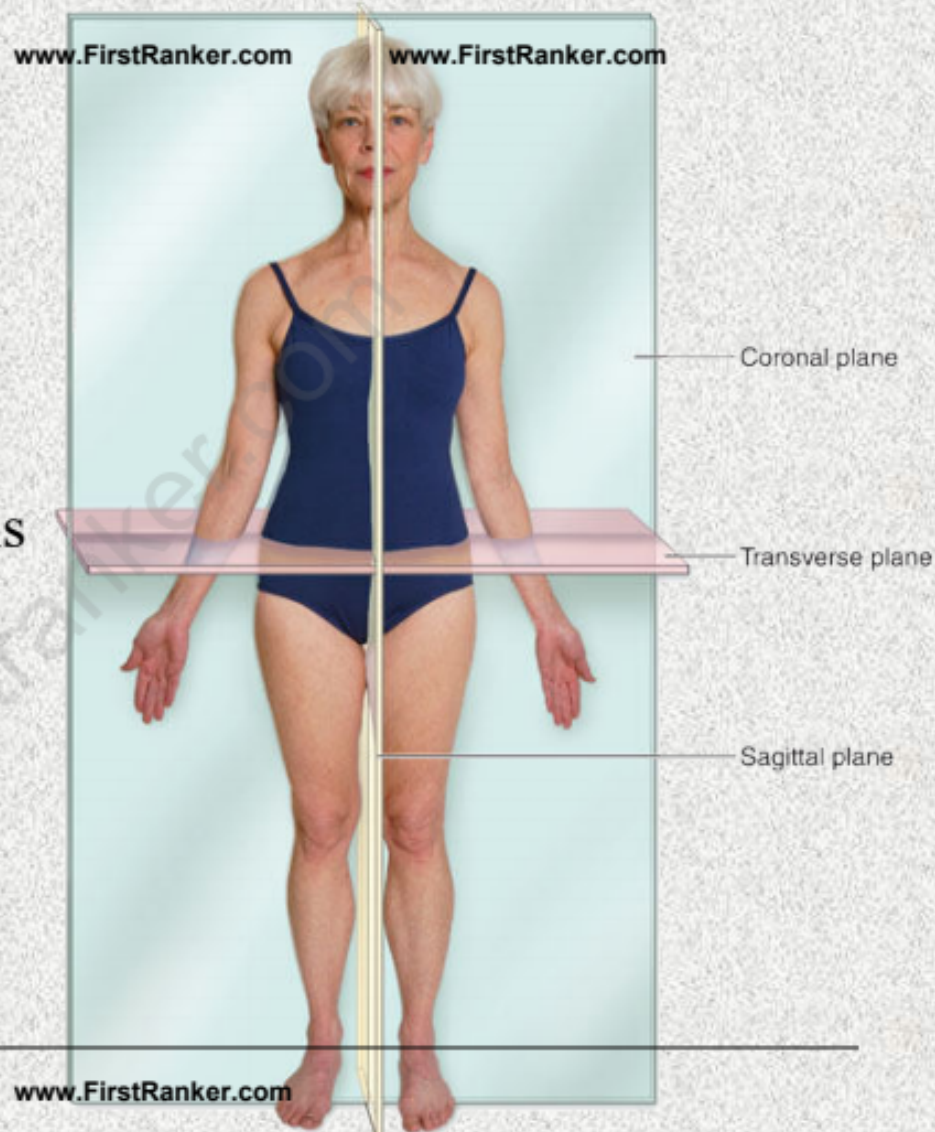
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Anatomical Terminology

- ❖ A **plane** is an imaginary surface that slices the body into specific sections.
- ❖ The three major anatomic planes of reference are the **coronal, transverse, and sagittal** planes.

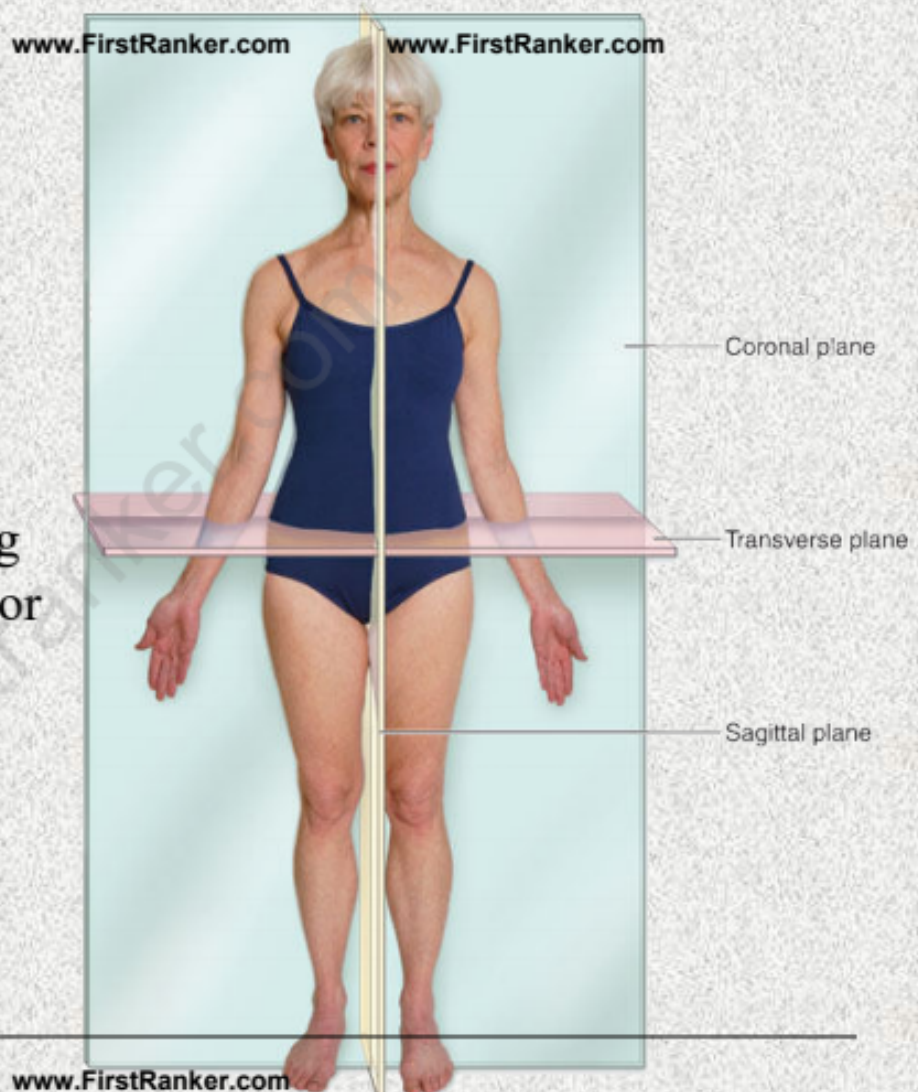
Sections and Planes

A **coronal** plane, also called a **frontal plane**, is a **vertical plane** that divides the body into anterior (front) and posterior (back) parts.



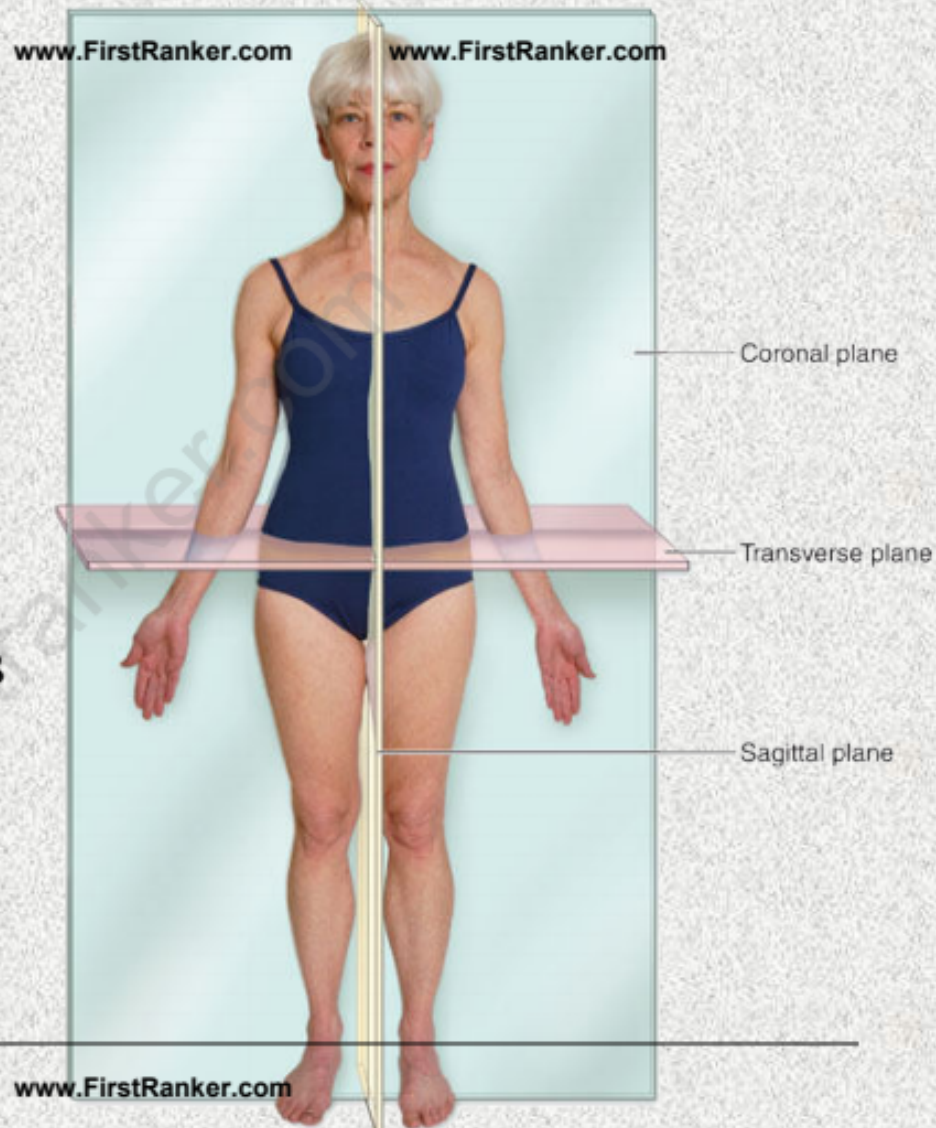
Sections and Planes

- ❖ A **transverse** plane, also called a **cross-sectional plane** or horizontal plane, cuts perpendicularly along the **long axis** of the body or organ separating it into both superior (upper) and inferior (lower) parts.



Sections and Planes

- ❖ A **sagittal** plane or median plane, extends through the body or organ **vertically** and divides the structure into **right and left halves**.



Sections and Planes

- ❖ A sagittal plane in the body midline is a **midsagittal** plane.
- ❖ A plane that is parallel to the midsagittal plane, but either **to the left or the right of it**, is termed a **parasagittal (or sagittal) plane**.
- ❖ A minor plane, called the **oblique** plane, passes through the specimen at an **angle**.

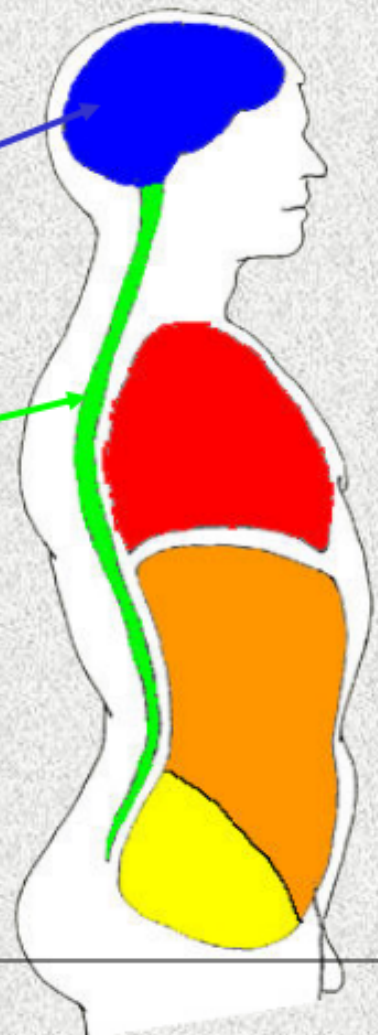
Body Cavities: Dorsal

❖ Cranial Cavity

- Houses the Brain

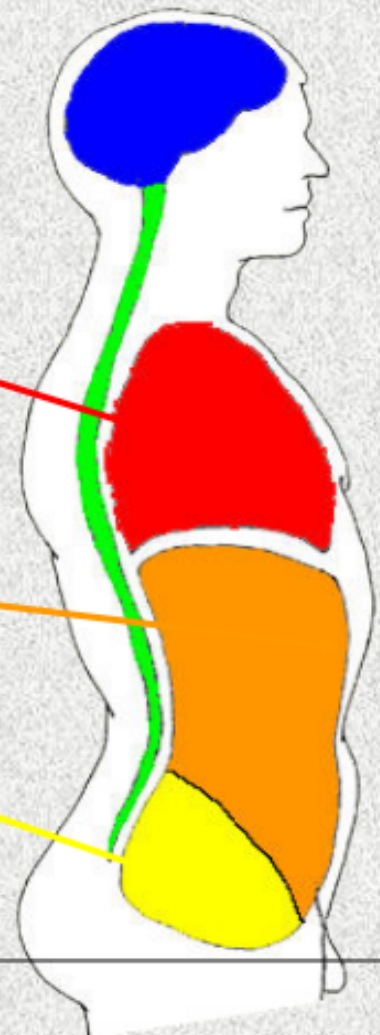
❖ Vertebral Canal

- Houses the Spinal Cord



Body Cavities: Ventral (Lateral View)

- ❖ **Thoracic Cavity**
- ❖ **Abdominopelvic Cavity (contains the "viscera")**
 - **Abdominal Cavity**
 - **Pelvic Cavity**



Other Cavities

- ❖ Oral cavity
- ❖ Nasal cavity
- ❖ Orbital cavities
- ❖ Middle ear cavities

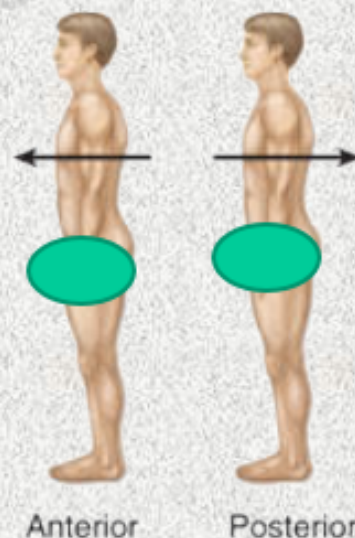
Directional Terms of the Body

- ❖ Directional terms are precise and brief, and for most of them there is a **correlative** term that means **just the opposite**.

Relative and Directional Terms of the Body

❖ Relative to front (belly side) or back (back side) of the body :

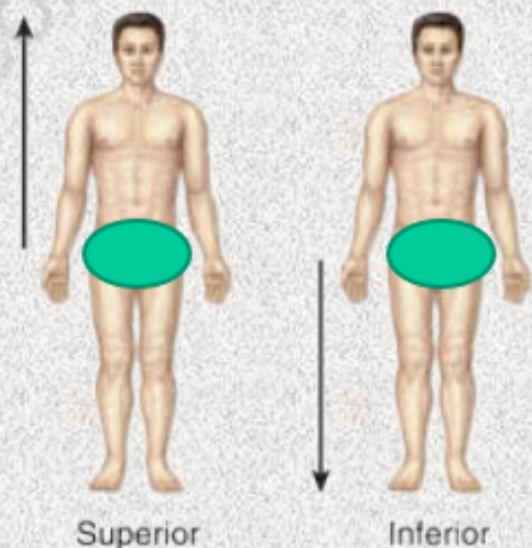
- **Anterior** = In front of; toward the front surface
- **Posterior** = In back of; toward the back surface
- **Dorsal** = At the back side of the human body
- **Ventral** = At the belly side of the human body



Relative and Directional Terms of the Body

❖ Relative to the head or tail of the body:

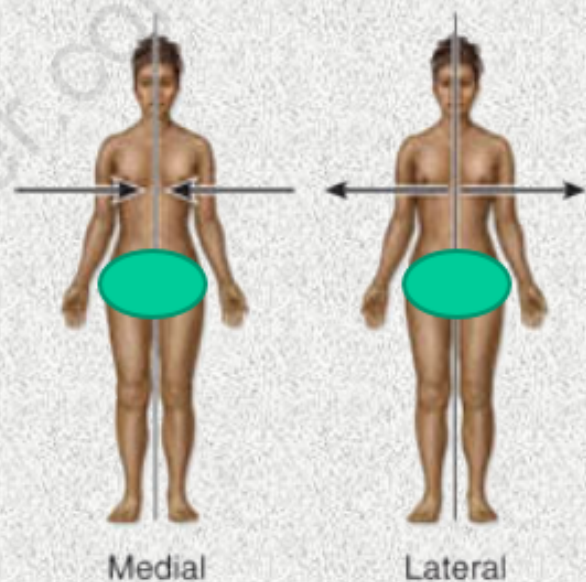
- **Superior** = Toward the head or above
- **Inferior** = Toward feet not head
- **Caudal** = At the tail end
- **Cranial** = At the head end



Relative and Directional Terms of the Body

❖ Relative to the midline or center of the body:

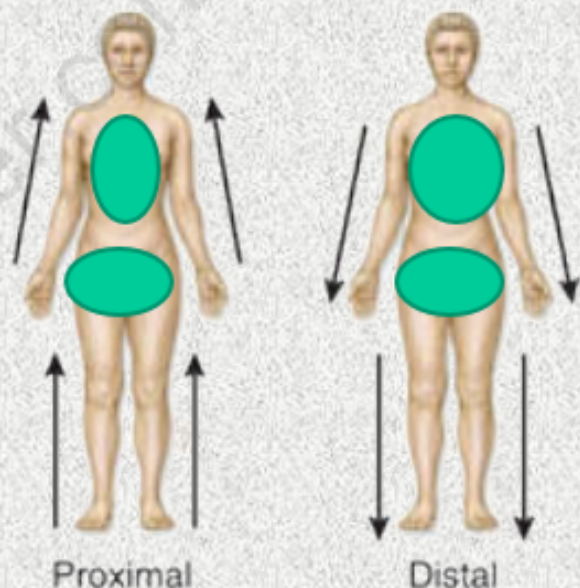
- **Medial** = Toward the midline of the body
- **Lateral** = Away from the midline of the body
- **Deep** = On the inside, underneath another structure
- **Superficial** = On the outside



Relative and Directional Terms of the Body

❖ Relative to point of attachment of the appendage:

- **Proximal** = Closest to point of attachment to trunk
- **Distal** = Furthest from point of attachment to trunk



Body Regions

- ❖ The human body is partitioned into two main regions, called the **axial** and **appendicular** regions.
 - the **axial region** includes the head, neck, and trunk which comprise the main vertical axis of our body
 - our limbs, or appendages, attach to the body's axis and make up the **appendicular region**

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