



الجامعة الهاشمية  
The Hashemite University



# General Anatomy

## Lecture 1: Introduction to Human Anatomy

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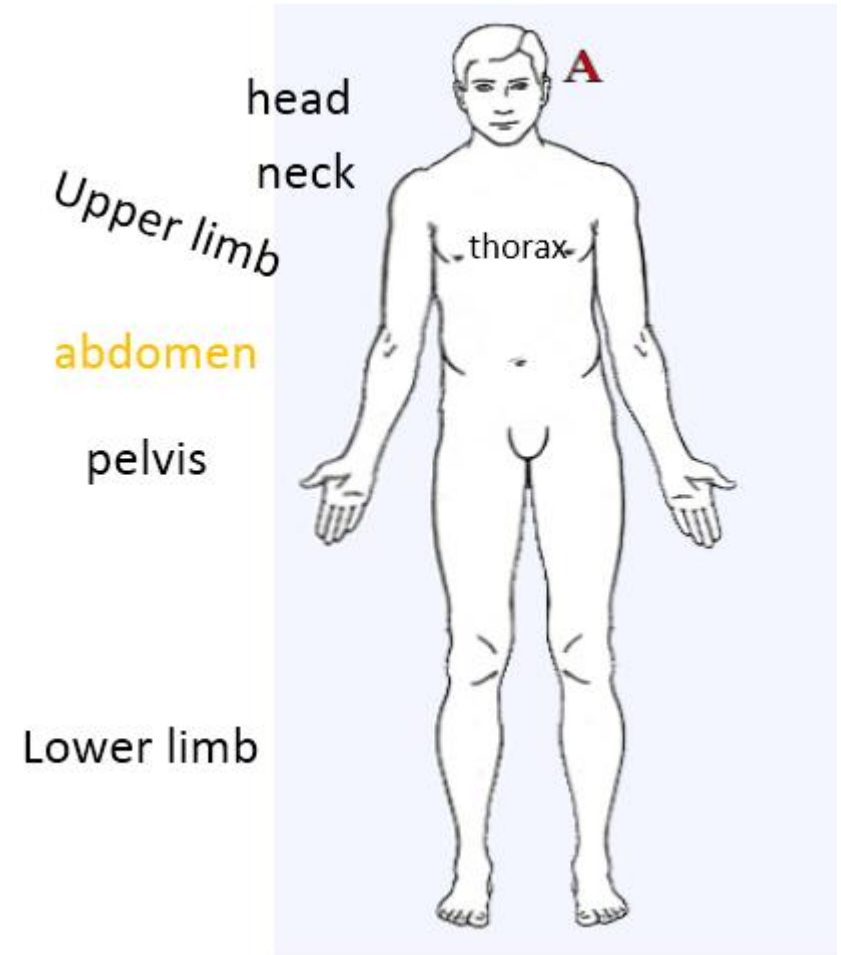
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# Anatomy

- \* **Definition:** anatome = up (ana) + cutting (tome).
- \* **Descriptive anatomy:** **Regional or Systemic.**
  - \* **Regional Anatomy** : parts of body e.g. head, neck, thorax, abdomen, upper limb & lower limb.
  - \* **Systemic Anatomy**: e.g. cardiovascular system, respiratory system, urinary system, etc.
- \* **Developmental Anatomy (Embryology).**
- \* **Applied Anatomy (clinical).**
- \* **Radiological Anatomy.**
- \* **Surface Anatomy.**

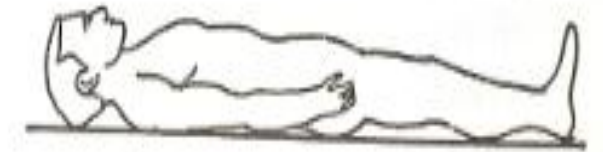
# Body Regions

1. Head and Neck.
2. Abdomen & Pelvis.
3. Lower limb.
4. Upper limb.
5. Thorax.
6. Brain & spinal cord (Neuroanatomy).



# Anatomical Position

- **Body erect (person standing).**
- **Face directed forward.**
- **Limbs at sides of body.**
- **Legs & feet close together.**
- **Palms directed forward.**



supine

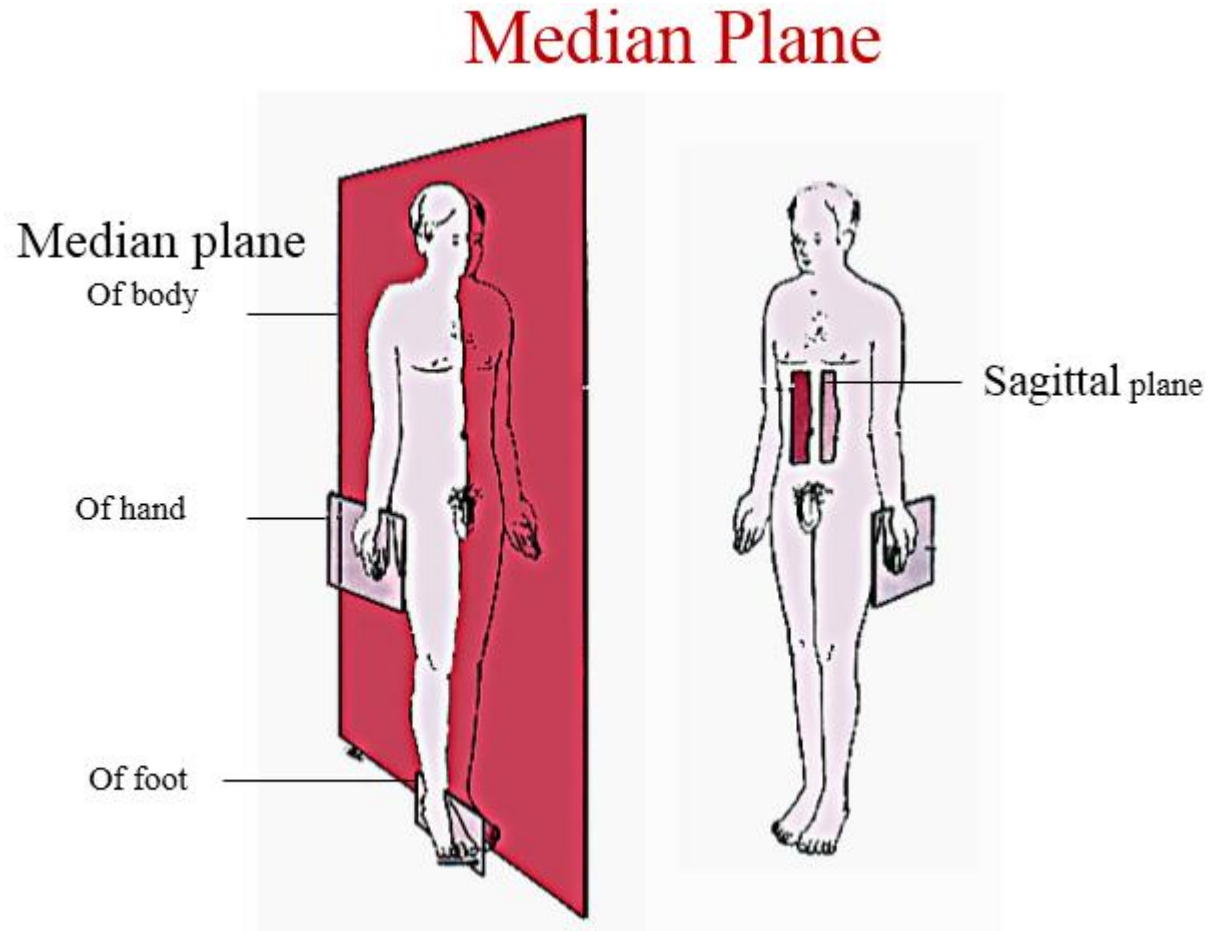


prone

# Anatomical Planes

\* Median (midsagittal) plane = vertical in midline, divides body into right & left equal parts.

\* \* Parasagittal = vertical, parallel to median.

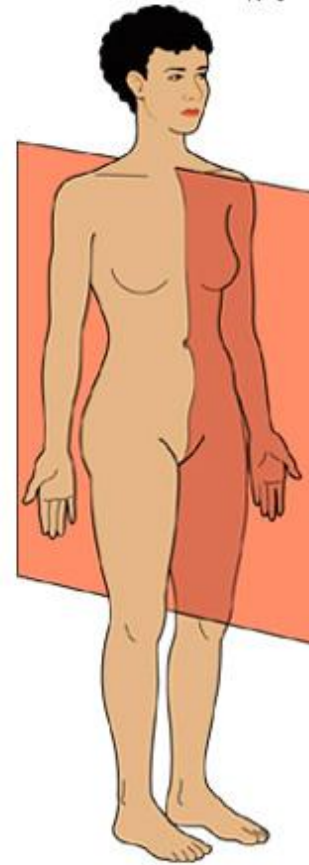


# Anatomical Planes

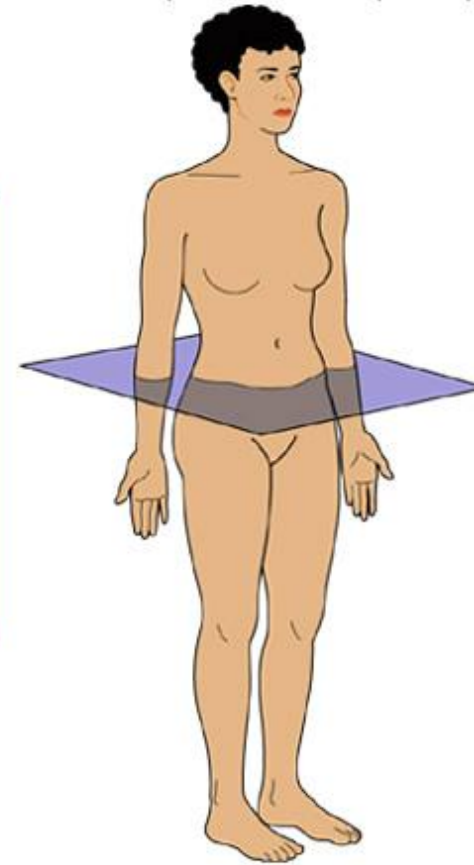
\* Coronal plane = vertical, perpendicular to median, divides body into anterior & posterior parts.

\* Horizontal (transverse) = perpendicular to median & coronal planes divides body into upper & lower parts.

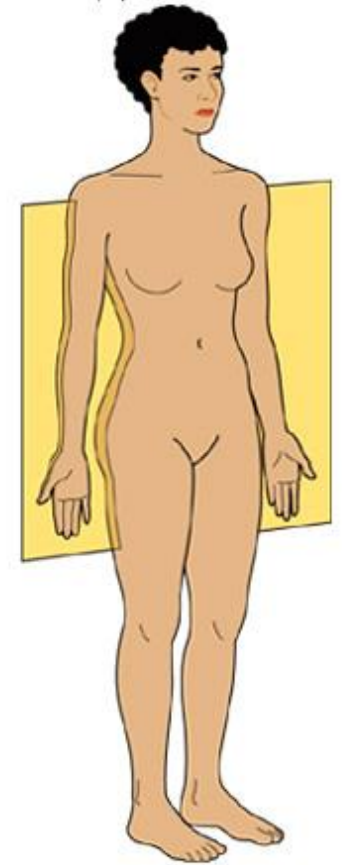
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Sagittal plane  
(median plane)

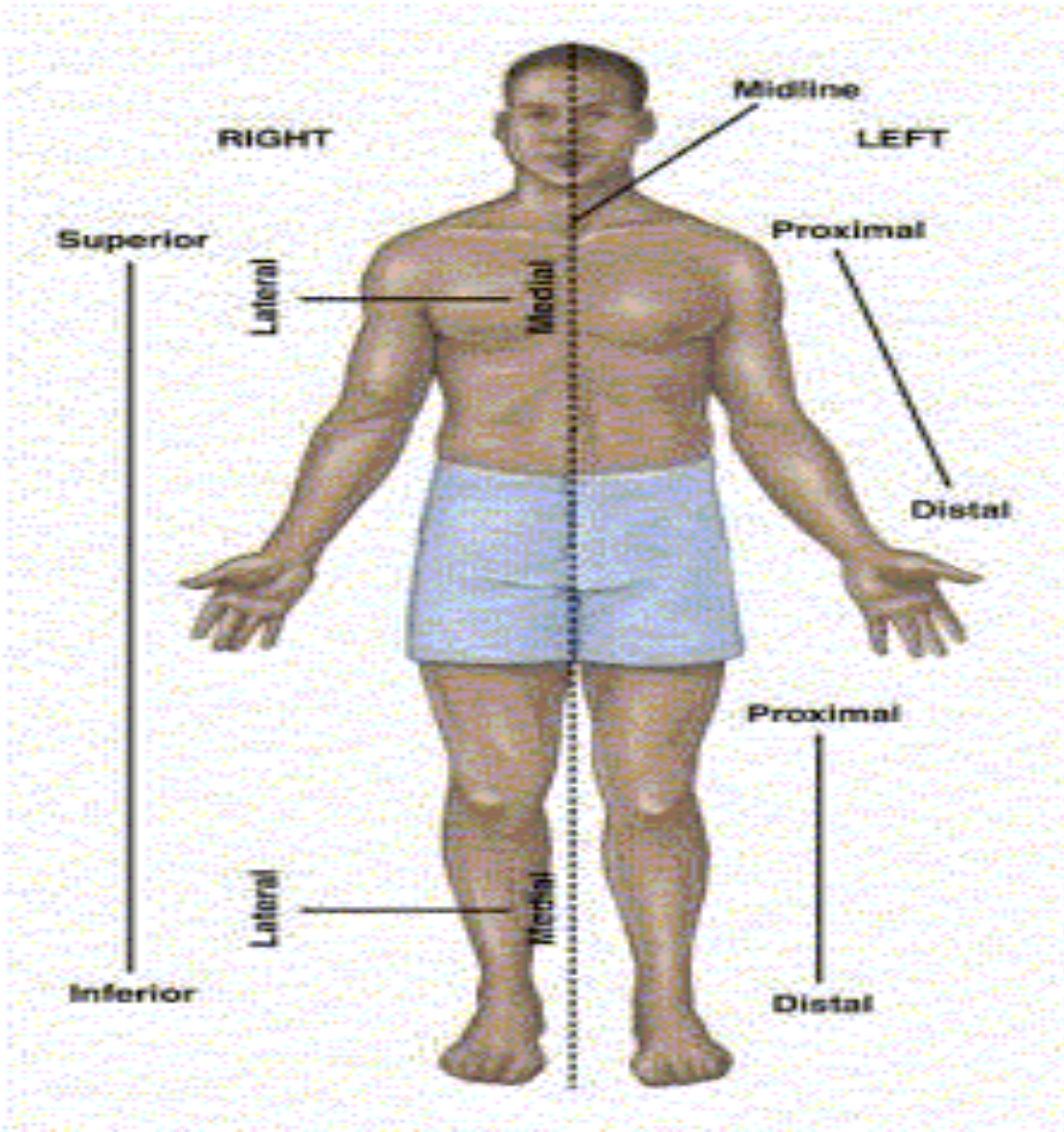


Transverse plane  
(horizontal plane)



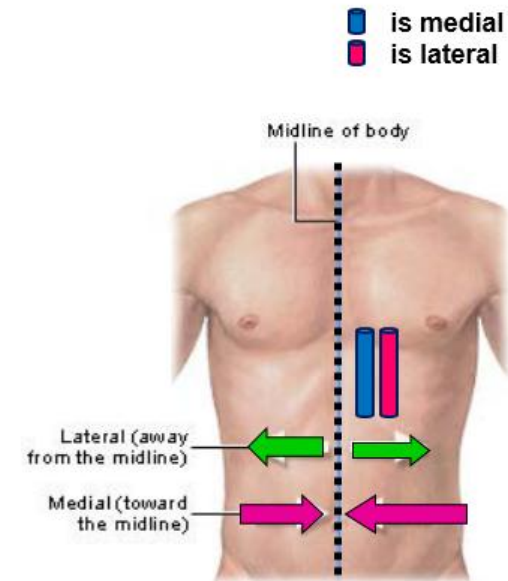
Coronal plane  
(frontal plane)

# Anatomical Terms



## 1. Medial & Lateral:

- \* Medial = closer to median plane.
- \* Lateral = away from median plane.



## 2. Anterior & posterior:

- **Anterior or Ventral** → towards the front of the body
- **Posterior or dorsal** → towards the back of the body
- **Anterior surface of hand** → palmar surface
- **Posterior surface of hand** → dorsal surface
- **Upper surface of foot** → dorsal surface
- **Lower surface of foot** → plantar surface





### **3. Superior & inferior:**

- \* **Superior**  
**(cephalic or cranial) =**  
**towards head.**
- \* **Inferior (caudal)**  
**= towards feet.**



## **4. Proximal & Distal:**

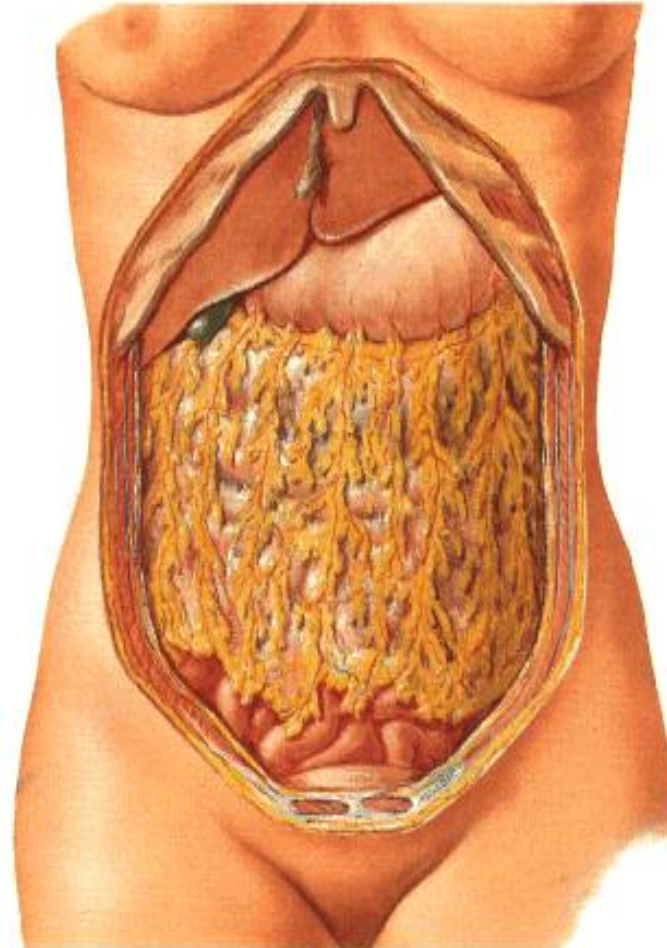
- \* Proximal → closer to trunk.**
- \* Distal → away from trunk.**



## 5. Superficial &

### Deep:

- \* **Superficial** →  
**towards surface of  
body.**
- \* **Deep** → **away from  
surface of body.**



# Anatomical Terms

- \* **Medial = closer to median plane.**
- \* **Lateral = away from median plane.**
- \* **Anterior (ventral) = towards front of body.**
- \* **Posterior (dorsal) = towards back of body.**
- \* **Superior (cephalic or cranial) = towards head**
- \* **Inferior (caudal) = towards feet.**
- \* **Superficial = towards surface of body.**
- \* **Deep = towards center of body.**
- \* **Proximal = nearer origin.**
- \* **Distal = further from origin.**

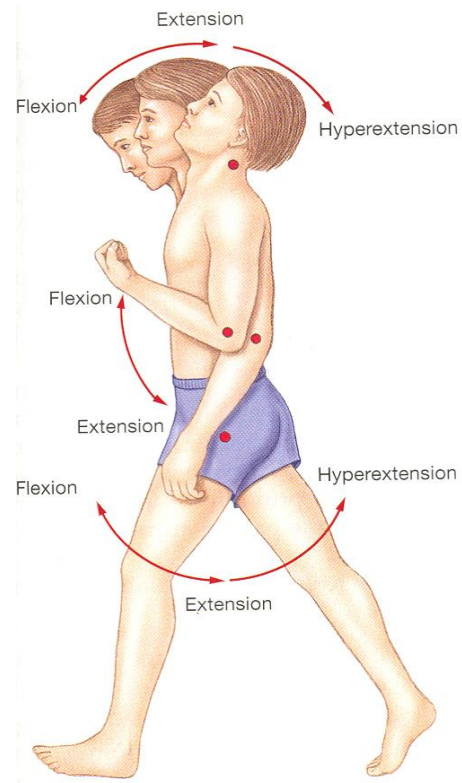
- \* **External (outer):** means towards the surface and applies to the hollow-out structure.
- \* **Internal (inner):** means towards the cavity of a hollow-out structure.
- \* **Central:** means towards the center of the body.
- \* **Peripheral:** means away from the center of the body.
- \* **Ipsilateral:** means of the same side of the body.
- \* **Contralateral :** means of the opposite side of the body.

# Specific terms for the limbs :

- **In the forearm :** radial = lateral & ulnar = medial.
- **In the hand :** palmar = anterior & dorsal = posterior.
- **In the leg:** fibular = lateral & tibial = medial.
- **In the foot:** plantar = inferior & dorsal = superior.

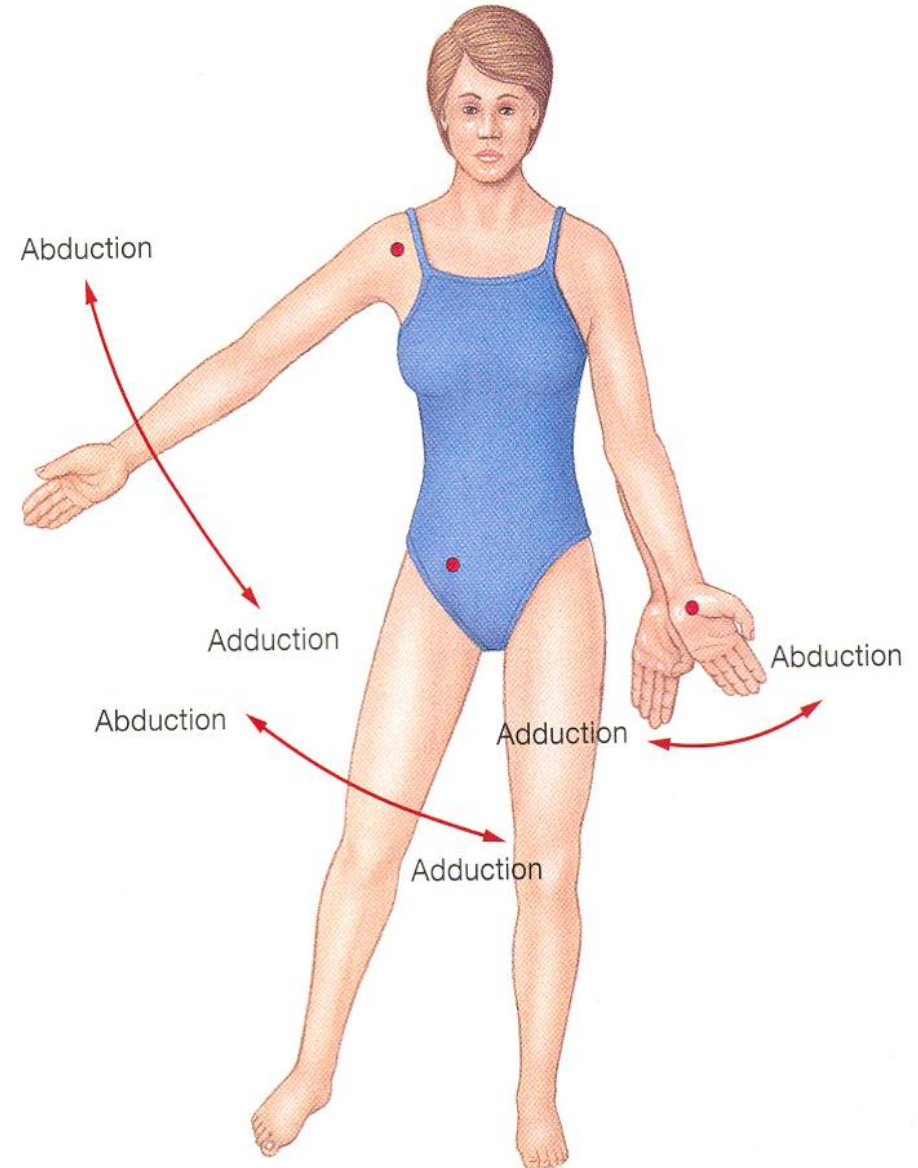
# Anatomical Terms of Movements

- **Flexion** → to bend = angle = approximation of 2 ventral surfaces
- **Extension** → to stretch = straighten = approximation of 2 dorsal surfaces.



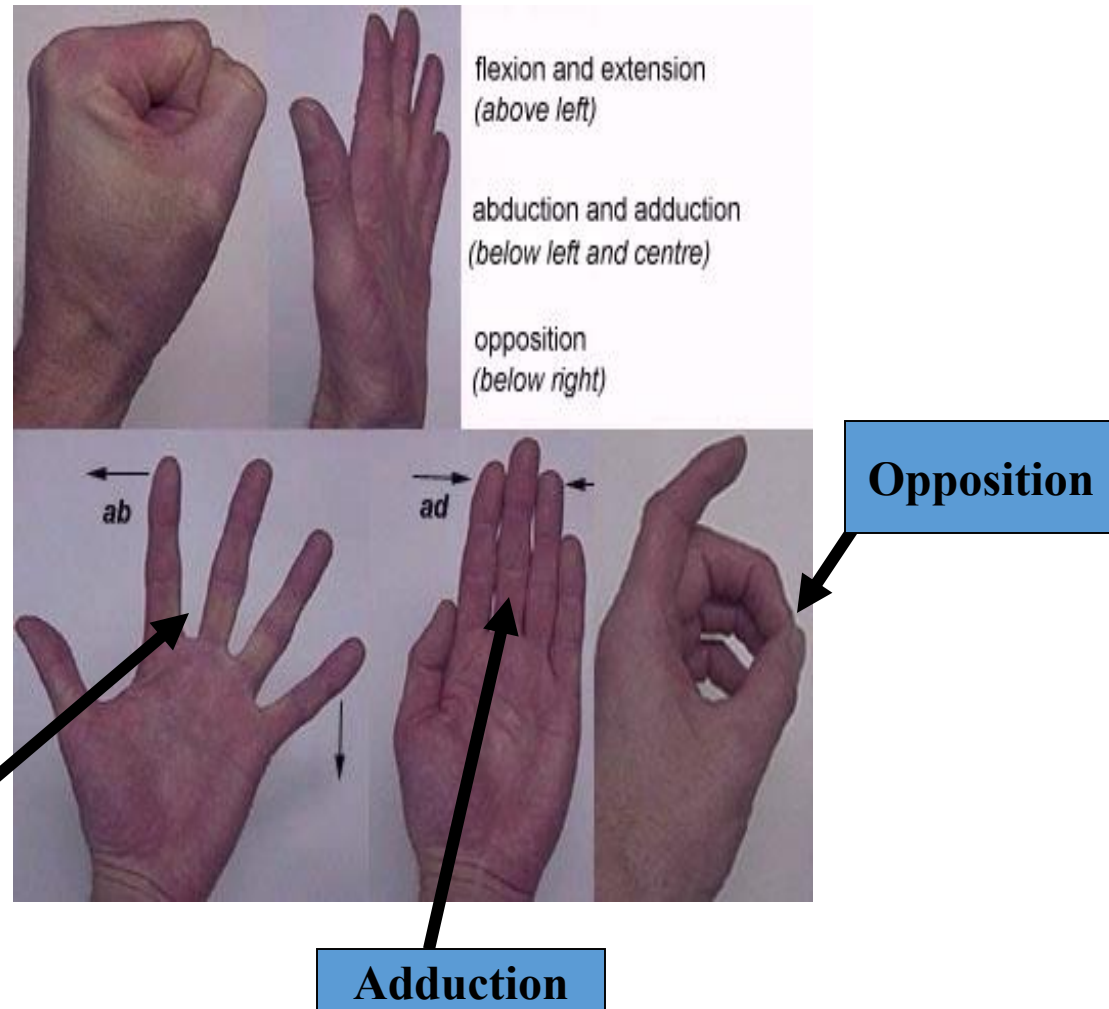
• **Abduction** →  
moving a part  
away from  
midline.

• **Adduction** →  
moving a part  
towards the  
midline.





- **Abduction of fingers & toes** → spreading of fingers or toes apart.
- **Adduction of fingers & toes** → drawing or approximating fingers or toes together.

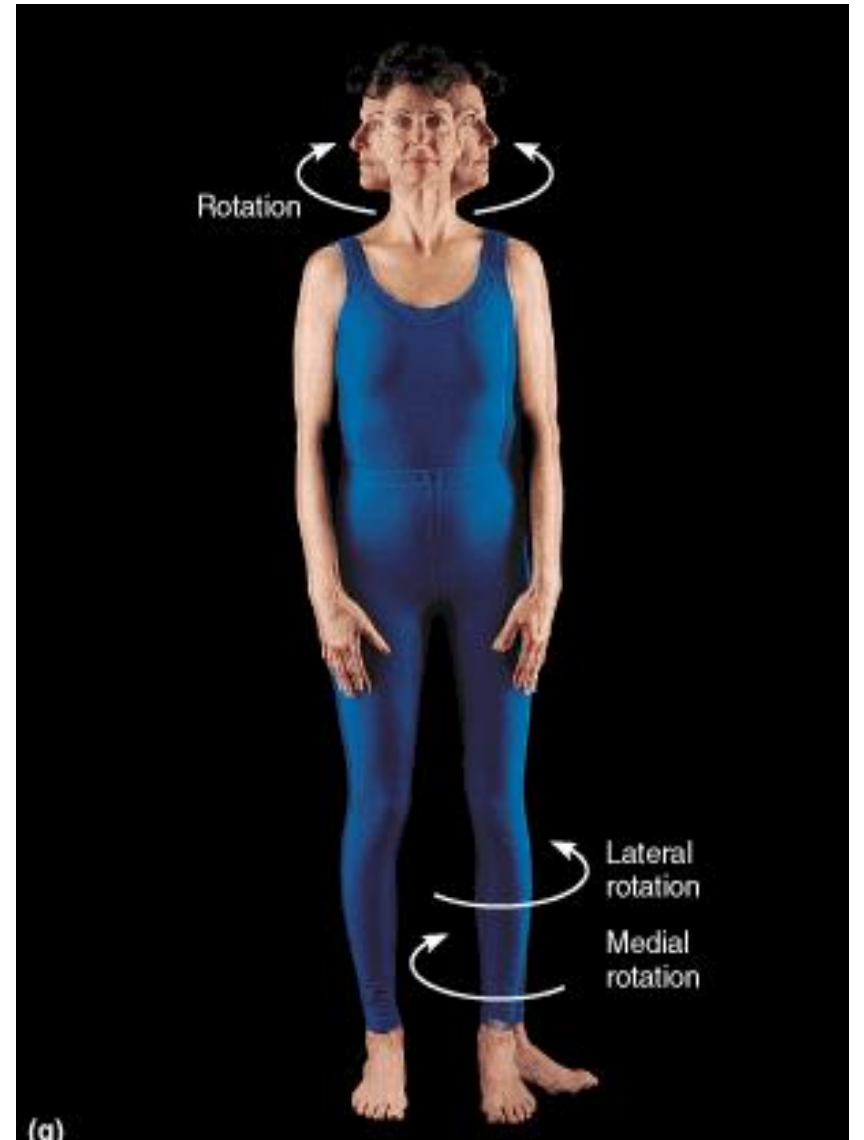


- **Opposition:**
- **Circumduction** →  
the combination  
in sequence of  
movements of  
flexion, abduction,  
extension &  
adduction.

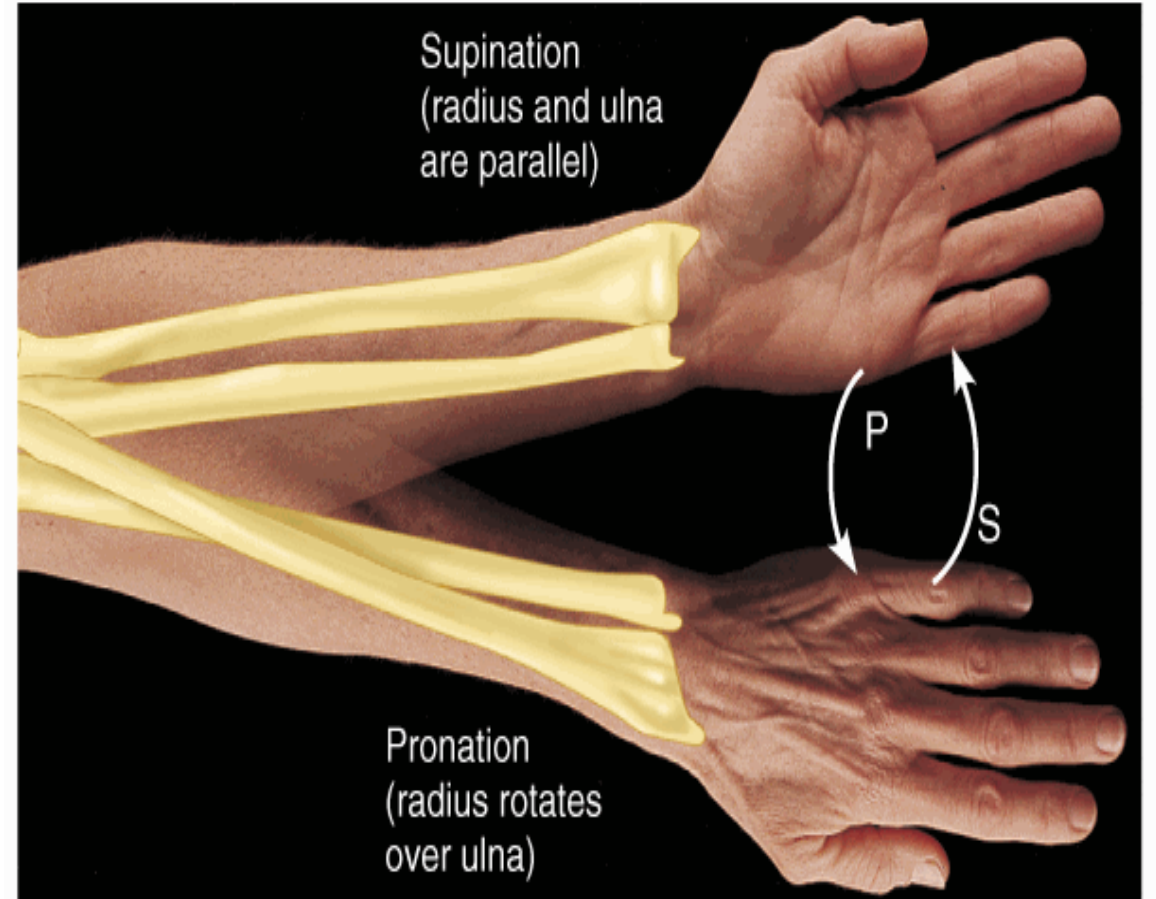


- **Medial rotation** →  
brings anterior surface  
to face medially

- **Lateral rotation** →  
brings anterior surface  
to face laterally

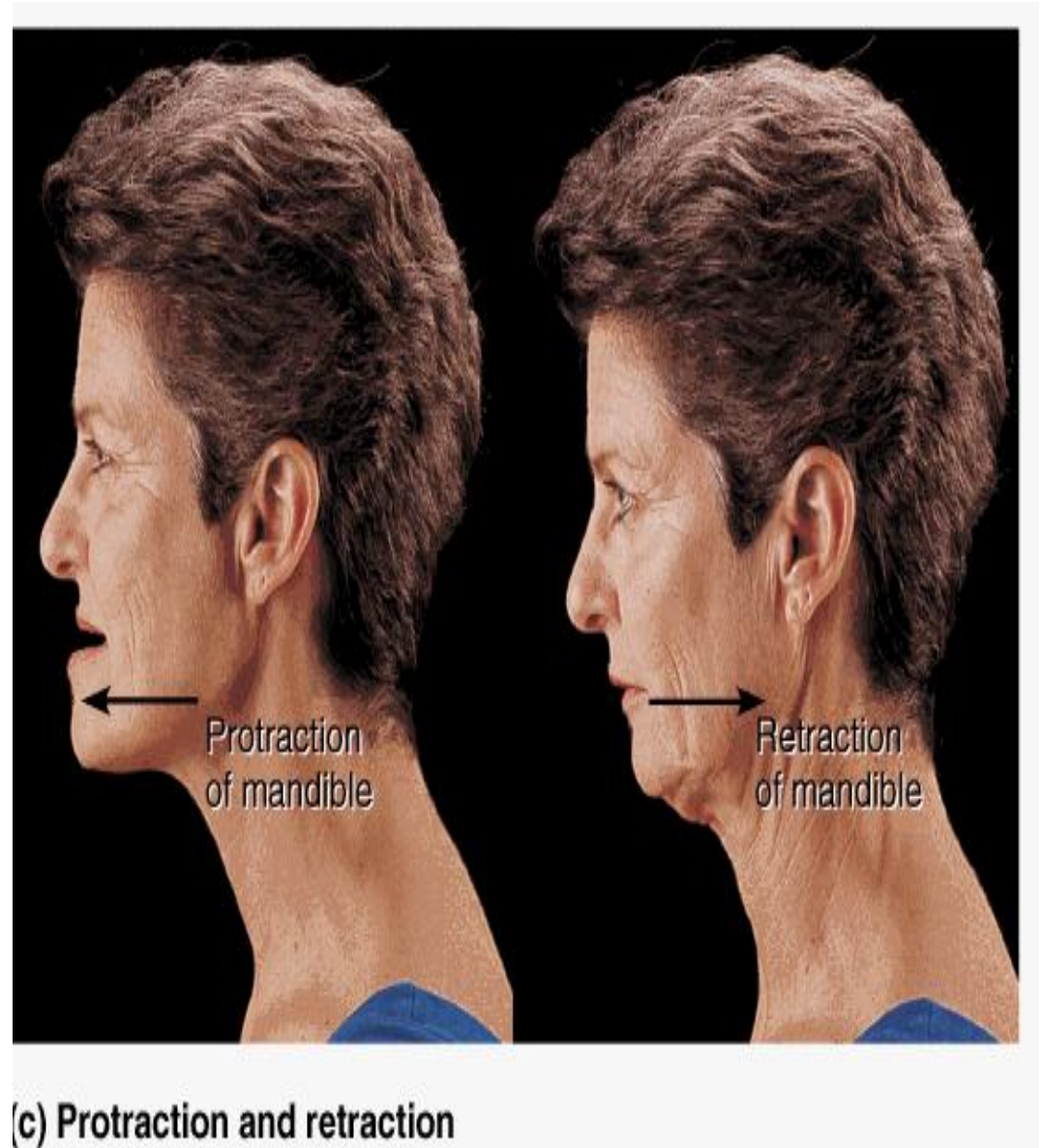


- **Pronation** → medial rotation of forearm which brings palm of hand to face posteriorly
- **Supination** → lateral rotation of forearm which brings palm of hand to face anteriorly

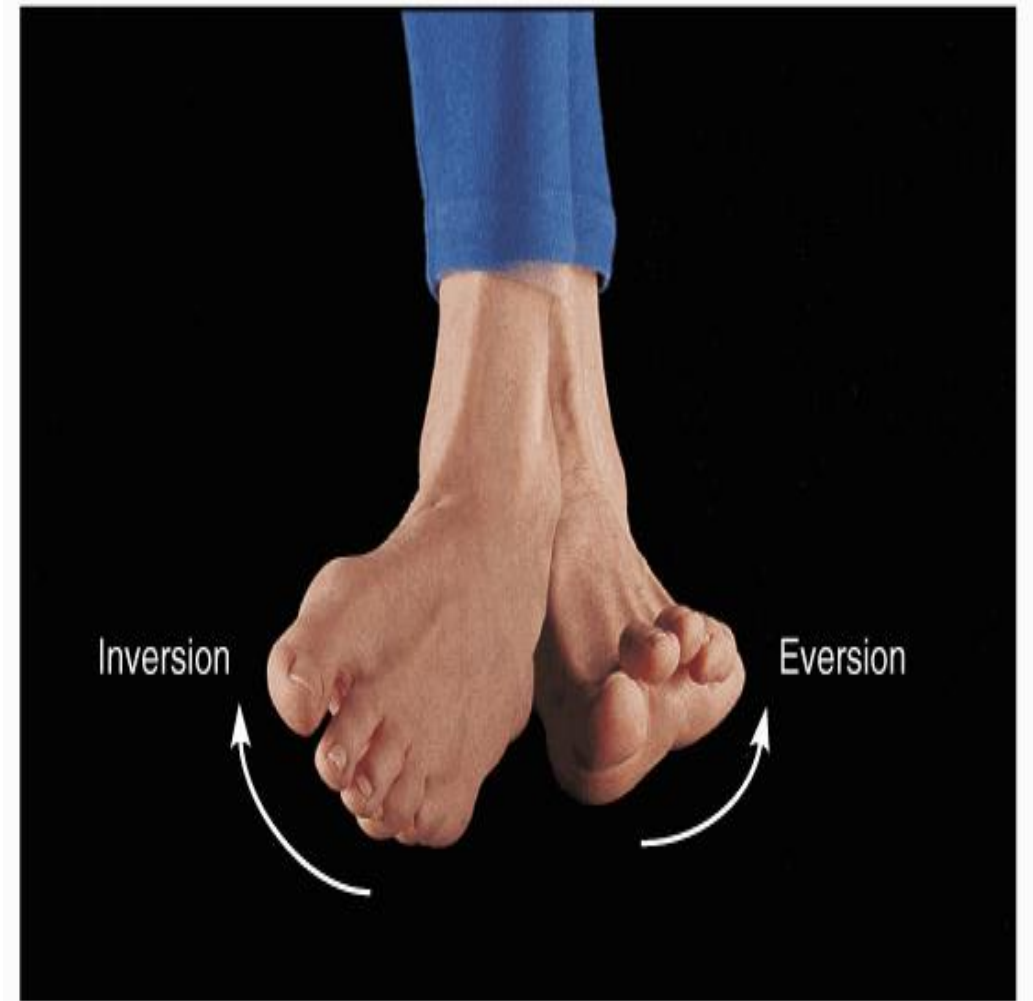


(a) Supination (S) and pronation (P)

- **Protraction** → moving the jaw forwards.
- **Retraction** → moving the jaw backwards.
- **Protraction & retraction can also occur at the shoulders.**

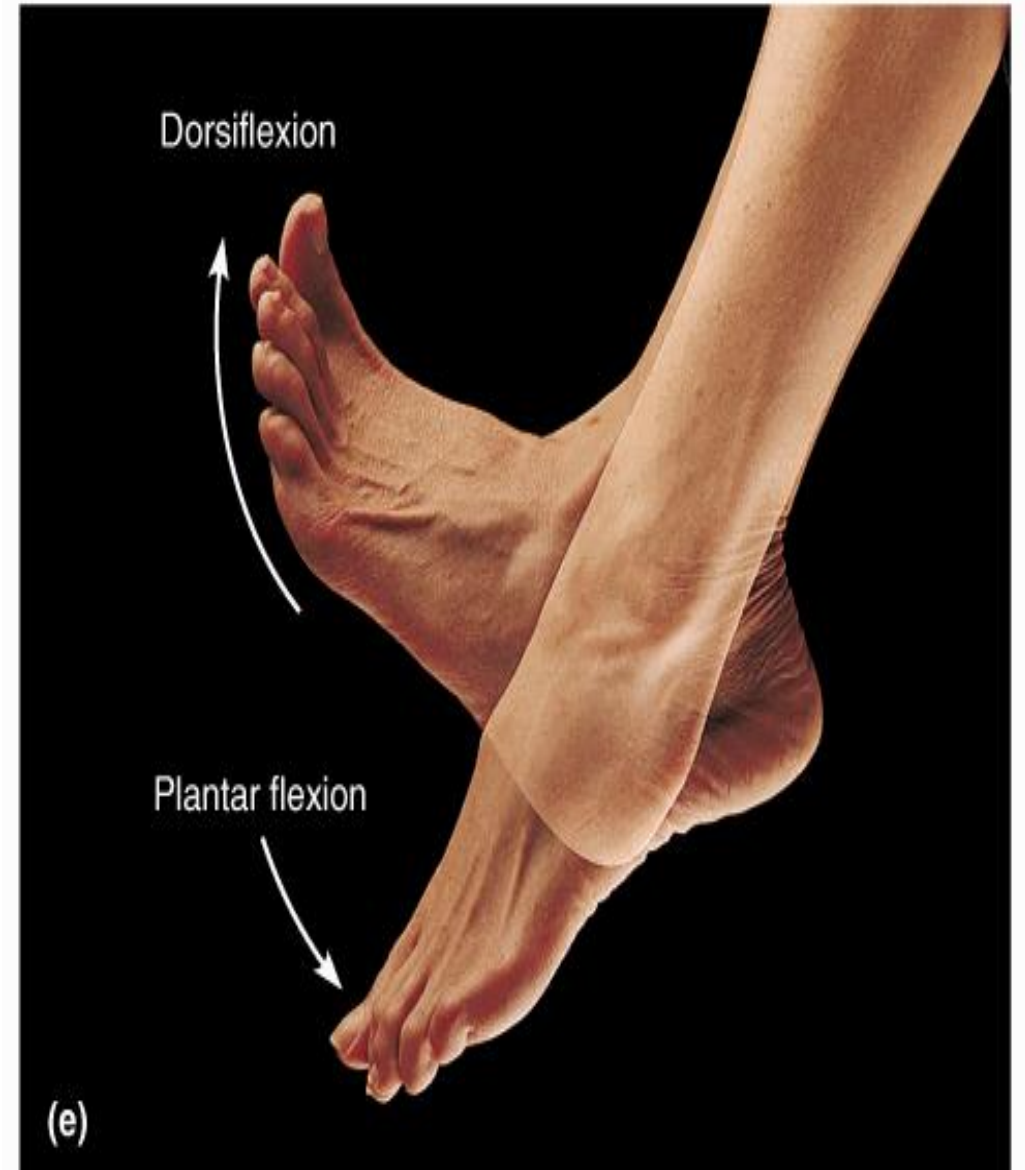


- **Inversion** → moving foot so that sole faces medially.
- **Eversion** → moving foot so that sole faces laterally.



(b) Inversion and eversion

- **Dorsiflexion** → bending foot or ankle upwards.
- **Plantar flexion** → bending foot or ankle downwards.



# Body Cavities

## 1. Cranial Cavity

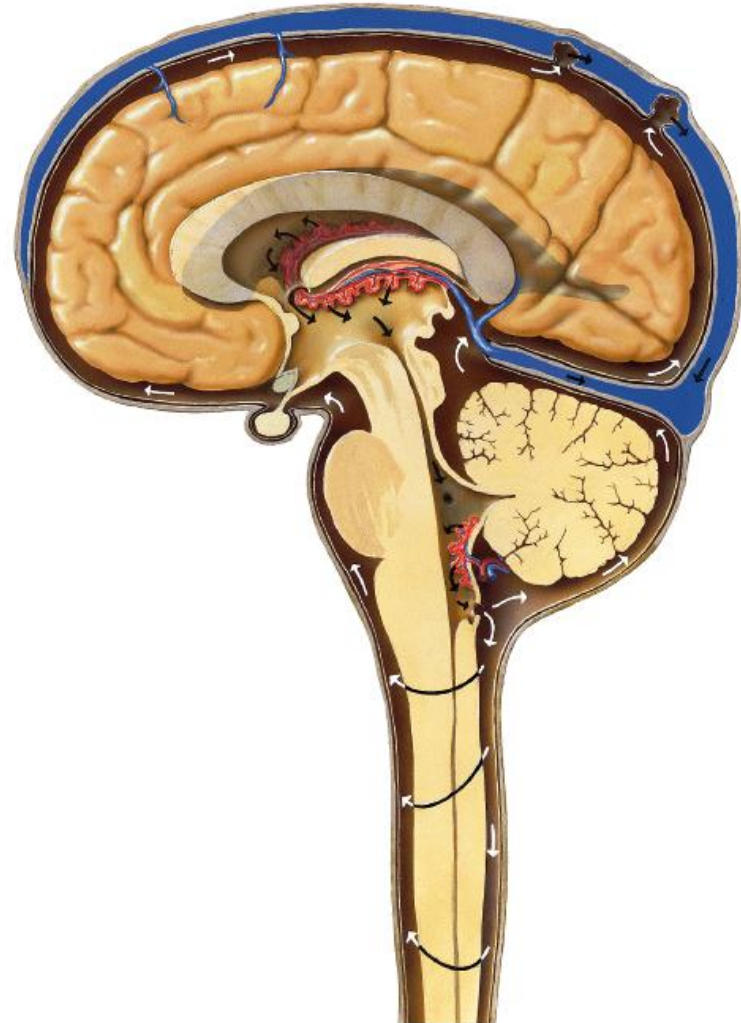
- \* The cavity inside the skull.
- \* Contains the brain.





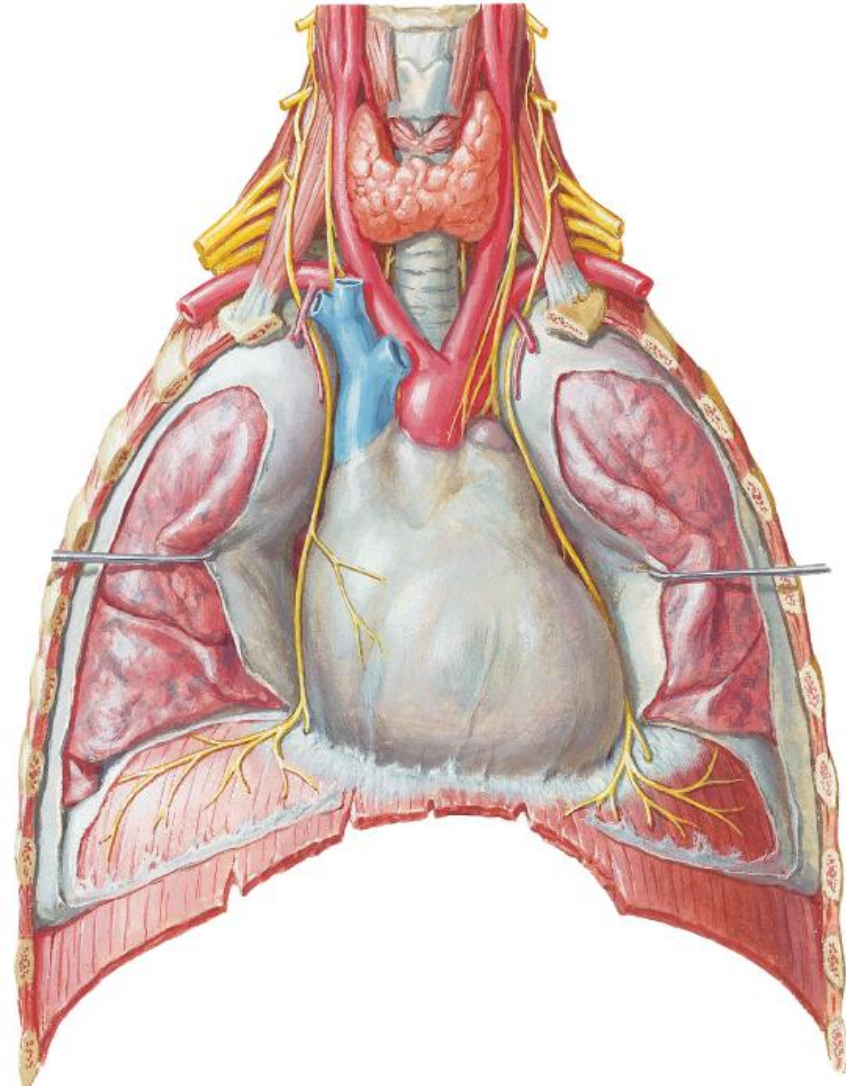
## 2. Vertebral Cavity

- \* The cavity of the vertebral column.
- \* Contains the spinal cord.



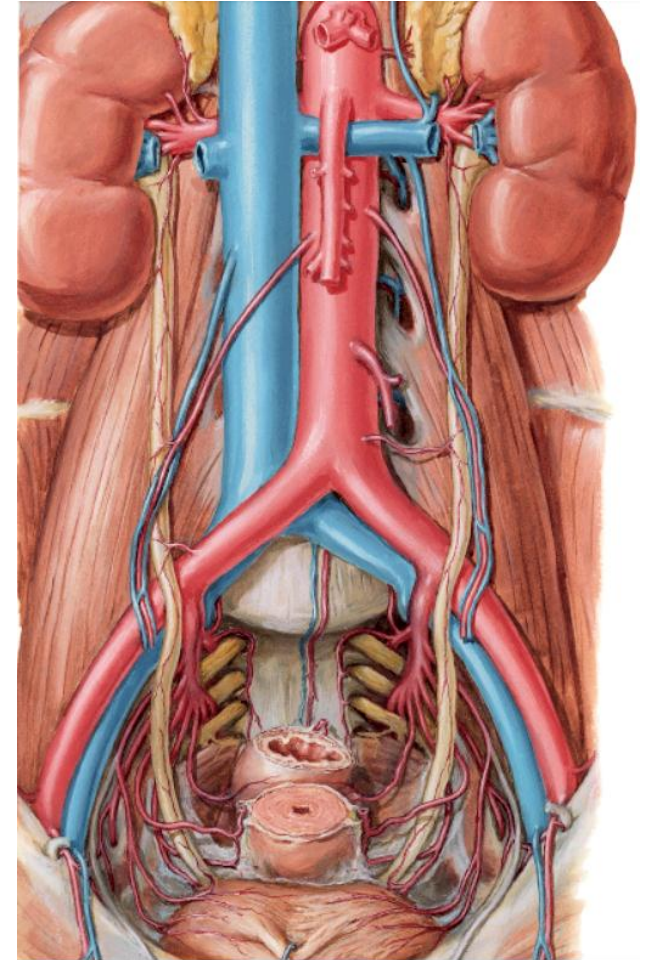
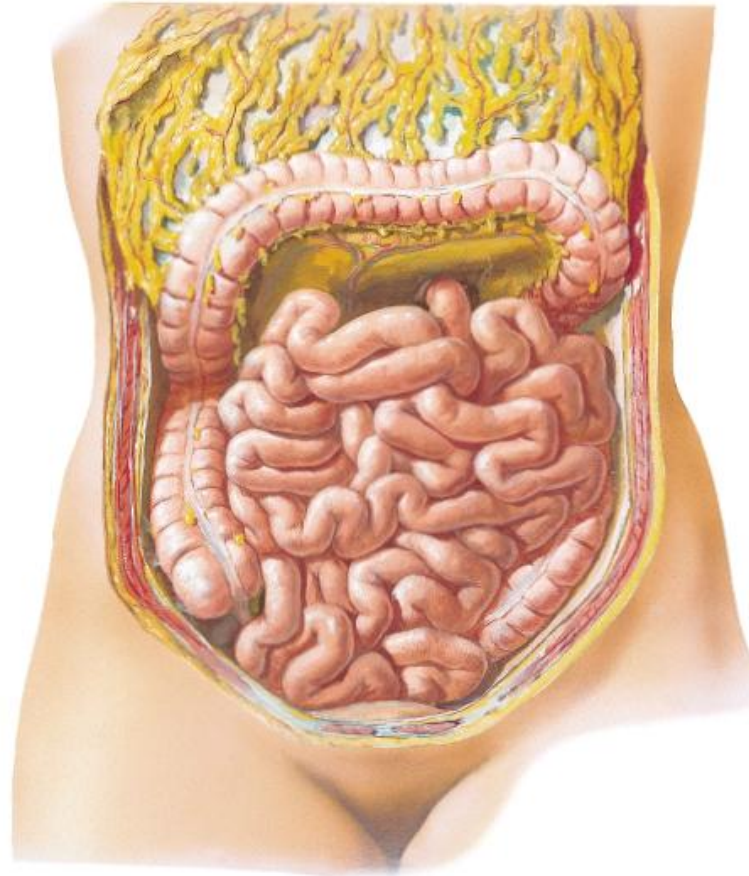
# 3. Thoracic Cavity

- \* Contains the heart inside the pericardial cavity.
- \* Contains the lungs inside the pleural cavities.



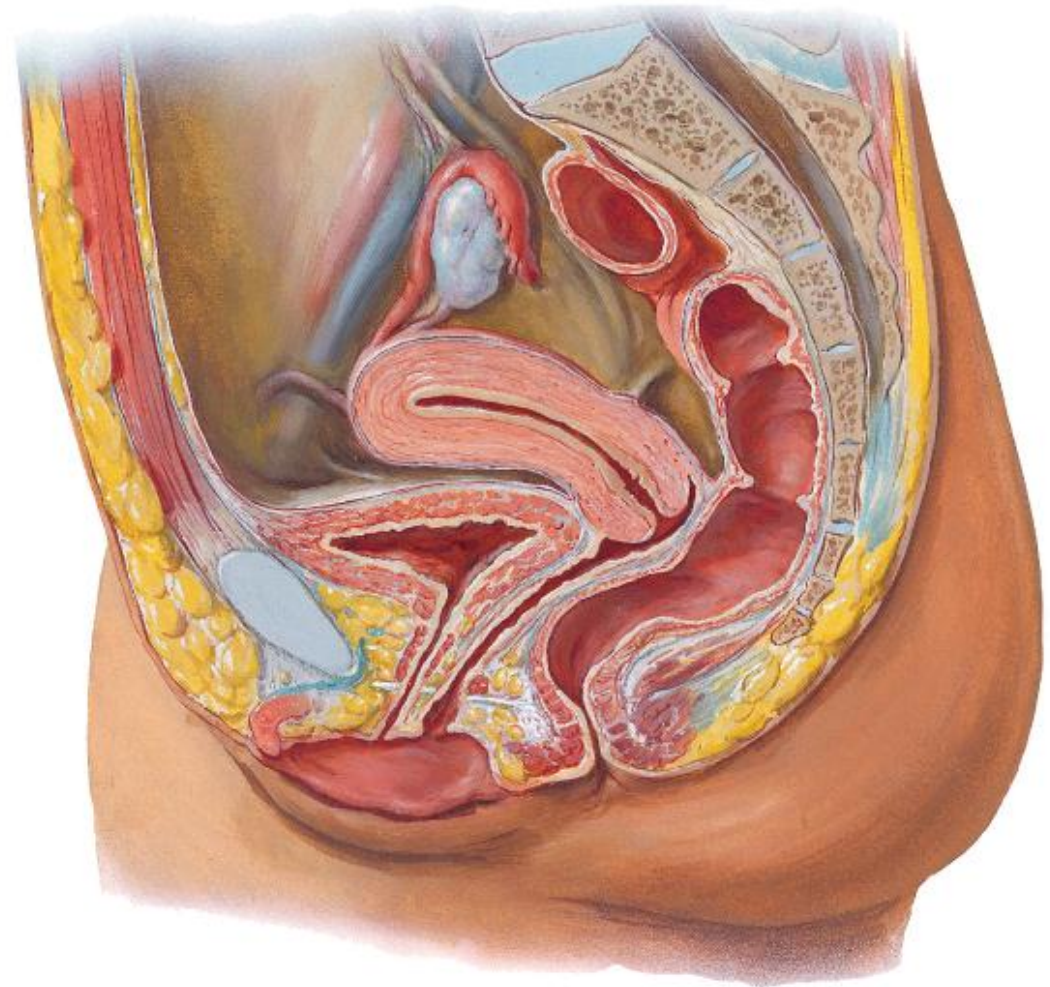
# 4. Abdominal Cavity

**\* Contains abdominal organs such as organs of gastro-intestinal tract & kidneys.**



# 5. Pelvic Cavity

**\* Contains pelvic organs such as urinary bladder, rectum & uterus & ovaries (in females).**





Thank You  
Thank You  
Thank You!!!!