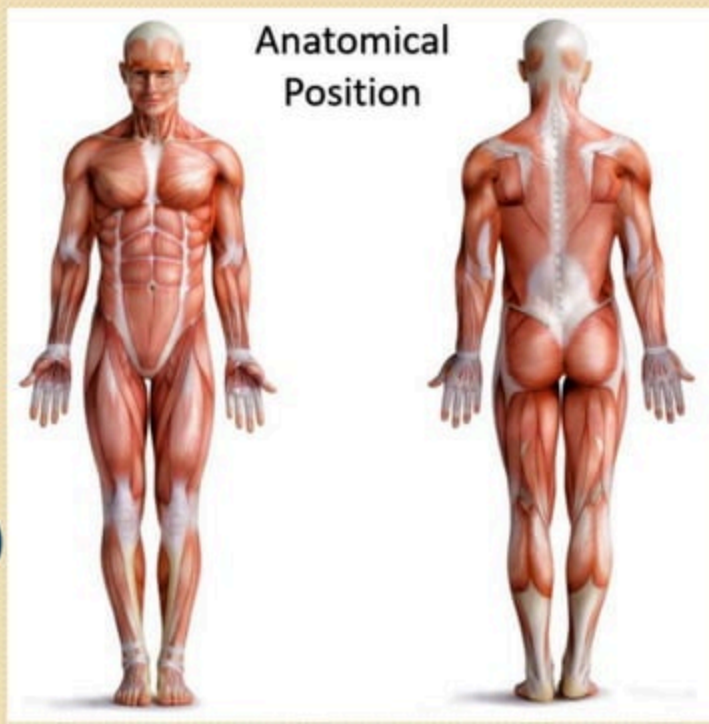


# Anatomical Position

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DPT (KMU),  
MSPT-Neuro (KMU)  
Pharm-B (PCP)



## Define Anatomical Position.

Anatomical position is a position where “Body is erect with the feet parallel and the arms hanging at the sides with the palms facing forward”.

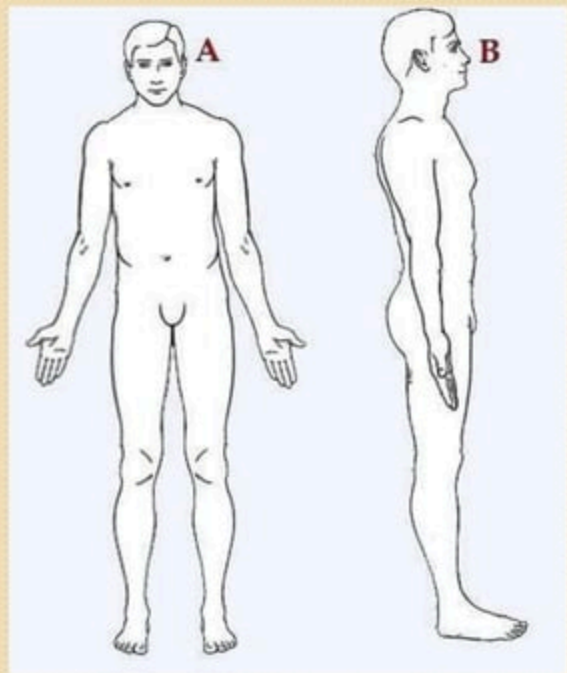
It has to have these four Components:

1. **B**ody erect
2. **F**eet slightly apart
3. **P**alms facing forward
4. **T**humbs point away from body.



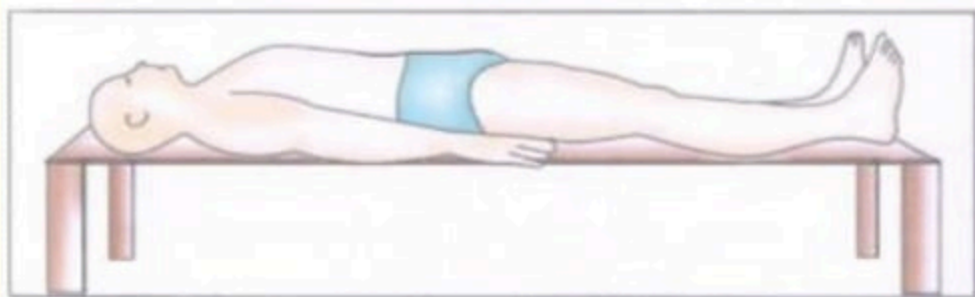
# ANATOMICAL POSITION

- Body erect
- Head, eyes, toes directed forward
- Limbs at sides of body
- Palms directed forward

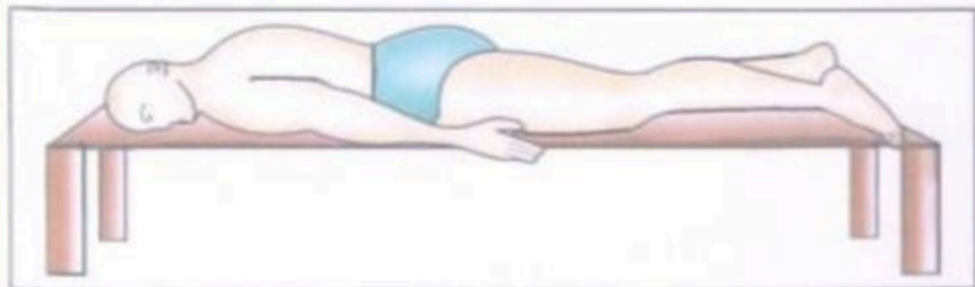


# ANATOMICAL POSITION

- When the body is lying face up, this is called the **supine** position.
- When the body is lying face down in the anatomical position, this is called the **prone** position.



**Fig. 1.8: Supine position**



**Fig. 1.9: Prone position**



# Regional Terms: Anterior View

## Axial -

Head, neck, and trunk

## Appendicular -

Appendages or limbs

## Specific regional terminology

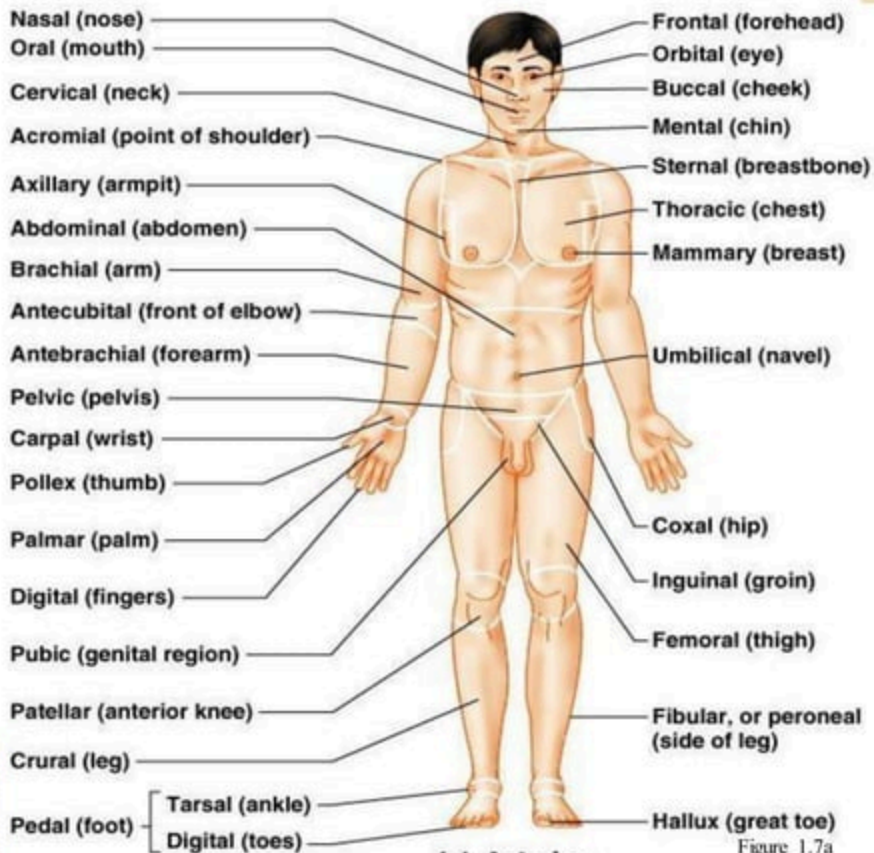
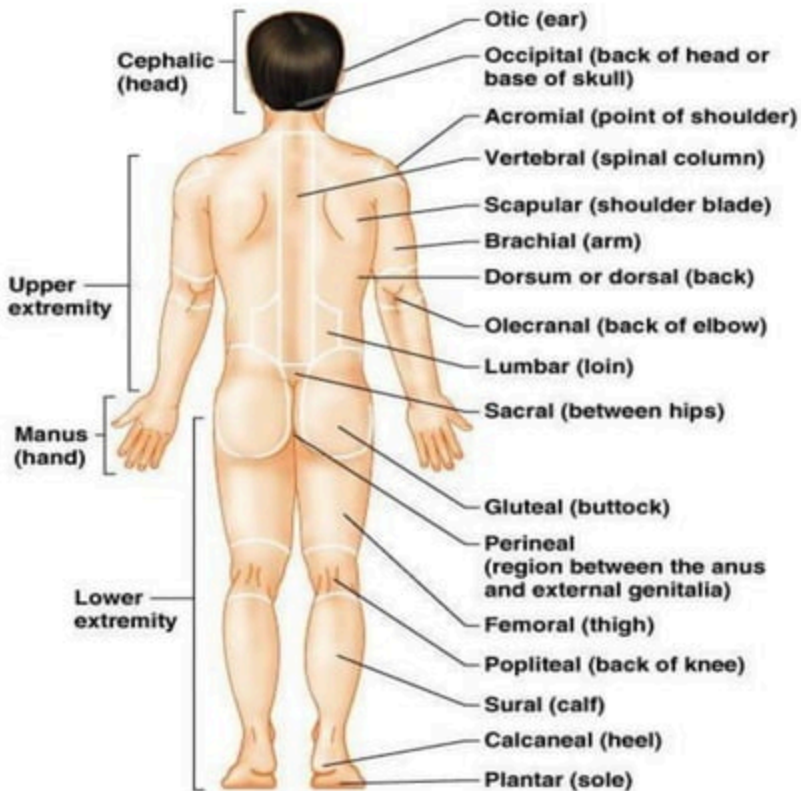


Figure 1.7a

# Regional Terms: Posterior View



**(b) Posterior**

# ANATOMICAL PLANES

- Median Sagittal/Median plane
- Para Median /Sagittal
- Frontal (coronal)
- Horizontal (transverse)

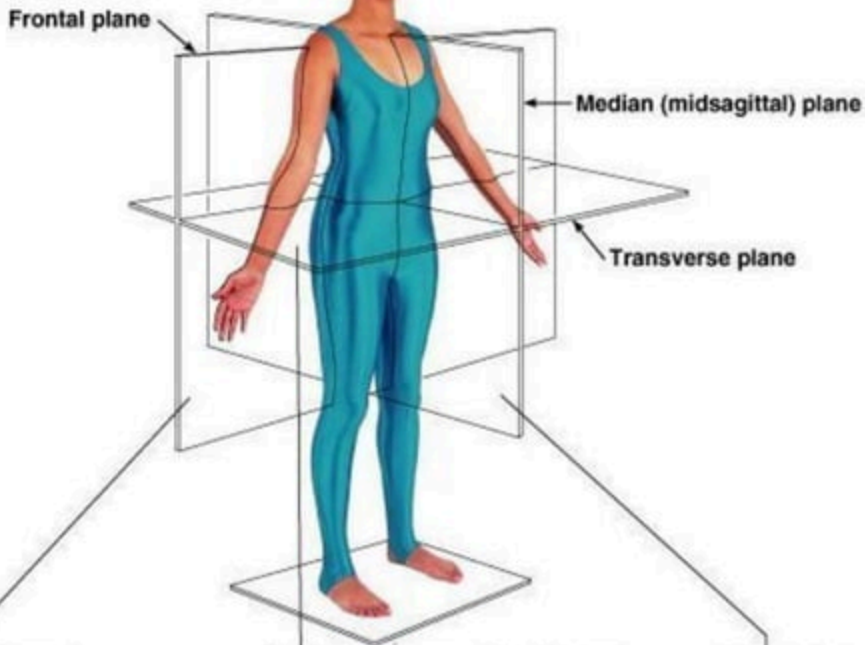


# DEFINE THE VARIOUS BODY PLANES AND SECTIONS:

A section is a cut made along a plane

- Sagittal - cut made along the lengthwise or longitudinal plane of the body dividing it into left and right parts
- Midsagittal (median) plane - right and left parts are of equal size
- Frontal (coronal) plane - cut made along a lengthwise plane that divides the body into anterior and posterior parts
- Transverse plane (cross section) - cut made along a horizontal plane dividing the body or organ into superior and inferior parts.
- Oblique section - cuts made diagonally.

# Body Planes



**(a) Frontal section through torso**

**(b) Transverse section through torso (superior view)**

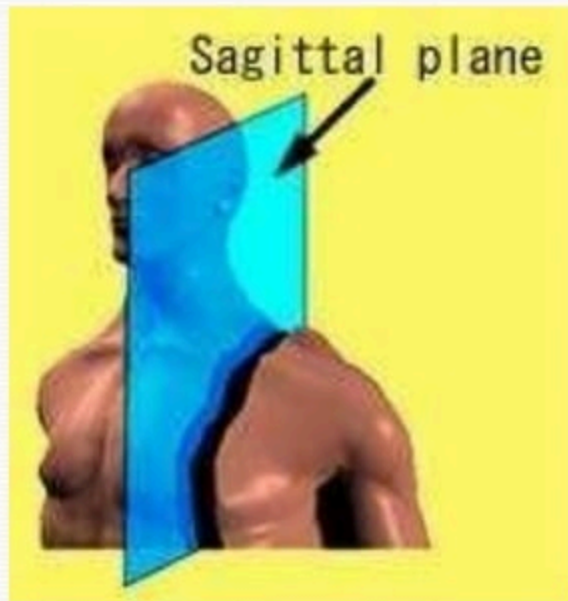
**(c) Median (midsagittal) section**

# MEDIAN PLANE



- Vertical plane, passing through the center of body, dividing it into two equal halves right and left

# PARAMEDIAN PLANE



- Vertical, parallel to median plane

# Planes

- **Sagittal Plane** - divides body into right and left parts.
- **Midsagittal** =median plane -divides body into two equal halves.



Sagittal/Anteroposterior  
Plane

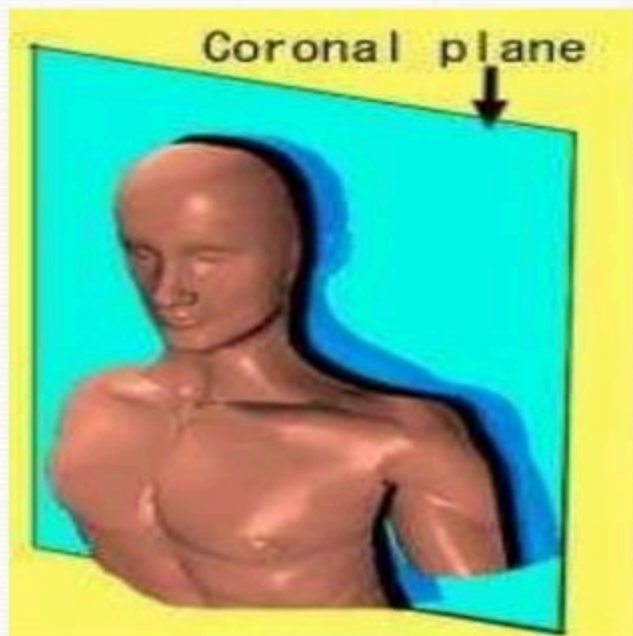


# Planes

- **Frontal** = coronal plane
  - divides body into anterior and posterior parts



Frontal/Lateral  
Plane



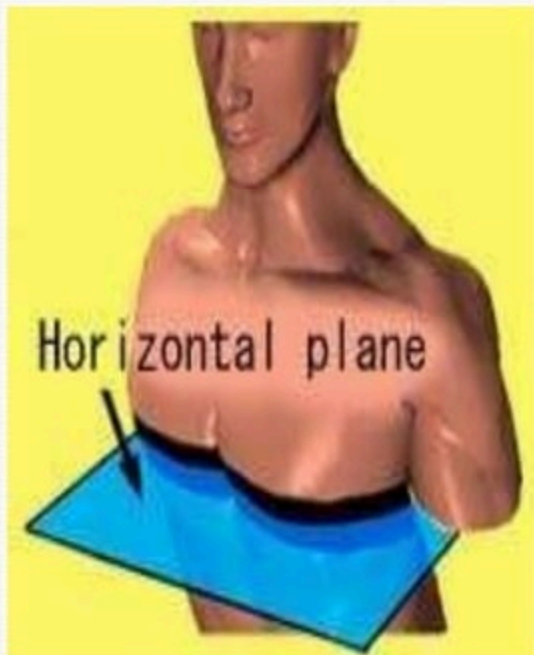
- Vertical, perpendicular to median plane
- separates the body into Anterior and Posterior parts

# Planes

- Transverse plane =  
cross Section=  
horizontal section  
divides into upper and  
lower parts



Horizontal/Transverse  
Plane



- Parallel to floor, perpendicular to median & coronal plane
- Separates the body into Superior and Inferior parts





## Terms of Laterality

- **Bilateral:**

Those structures, organs or conditions which occur on both sides i.e. Left and right sides of the body.

**Example** ???????

Kidneys, lungs etc

- **Unilateral:**

Which occurs on only one side of the body.

**Example:** Spleen, Heart Appendix etc.

## Terms of Laterality

- **Ipsilateral:**

Structure occurring on the same side of the body as another structure.

**Example** The right hand and right foot.

- **Contralateral:**

Structure occurring on the opposite side of the body with reference to another same structure.

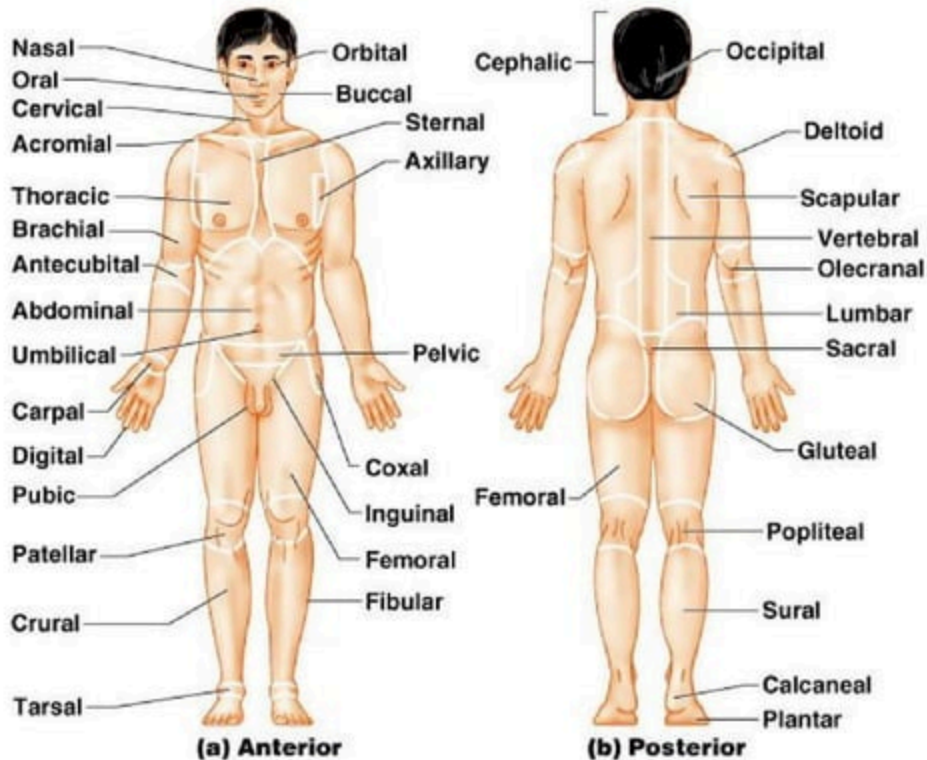
**Example** Right foot is contralateral to left arm.



## **Regional Terms:**

There are many visible landmarks on the surface of the body:

- Anterior body landmarks
- Posterior body landmarks




**(a) Anterior**

**(b) Posterior**

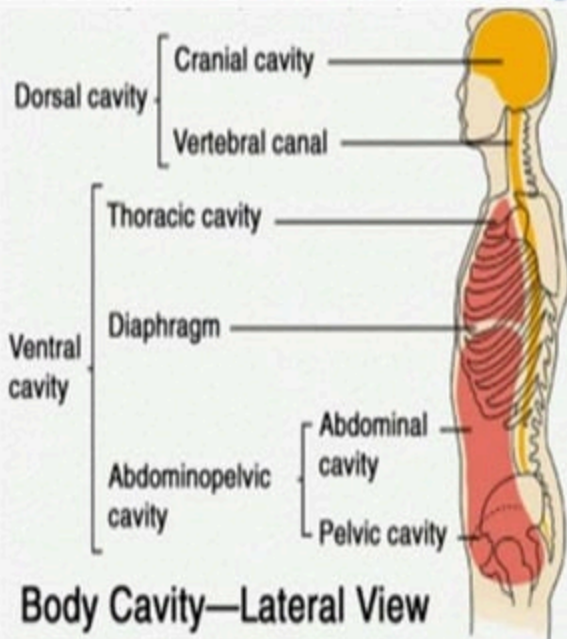
## Directional Terms:

- **Superior (cranial or cephalad)** - toward the head end or upper part of a structure or body; above
- **Inferior (caudal)** - away from the head end or toward the lower part of a structure or body; below
- **Anterior (ventral)** - toward or at the front of the body; in front of
- **Posterior (dorsal)** - toward or at the backside of the body; behind
- **Medial** - toward or at the midline of the body; on the inner side of the body
- **Lateral** - away from the midline of the body; on the outer side of body.



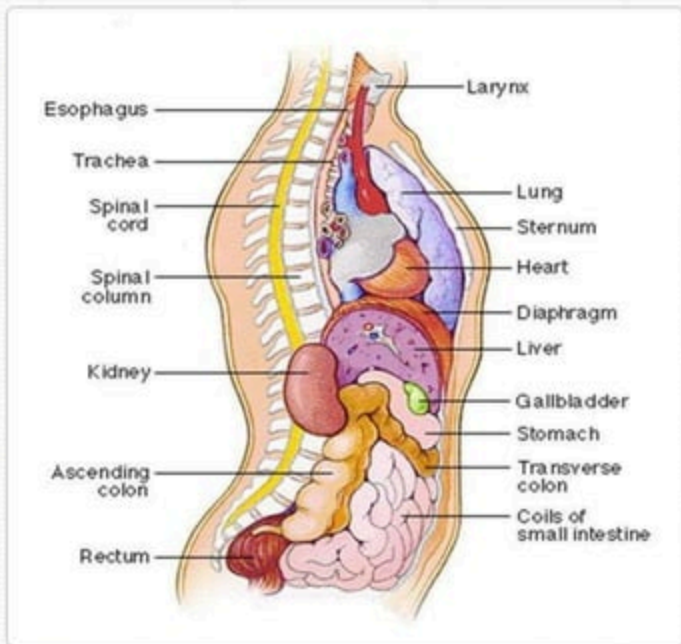
- 
- **Proximal** - close to the origin of the body part or the point of attachment of a limb to the body trunk.
  - **Distal** - farther from the origin of a body or the point of attachment of a limb to the body trunk.
  - **Superficial** (external) - toward or at the body surface.
  - **Deep** (internal) - away from the body surface; more internal.

# ANTERIOR/POSTERIOR

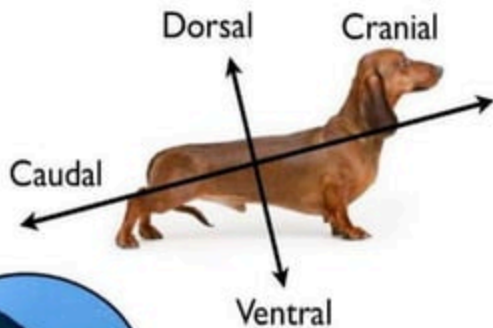


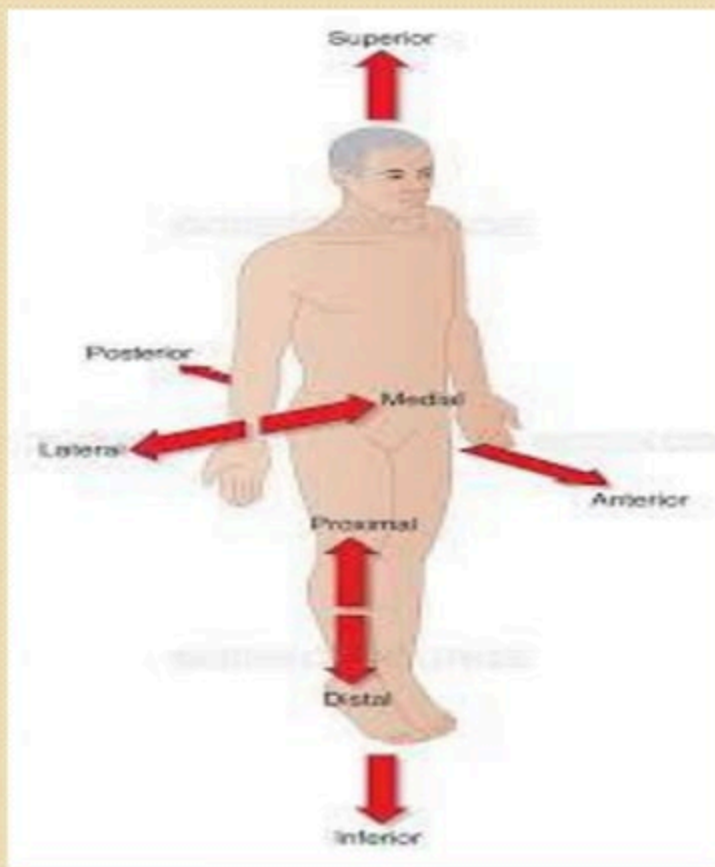
- **Anterior (ventral)**  
*closer to the anterior surface of the body*
- **Posterior (dorsal)**  
*closer to the posterior surface of the body*
- **reference point --**  
*frontal or coronal plane*

# DORSAL/VEVTRAL



# Anatomical Terms of Direction and Planes of Section

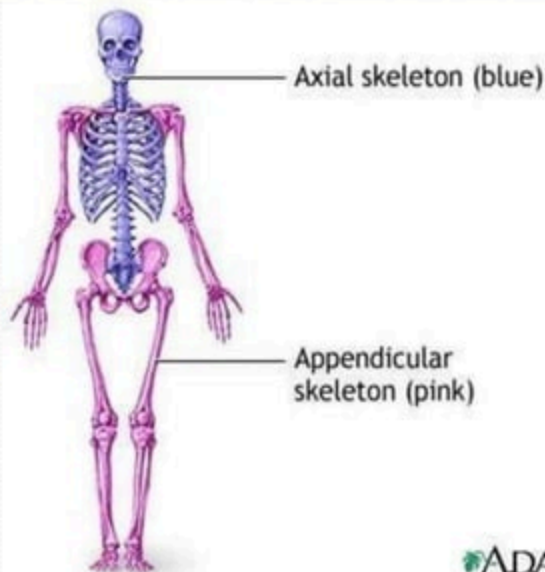






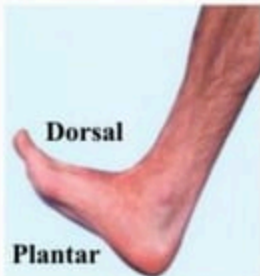
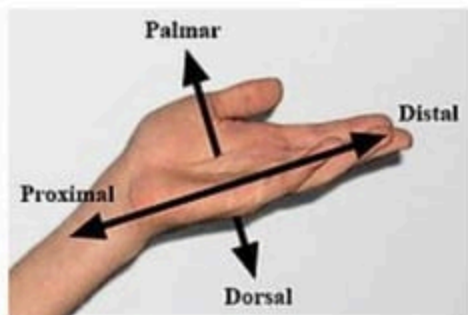
# SUPERIOR/INFERIOR

- Superior (*closer to the head*)
- Inferior (*closer to the feet*)
- reference point -- horizontal plane



## Terms:

- in describing the hand:
  - palmar & dorsal surfaces
- in describing the foot:
  - plantar & dorsal surfaces



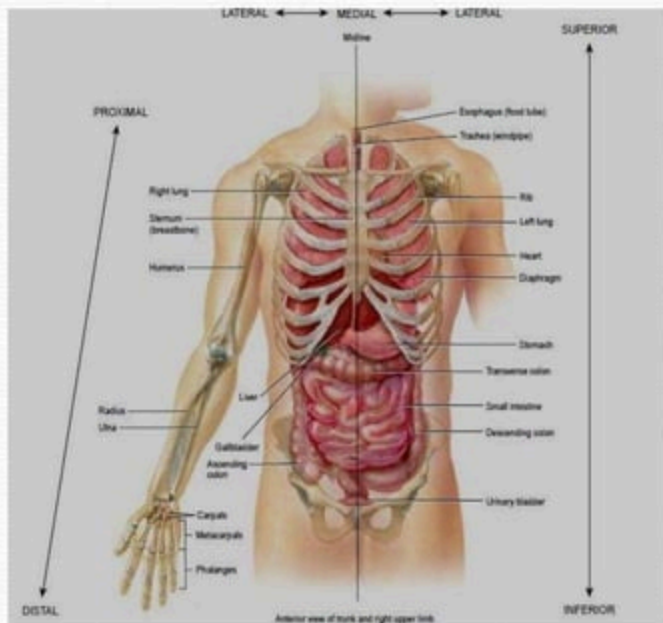
# SUPERFICIAL/DEEP

- Reference point is surface of body



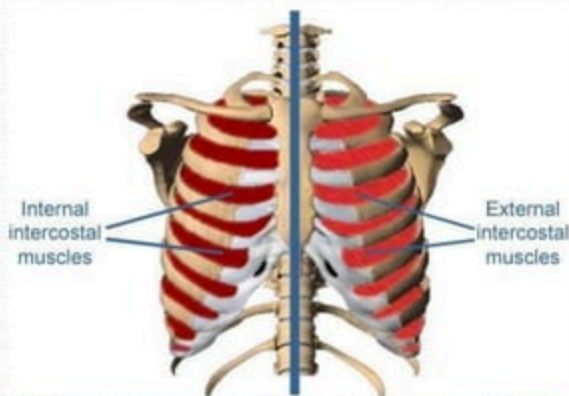
# PROXIMAL/DISTAL IPSILATERAL/ CONTRA LATERAL

- Proximal closer to root of limbs
- Distal further away from the root of limbs
- Reference point -- the origin of a structure



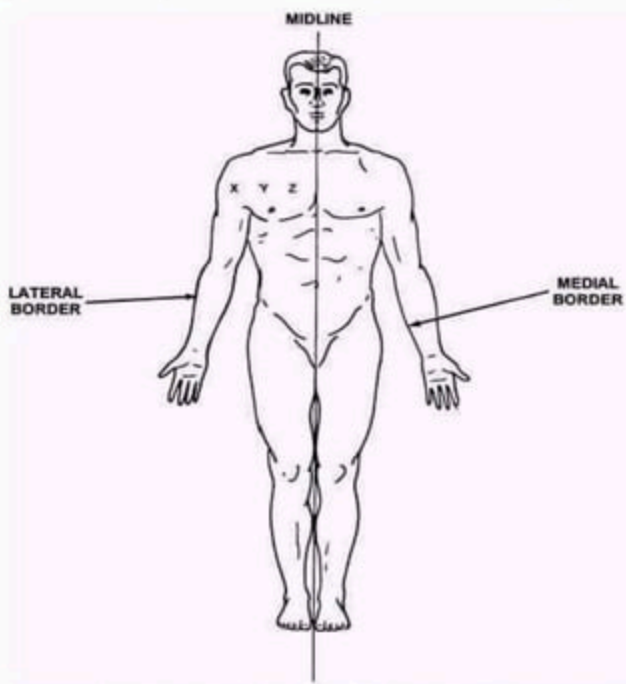
# EXTERNAL/INTERNAL

- refers to a hollow structure (external being outside and internal being inside)



**Note:** the external muscles are a layer on top of the internal muscles, but for the purposes of illustration the diagram has been split to show the inner layer on the left and the outer layer on the right.

# MEDIAL/LATERAL

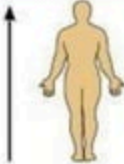








# Directional Terms:

Table 1.1

TABLE 1.1 Orientation and Directional Terms

Term	Definition	Example
Superior (cranial)	Toward the head end or upper part of a structure or the body; above	 The head is superior to the abdomen
Inferior (caudal)	Away from the head end or toward the lower part of a structure or the body; below	 The navel is inferior to the chin
Anterior (ventral)*	Toward or at the front of the body; in front of	 The breastbone is anterior to the spine
Posterior (dorsal)*	Toward or at the back of the body; behind	 The heart is posterior to the breastbone
Medial	Toward or at the midline of the body; on the inner side of	 The heart is medial to the arm

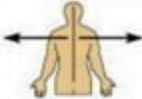





\*Whereas the terms ventral and anterior are synonymous in humans, this is not the case in four-legged animals. Ventral specifically refers to the "belly" of a vertebrate animal and thus is the inferior surface of four-legged animals. Likewise, although the dorsal and posterior surfaces are the same in humans, the term dorsal specifically refers to an animal's back. Thus, the dorsal surface of four-legged animals is their superior surface.

# Directional Terms:

Table 1.1

TABLE 1.1

## Orientation and Directional Terms

Term	Definition	Example
Lateral	Away from the midline of the body; on the outer side of	 <p>The arms are lateral to the chest</p>
Intermediate	Between a more medial and a more lateral structure	 <p>The collarbone is intermediate between the breastbone and shoulder</p>
Proximal	Closer to the origin of the body part or the point of attachment of a limb to the body trunk	 <p>The elbow is proximal to the wrist</p>
Distal	Farther from the origin of a body part or the point of attachment of a limb to the body trunk	 <p>The knee is distal to the thigh</p>
Superficial (external)	Toward or at the body surface	 <p>The skin is superficial to the skeletal muscles</p>
Deep (internal)	Away from the body surface; more internal	 <p>The lungs are deep to the skin</p>

THANK YOU