



TERMINOLOGIES:

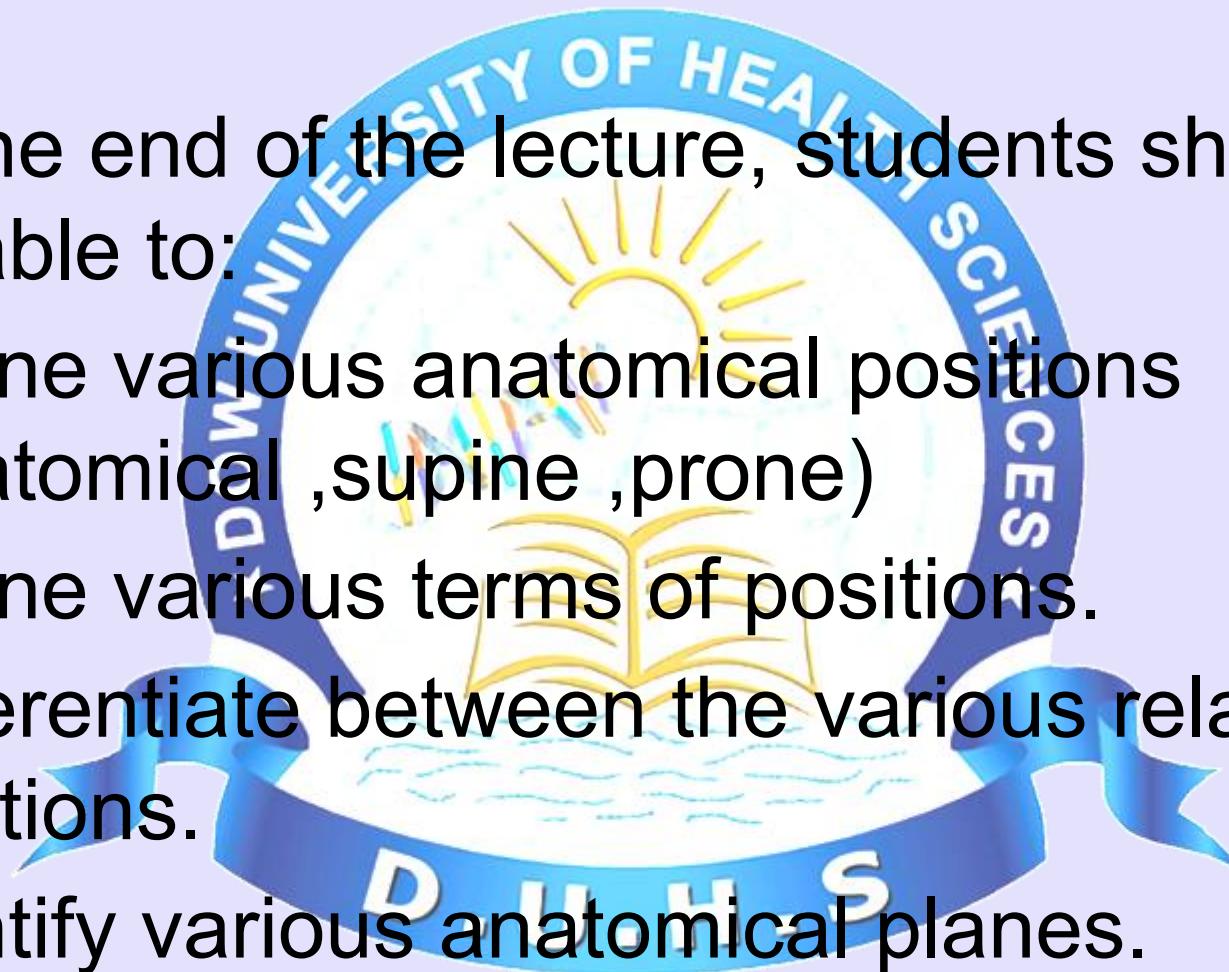
ANATOMICAL POSITIONS

ANATOMICAL PLANES

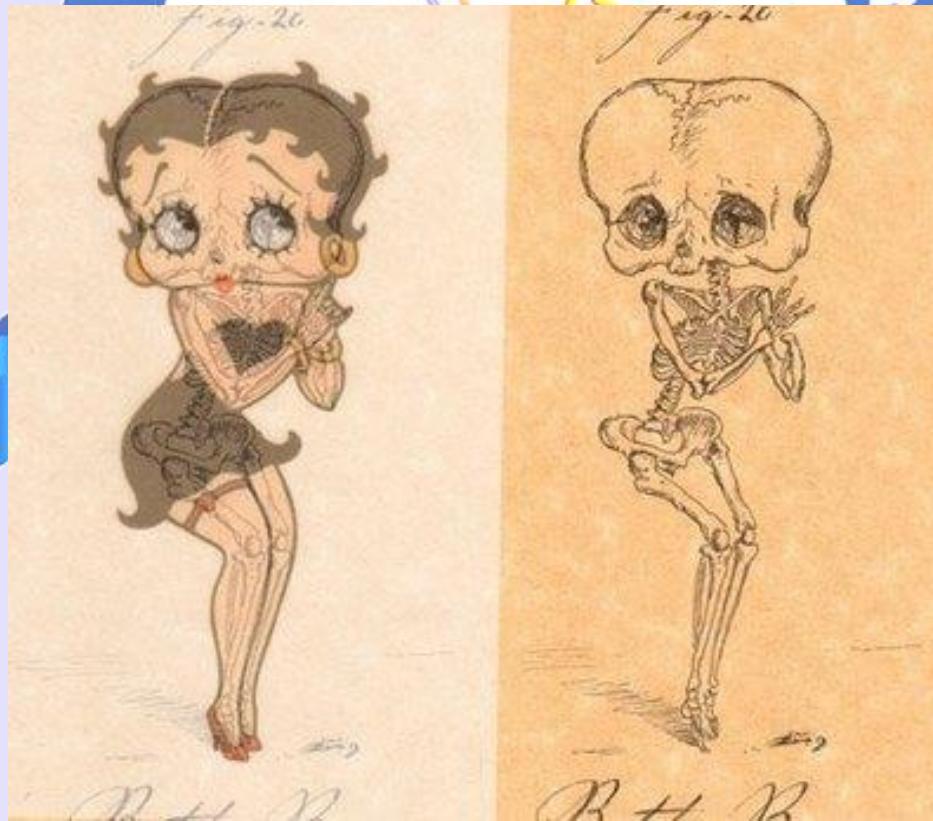
TERMS OF POSITIONS

LEARNING OBJECTIVES

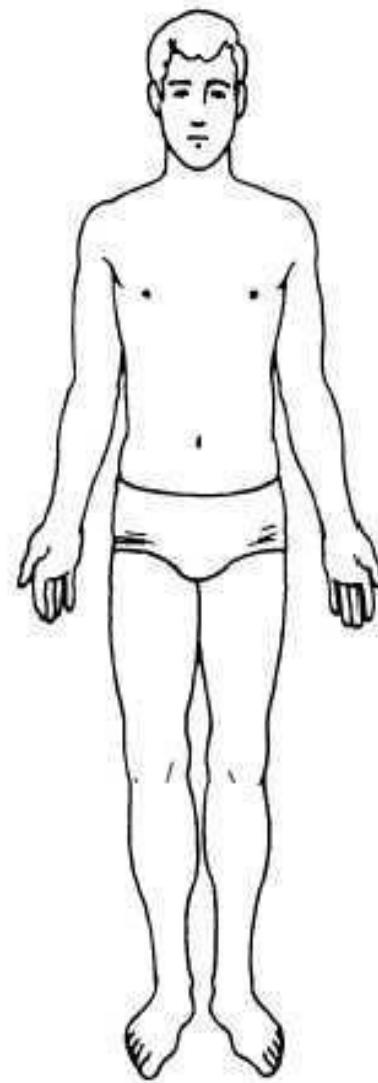
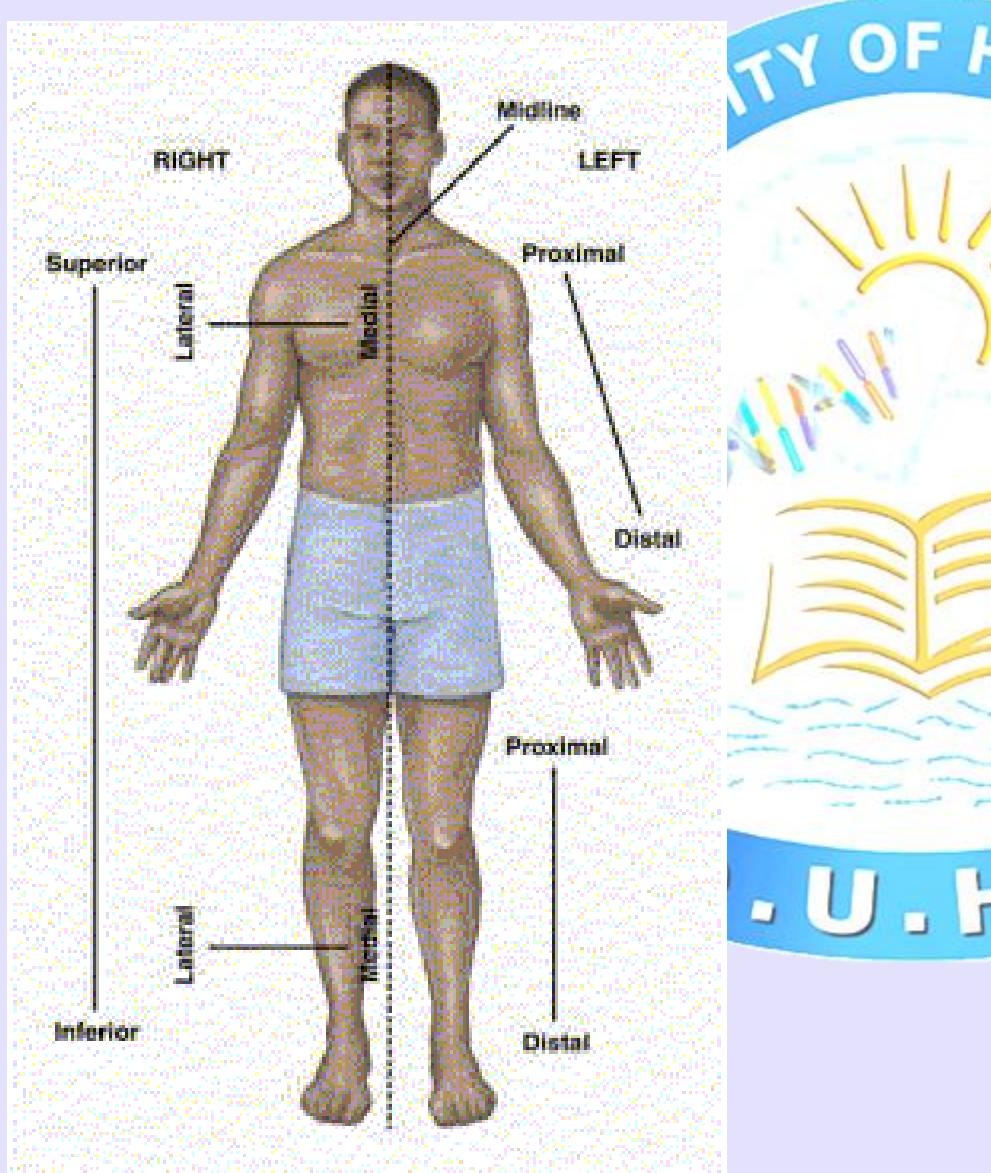
- At the end of the lecture, students should be able to:
- Define various anatomical positions (anatomical ,supine ,prone)
- Define various terms of positions.
- Differentiate between the various relative positions.
- Identify various anatomical planes.



WHAT DO YOU UNDERSTAND BY ANATOMY?



ANATOMICAL POSITIONS



- COMMONLY USED POSITIONS

- SUPINE

Supine Position

The supine position is a position of the body; lying down with the face up, person looking upward



Supine

- PRONE

Prone Position

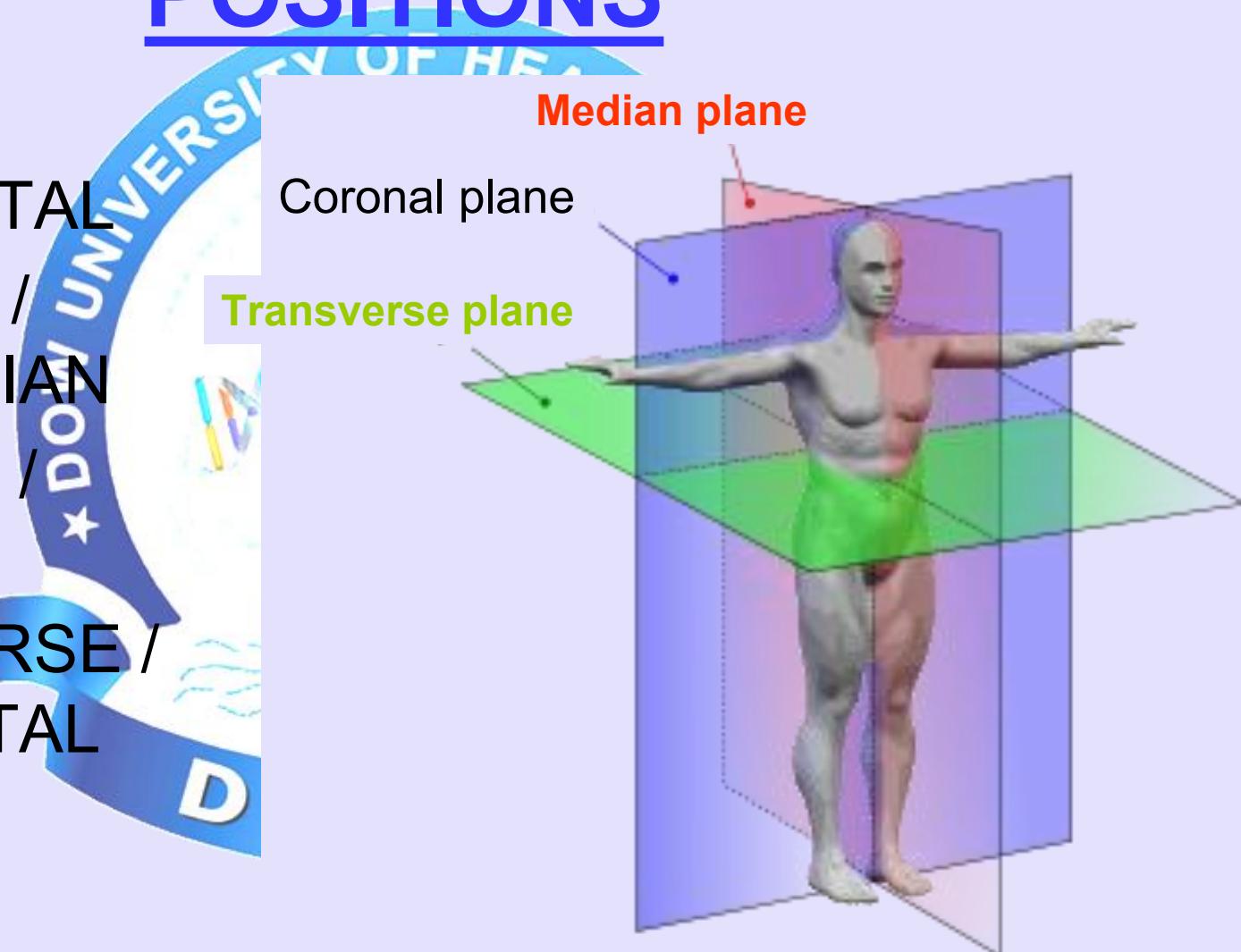
Prone position is lying on table and face directed downward towards floor



Prone

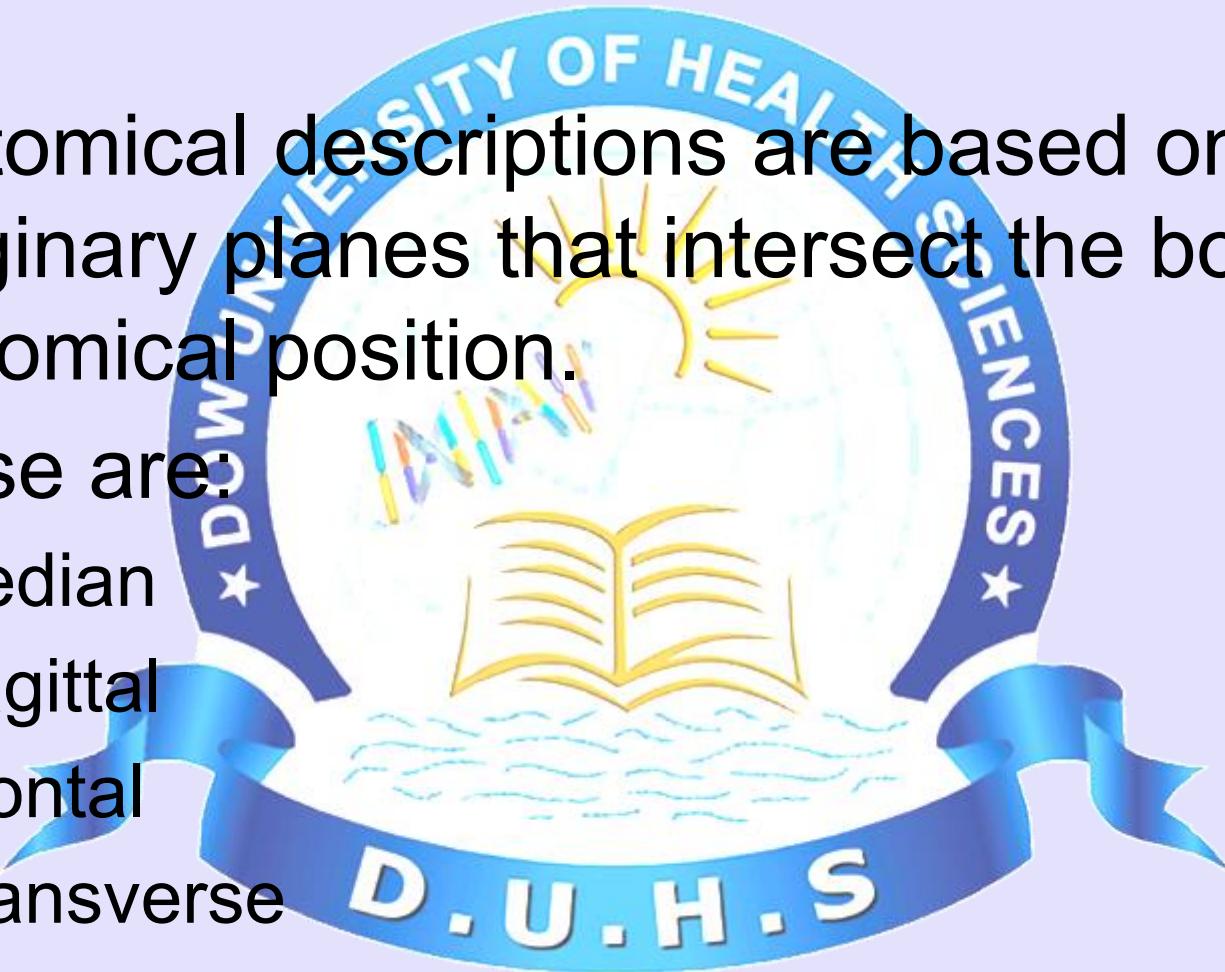
PLANES USED TO DESCRIBE POSITIONS

- MEDIAN / MIDSAGITTAL
- SAGITTAL / PARAMEDIAN
- CORONAL / FRONTAL
- TRANSVERSE / HORIZONTAL
- OBLIQUE



ANATOMICAL PLANES

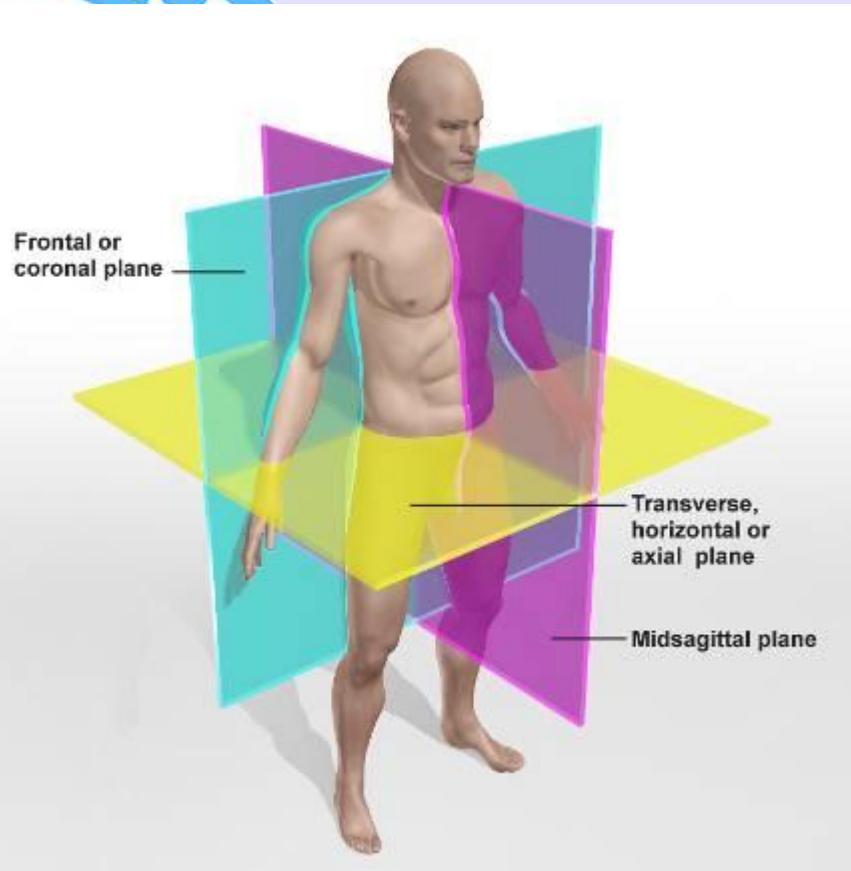
- Anatomical descriptions are based on four imaginary planes that intersect the body in anatomical position.
- These are:
 - Median
 - Sagittal
 - Frontal
 - Transverse



MEDIAN PLANE

Median Plane / midline:

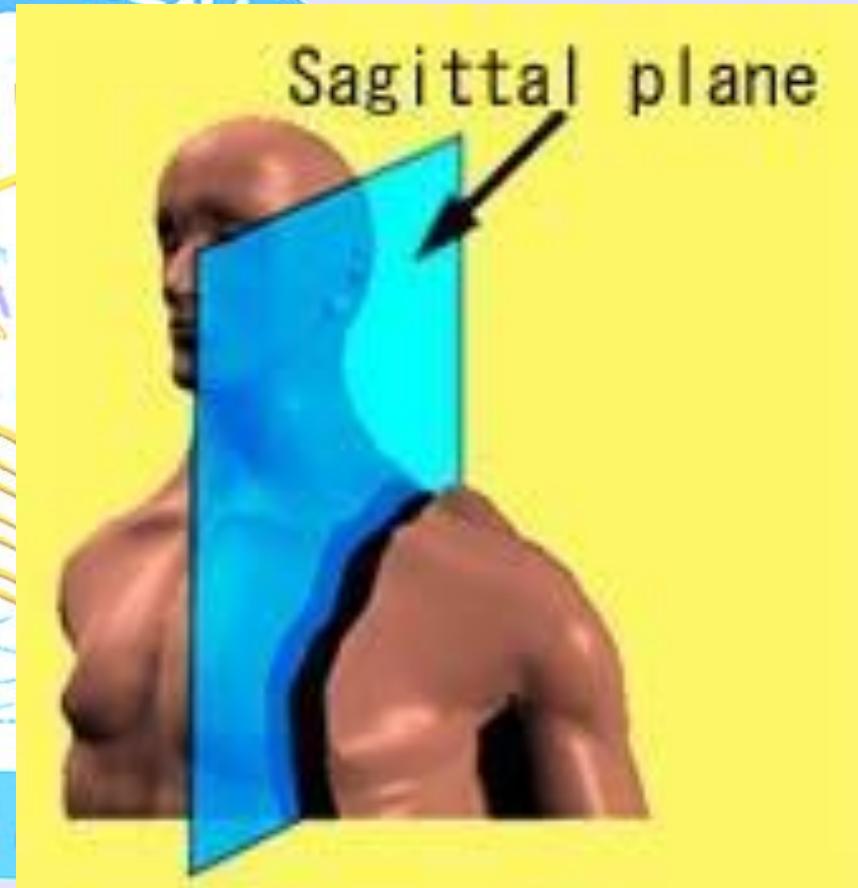
- Vertical plane passing longitudinally through the body , divides the body into **right and left halves**.
- Plane defines the midline of the head, neck and trunk where it intersects the surface of the body.



SAGITTAL PLANE

Sagittal Plane:

- Vertical planes passing through the body parallel to the median plane.
- Plane parallel and near to the median plane is paramedian plane

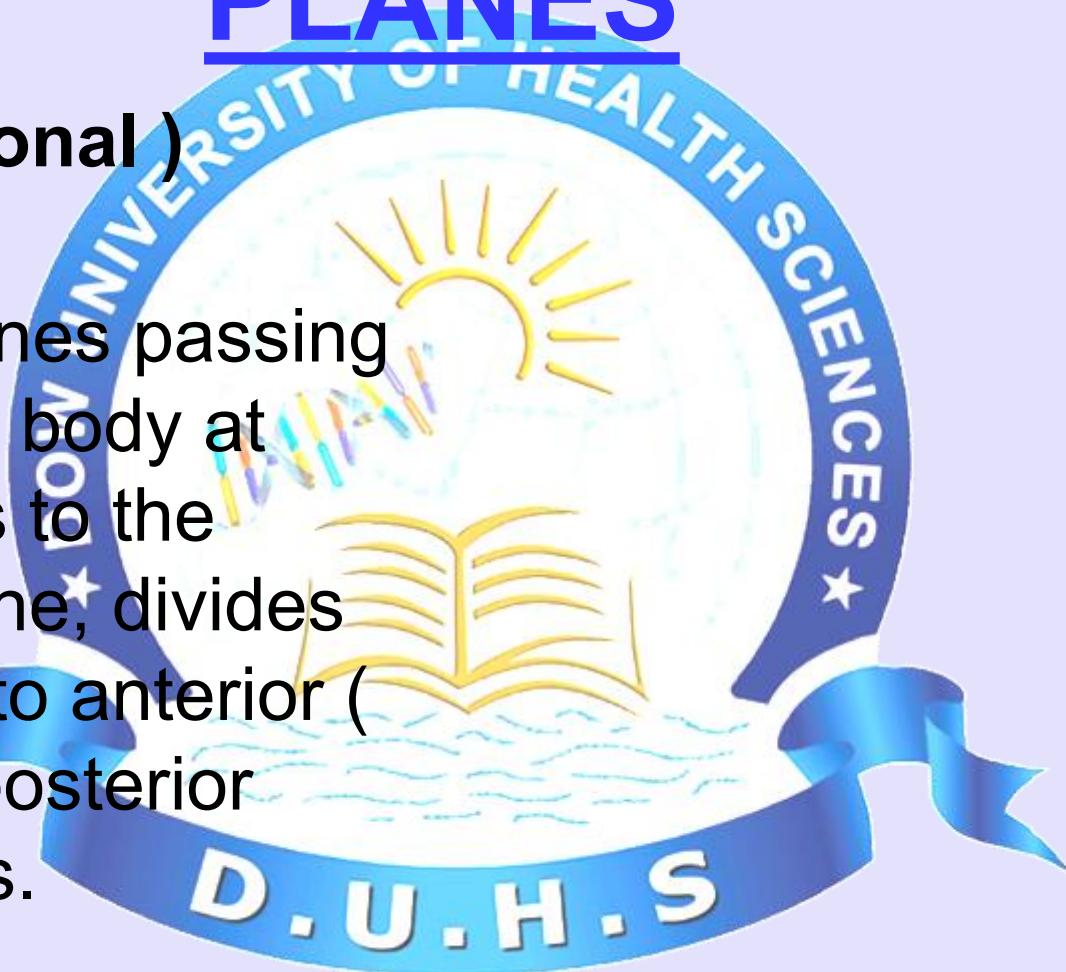


FRONTAL (CORONAL)

PLANES

**Frontal (coronal)
planes:**

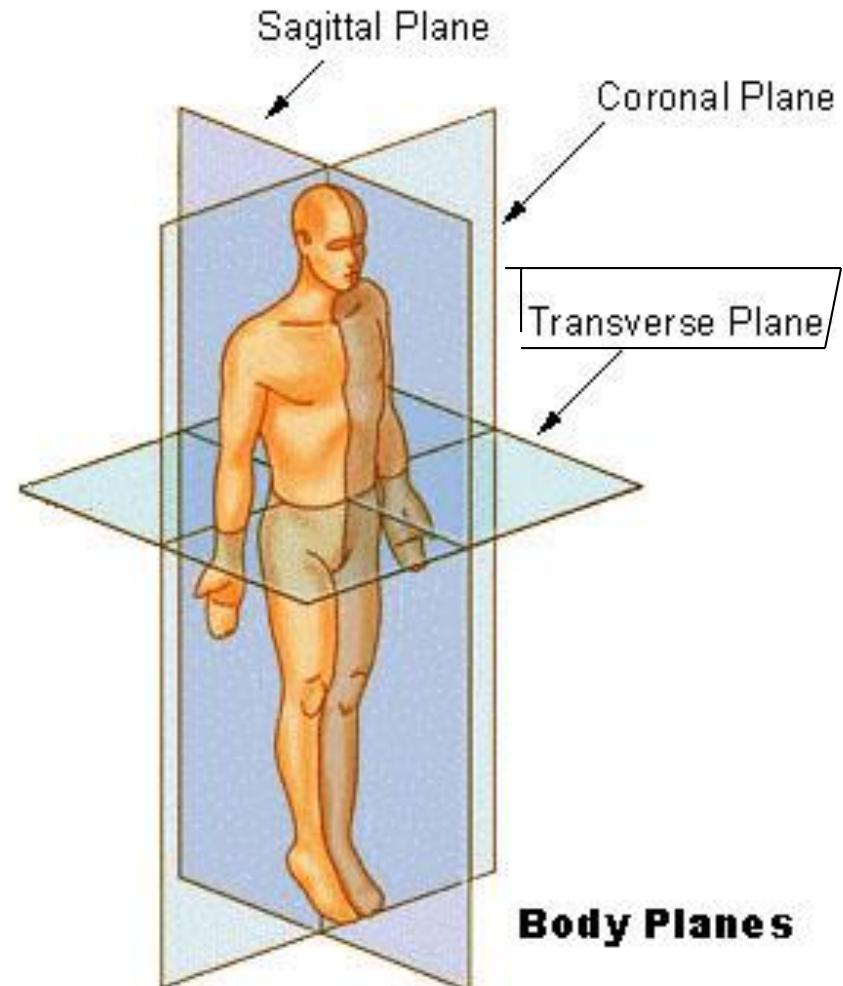
- Vertical planes passing through the body at right angles to the median plane, divides the body into anterior (front) and posterior (back) parts.



TRANSVERSE PLANES

Transverse Planes:

- Horizontal plane passing through the body at right angles to the median and frontal planes, dividing the body into **superior** (upper) and **inferior** (lower) parts.



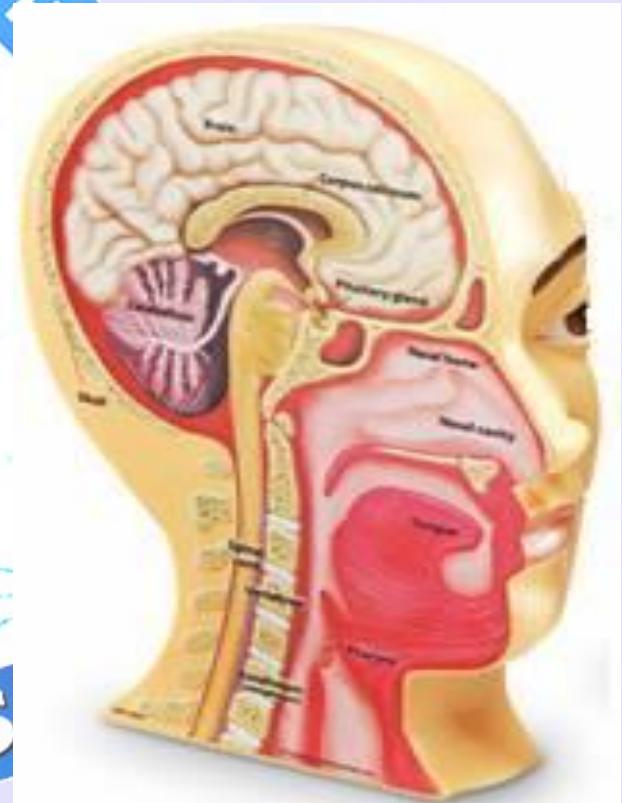
SECTIONS

LONGITUDINAL SECTION

Main use of anatomical planes is to describe sections.

- **Longitudinal Section:**

- Runs lengthwise or parallel to the long axis of the body.
- Median, sagittal and frontal planes are the standard longitudinal sections

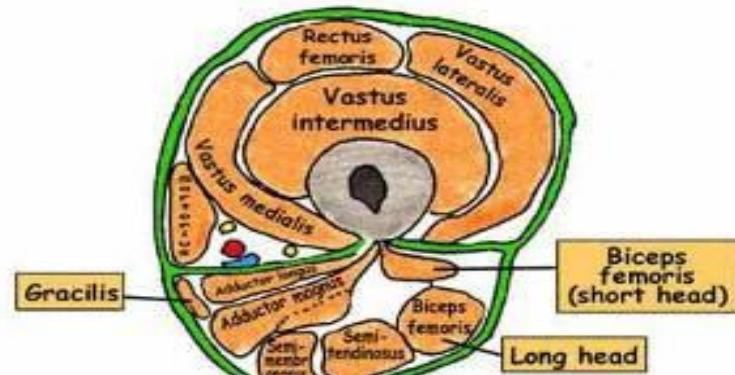


TRANSVERSE SECTIONS

- **Transverse sections or cross sections:**

- Slices of the body or its parts that are cut at right angles to the longitudinal axis of the body or of any of its parts.
- Transverse section of the foot lies in the frontal plane, because the long axis of the foot runs horizontally.

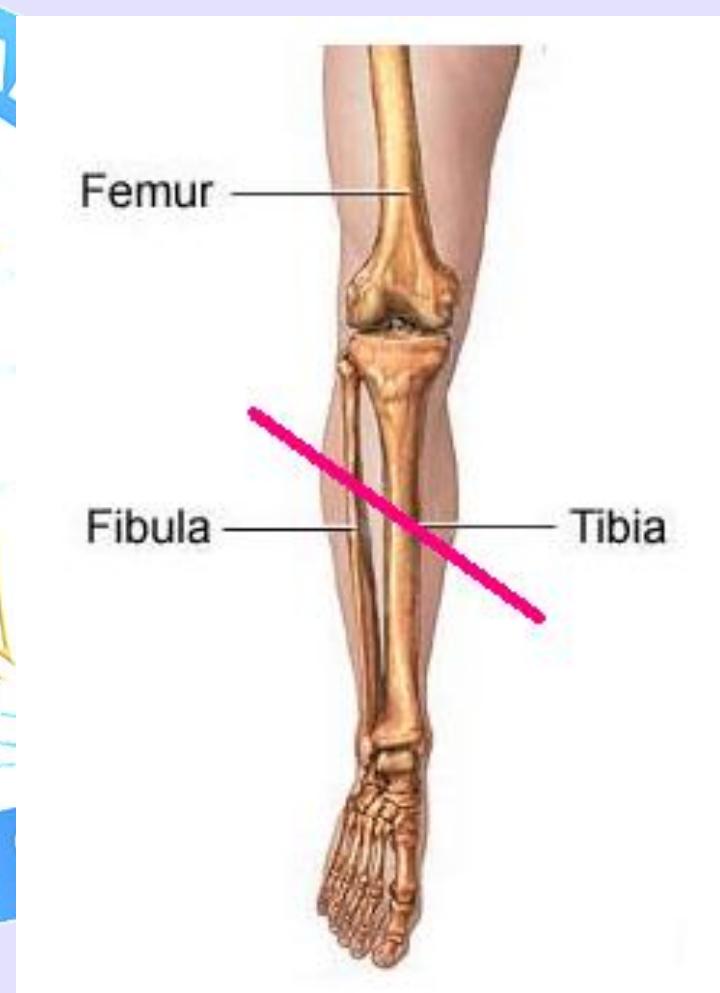
CROSS (AXIAL) SECTION OF MID LEFT THIGH LOOKING UP



Note: There is no posterior intermuscular septum.
It would divide adductor magnus if present.

OBLIQUE SECTIONS

- **Diagonal cross section** attained by slicing, actually or through imaging techniques, the body, in any plane that neither longitudinal (vertical) nor transverse (horizontal).
- In practice, many radiographic images and anatomical sections do not lie precisely in sagittal, frontal or transverse planes; often they are slightly oblique.



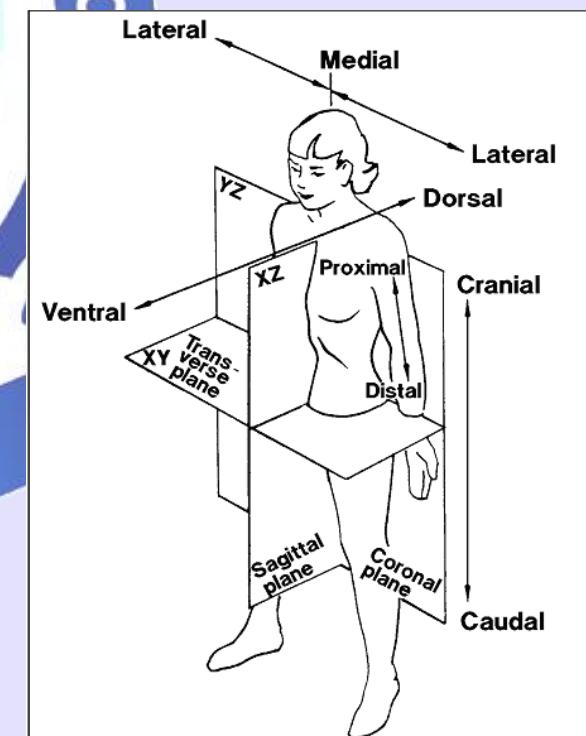
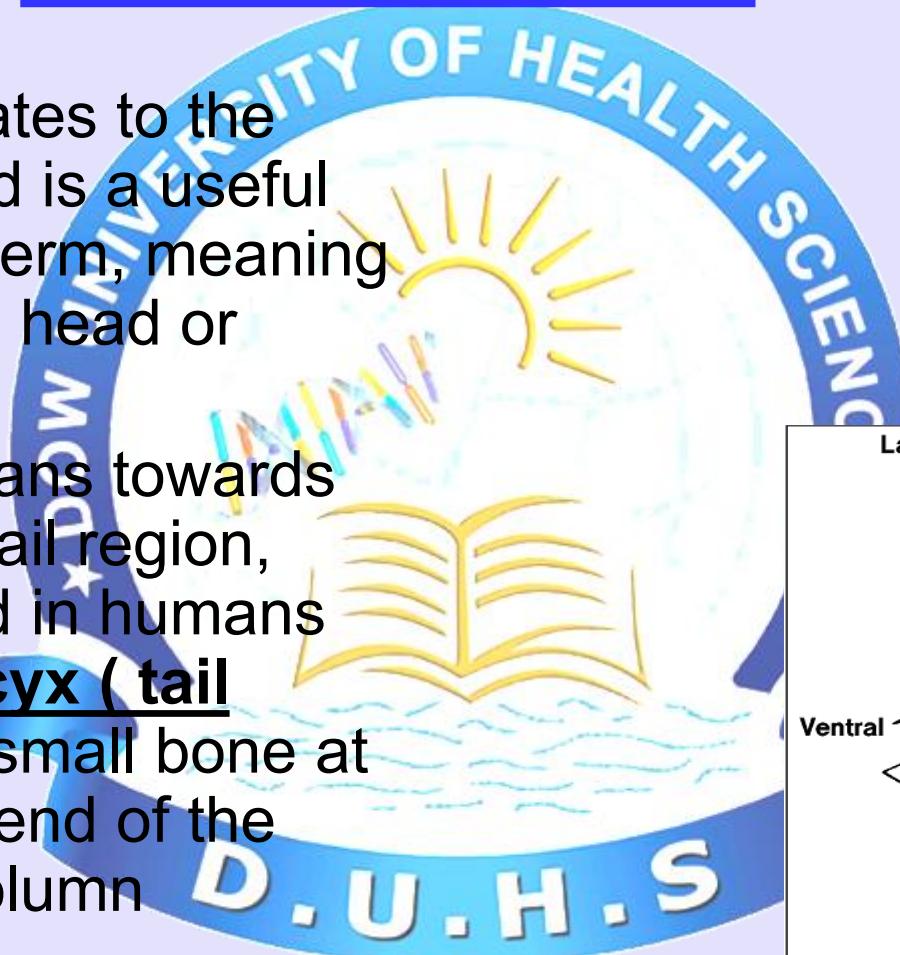
TERMS OF RELATIONSHIP AND COMPARISON

- **Superior** refers to a structure that is nearer the **vertex**, topmost point of the cranium.
- **Inferior** refers to a structure that is situated nearer the sole of the foot .



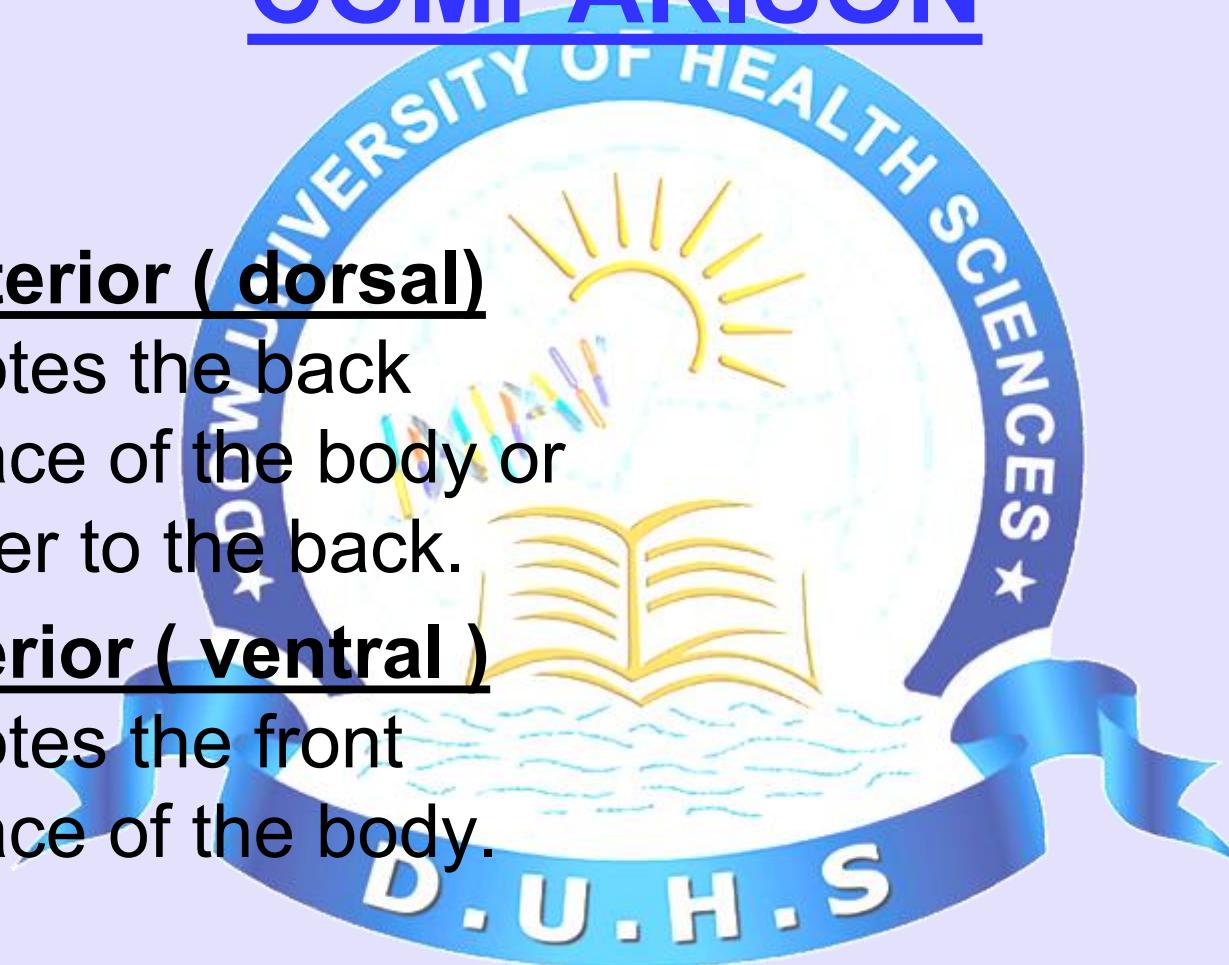
TERMS OF RELATIONSHIP AND COMPARISON

- **Cranial** relates to the cranium and is a useful directional term, meaning towards the head or cranium.
- **Caudal** means towards the feet or tail region, represented in humans by the **coccyx (tail bone)**, the small bone at the inferior end of the vertebral column



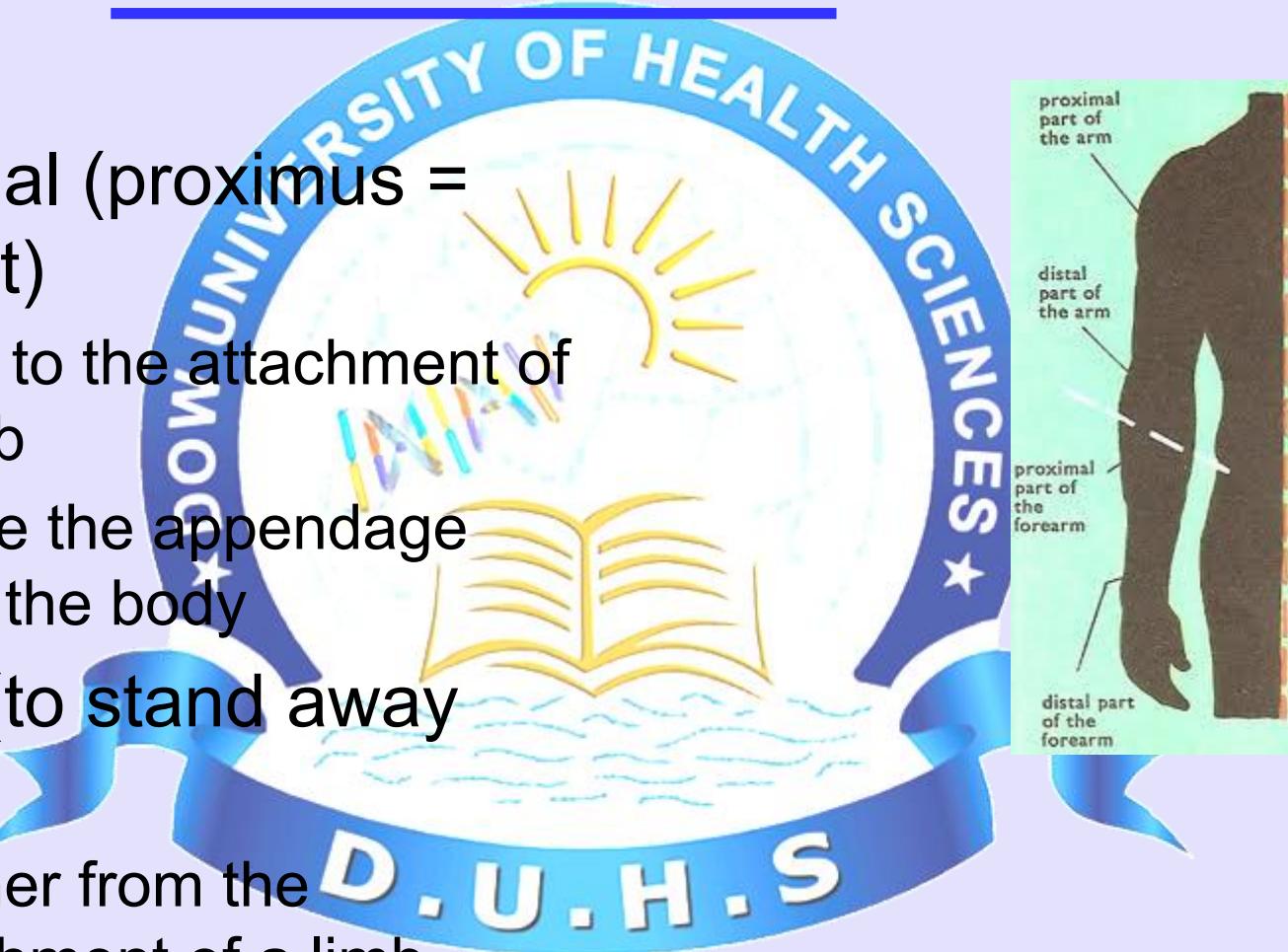
TERMS OF RELATIONSHIP AND COMPARISON

- **Posterior (dorsal)**
denotes the back surface of the body or nearer to the back.
- **Anterior (ventral)**
denotes the front surface of the body.



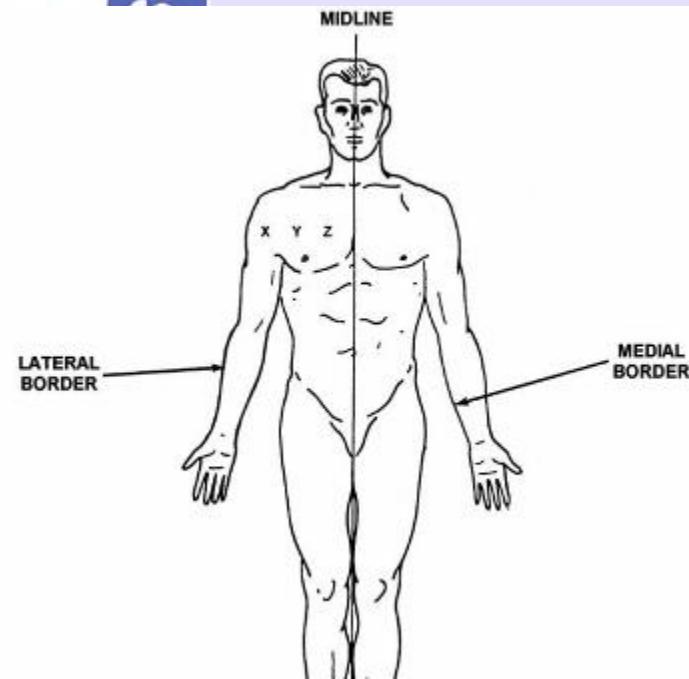
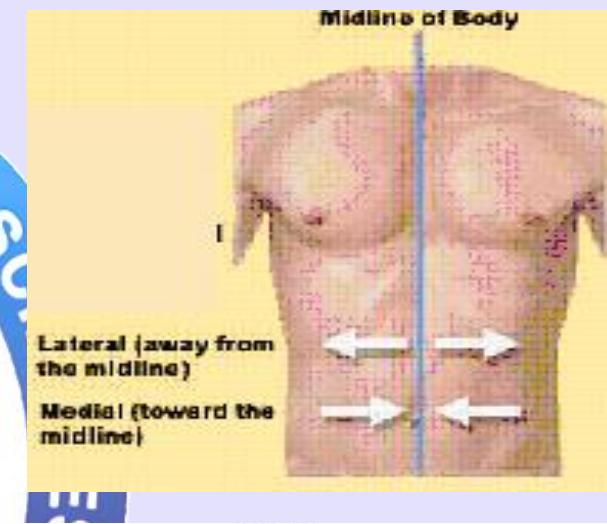
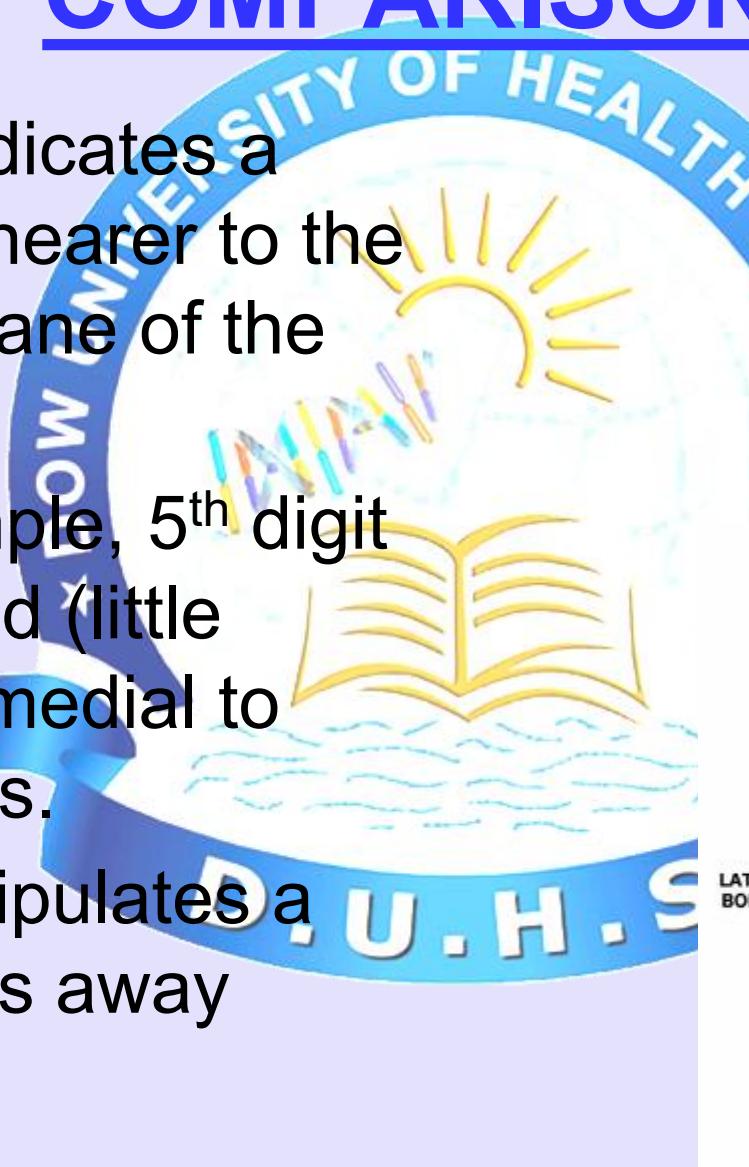
TERMS OF RELATIONSHIP AND COMPARISON

- Proximal (proximus = nearest)
 - Near to the attachment of a limb
 - where the appendage joins the body
- Distal (to stand away from)
 - Farther from the attachment of a limb.



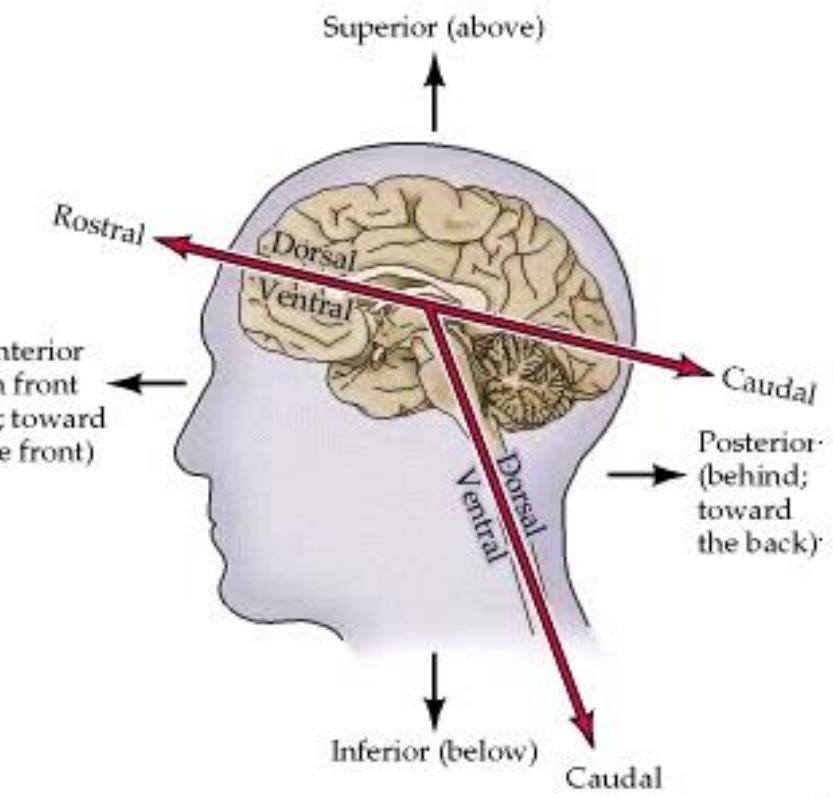
TERMS OF RELATIONSHIP AND COMPARISON

- **Medial** indicates a structure nearer to the median plane of the body.
- For example, 5th digit of the hand (little finger) is medial to other digits.
- **Lateral** stipulates a structure is away



TERMS OF RELATIONSHIP AND COMPARISON

- **Rostral** is often used instead of anterior when describing parts of the brain, means towards the rostrum. In humans, it denotes nearer the anterior part of the head.
- Towards the tip of the frontal lobes.
- (frontal lobe of the brain is rostral to the cerebellum).



TERMS OF RELATIONSHIP AND COMPARISON

- **Ipsilateral** (Latin *ipse*; self/same): on the same side as another structure
 - left arm is **ipsilateral** to the left leg.
-
- **Contralateral** (Latin *contra*; against): on the opposite from another structure.
 - Left arm is **contralateral** to the right arm, or the right leg.

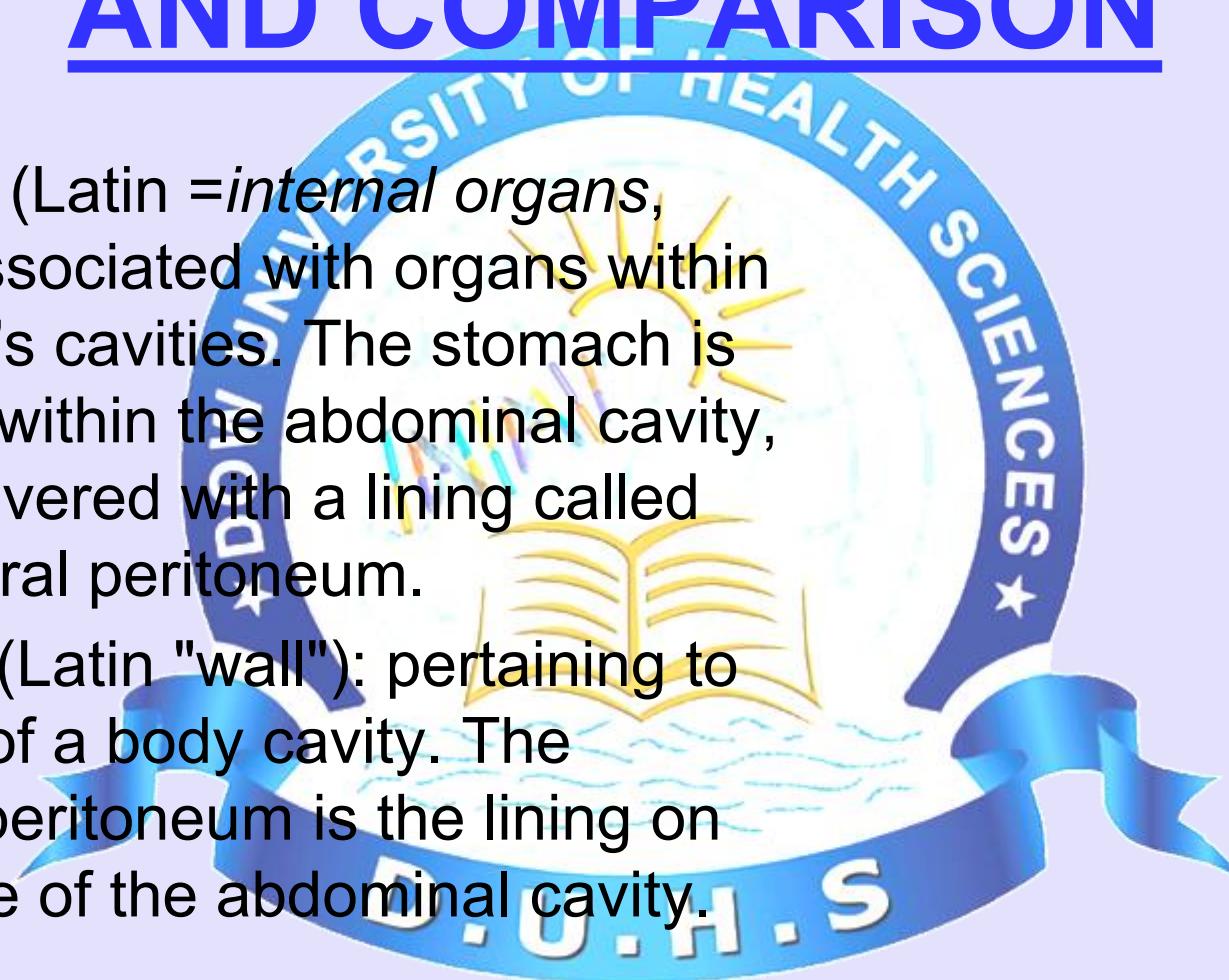


TERMS OF RELATIONSHIP AND COMPARISON

- **Superficial** (Latin = *at the surface or face*): near the outer surface of the organism. Thus, skin is **superficial to** the muscle layer.
- **Deep**: further away from the surface of the organism. Thus, the muscular layer is **deep to** the skin, but superficial to the intestines.

TERMS OF RELATIONSHIP AND COMPARISON

- **Visceral** (Latin =*internal organs, flesh*): associated with organs within the body's cavities. The stomach is a viscus within the abdominal cavity, and is covered with a lining called the visceral peritoneum.
- **Parietal** (Latin "wall"): pertaining to the wall of a body cavity. The parietal peritoneum is the lining on the inside of the abdominal cavity.



REFERENCES

- KLM clinical anatomy correlation.
- Snell's Anatomy .
- RJ Last's of Anatomy.

