



Anatomy

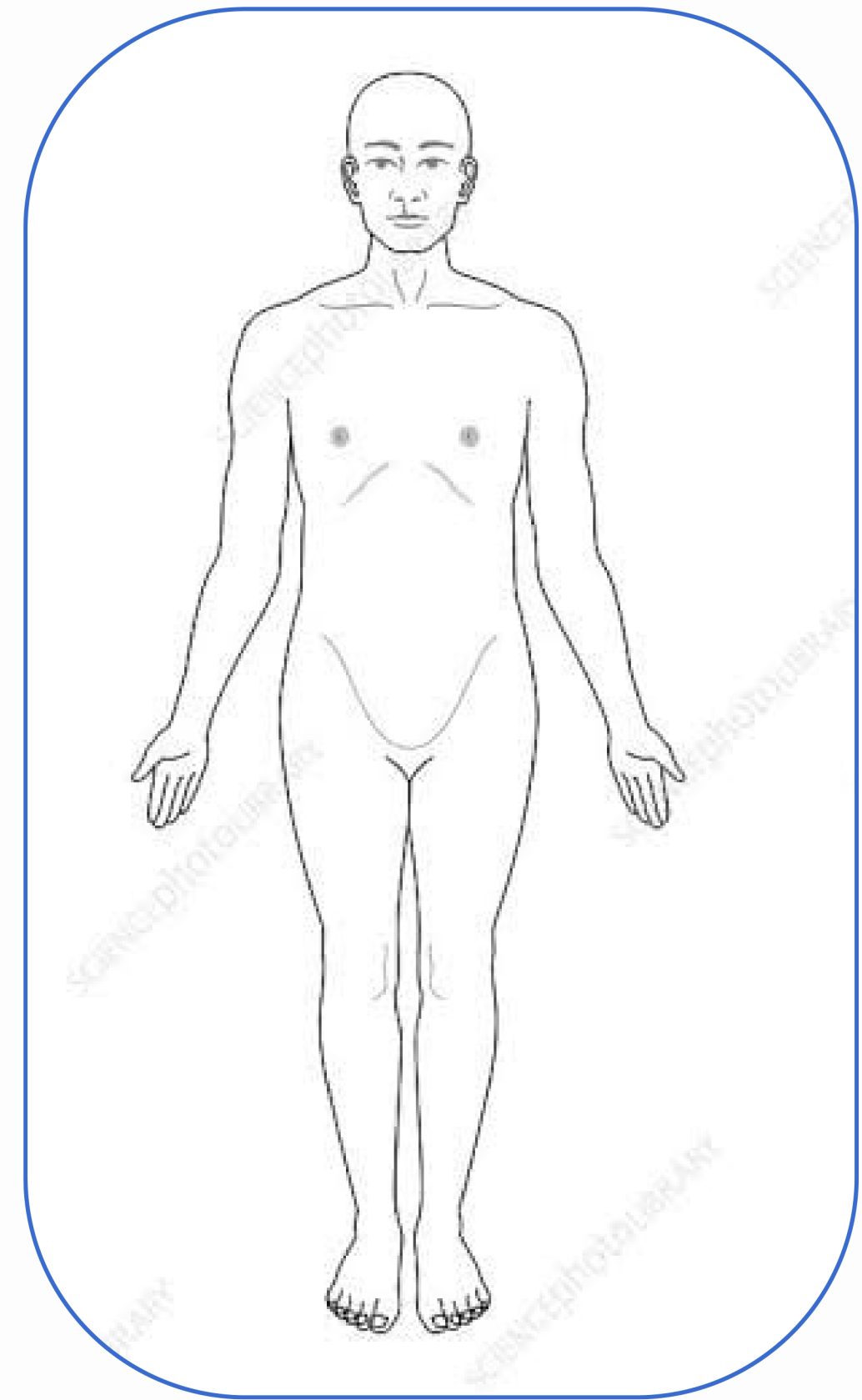


Terminology

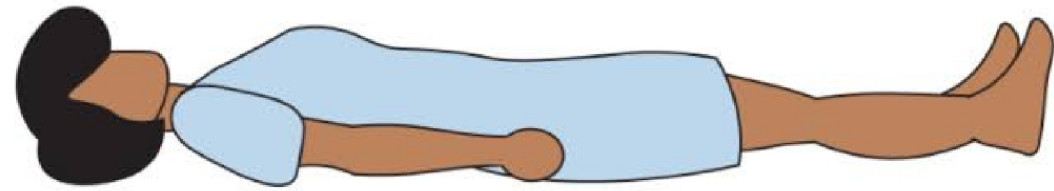
Anatomical position

1-Erect position

The body is standing up,
The face looks forwards,
The upper limbs at the sides,
The palm directed forwards.



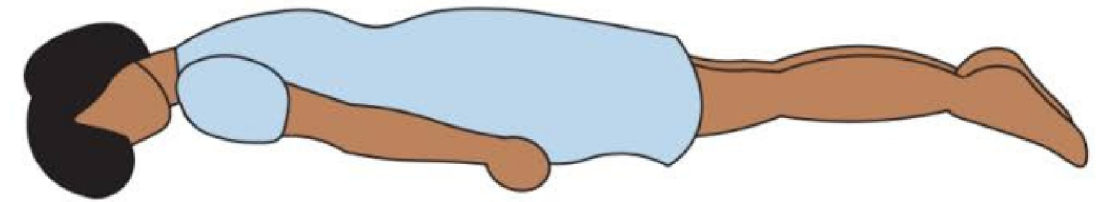
2-Supine position



Supine

The body lies on its back

3-Prone position



Prone

The body lies on its front

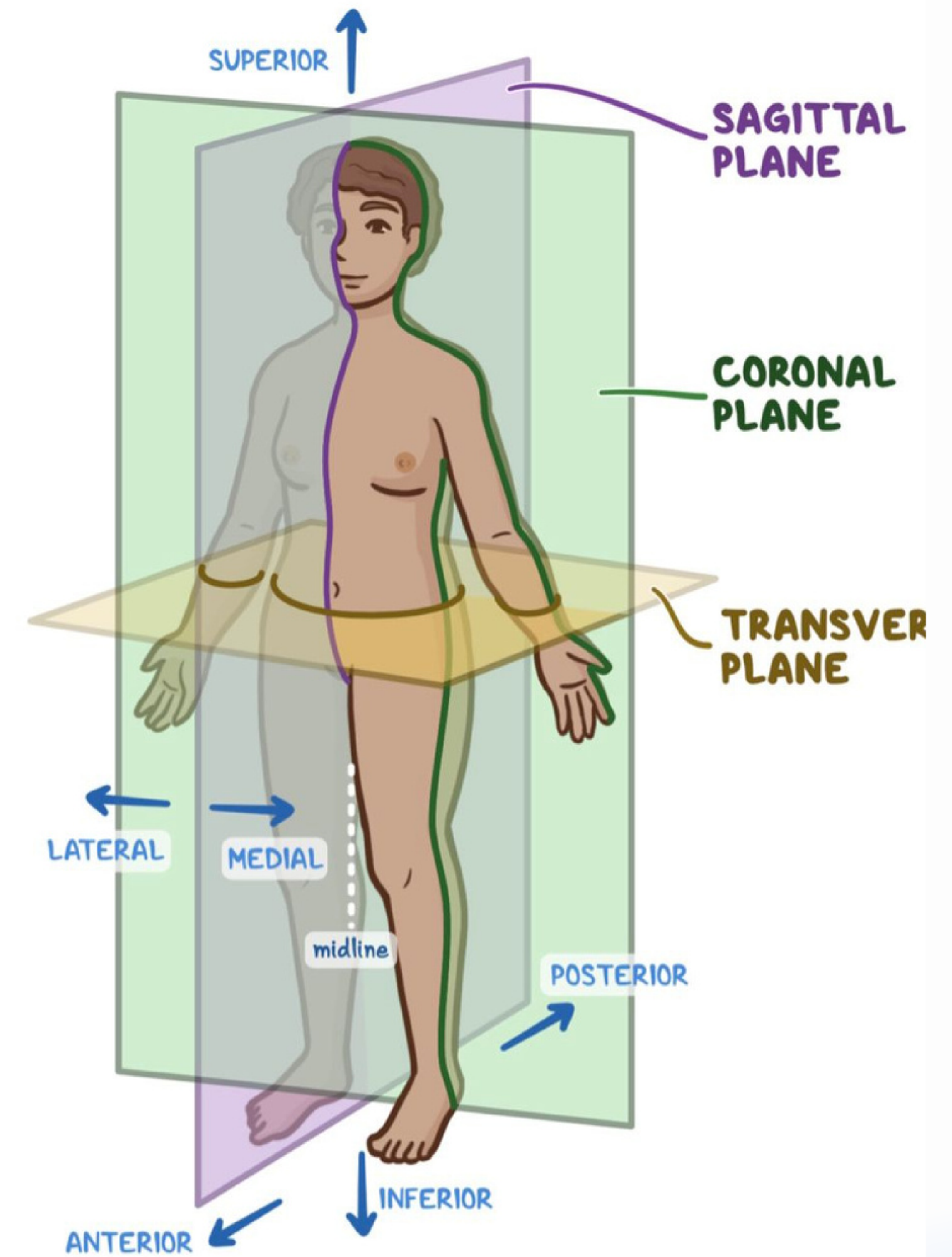
Anatomical planes

1- Coronal (Frontal) Plane: Vertical plane that divides the body into front (anterior) and back (posterior) parts.

2- Median (Sagittal) Plane: Vertical plane that divides the body into equal right and left halves.

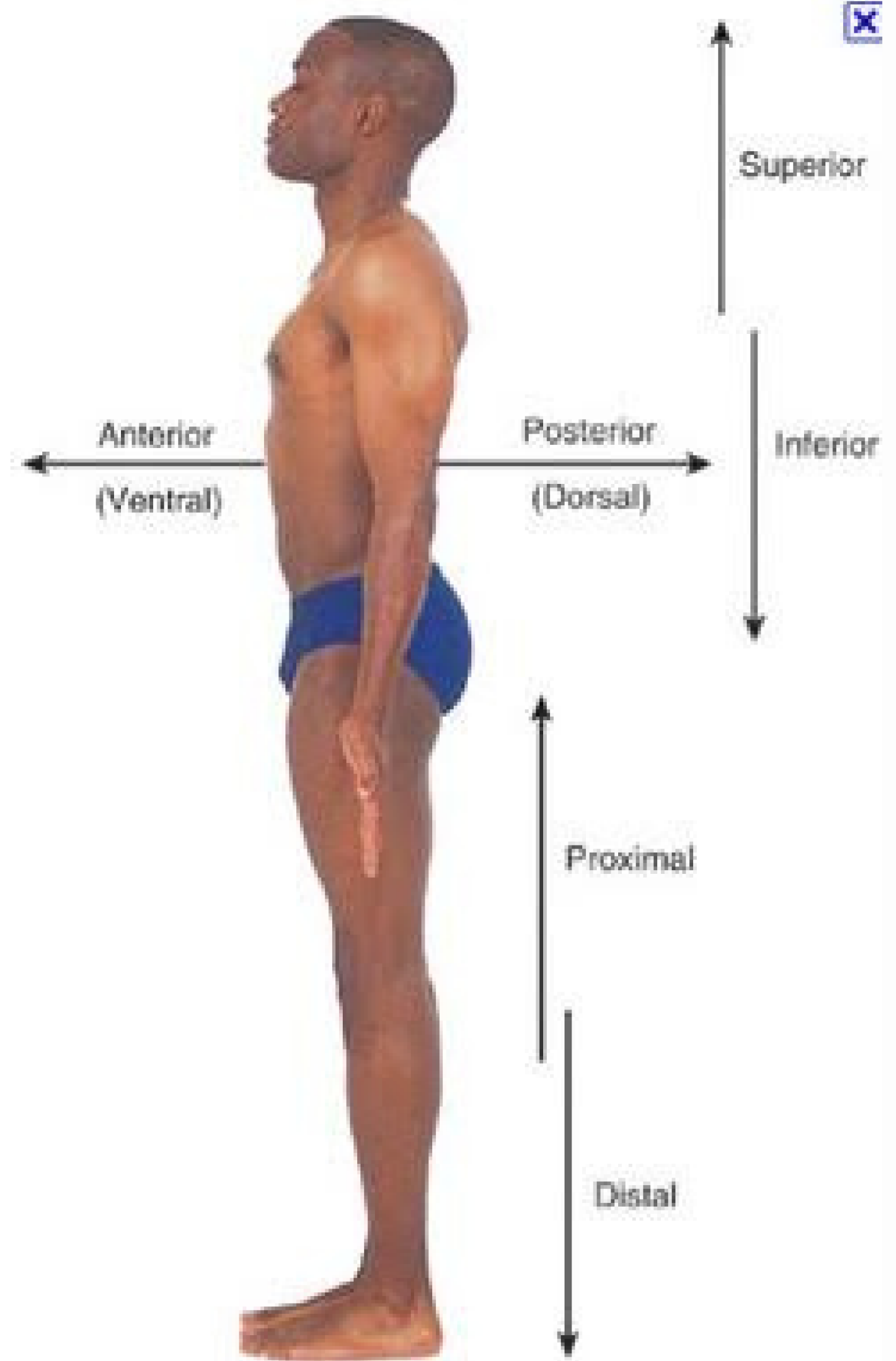
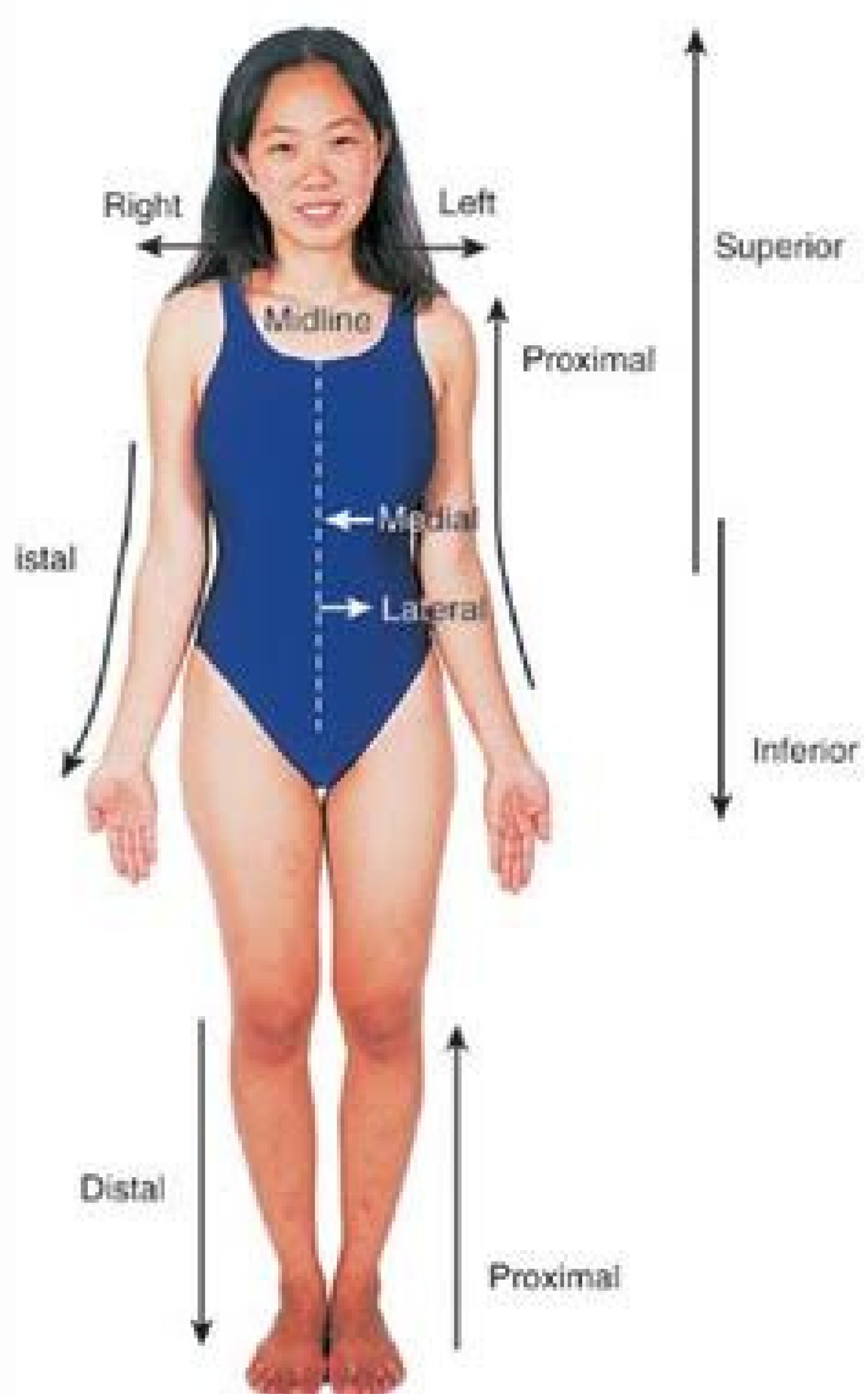
3. Horizontal Plane: Transverse plane that divides the body into upper (superior) and lower (inferior) parts.

4- Paramedian plane (lateral sagittal plane): It is vertical plane that runs parallel to the the median plane dividing the body into two unequal parts.



Anatomical terms of location

- **Anterior (ventral):** Near to the front of the body.
- **Posterior (dorsal):** Near to the back of the body behind.
- **Upper (superior , cephalical) :** Towards the head.
- **Lower (inferior, caudal):** Towards the feet.
- **Median:** In the median plane.
- **Medial:** Near to the median plane.
- **Lateral:** Away from the median plane.
- **Middle:** Located at equal distance between two fixed points.



- **Intermediate:** A point located between two fixed points.
- **Superficial:** Near to the skin.
- **Deep:** Away from the skin.
- **Proximal:** Near to the root of the limb.
- **Distal:** Away from the root of the limb.
- **Palmar:** Refers to the front of the hand.
- **Plantar:** Refers to the ventral aspect of the foot.
- **External:** Near to the surface of a hollow organ.
- **Internal:** Near to the cavity of a hollow organ

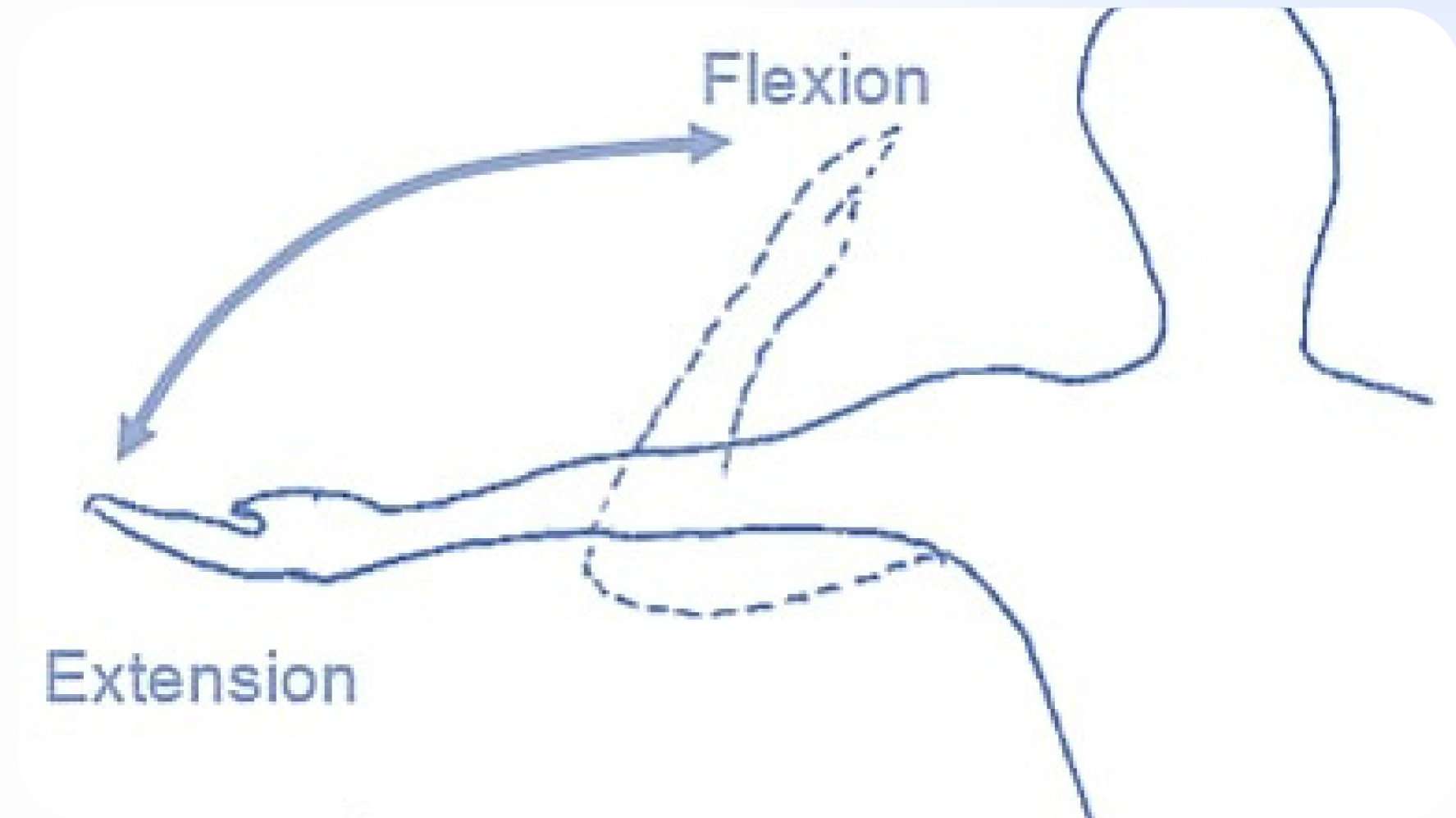
Anatomical Terms of Joint Movements

Flexion (bending):

Approximation of two flexor or ventral surfaces.

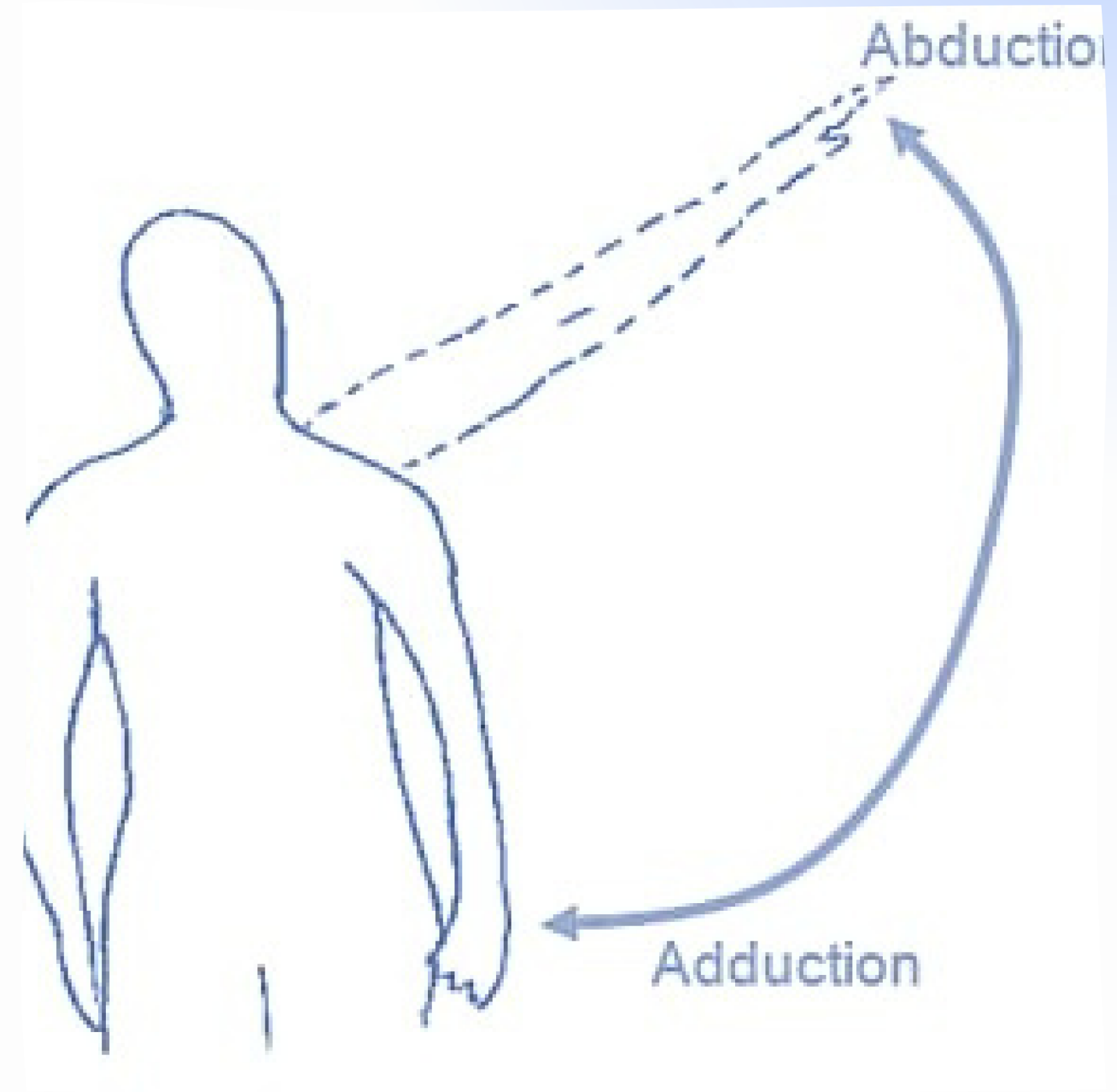
- **Extension (Straightening):**

Approximation of two extensor or dorsal surfaces.



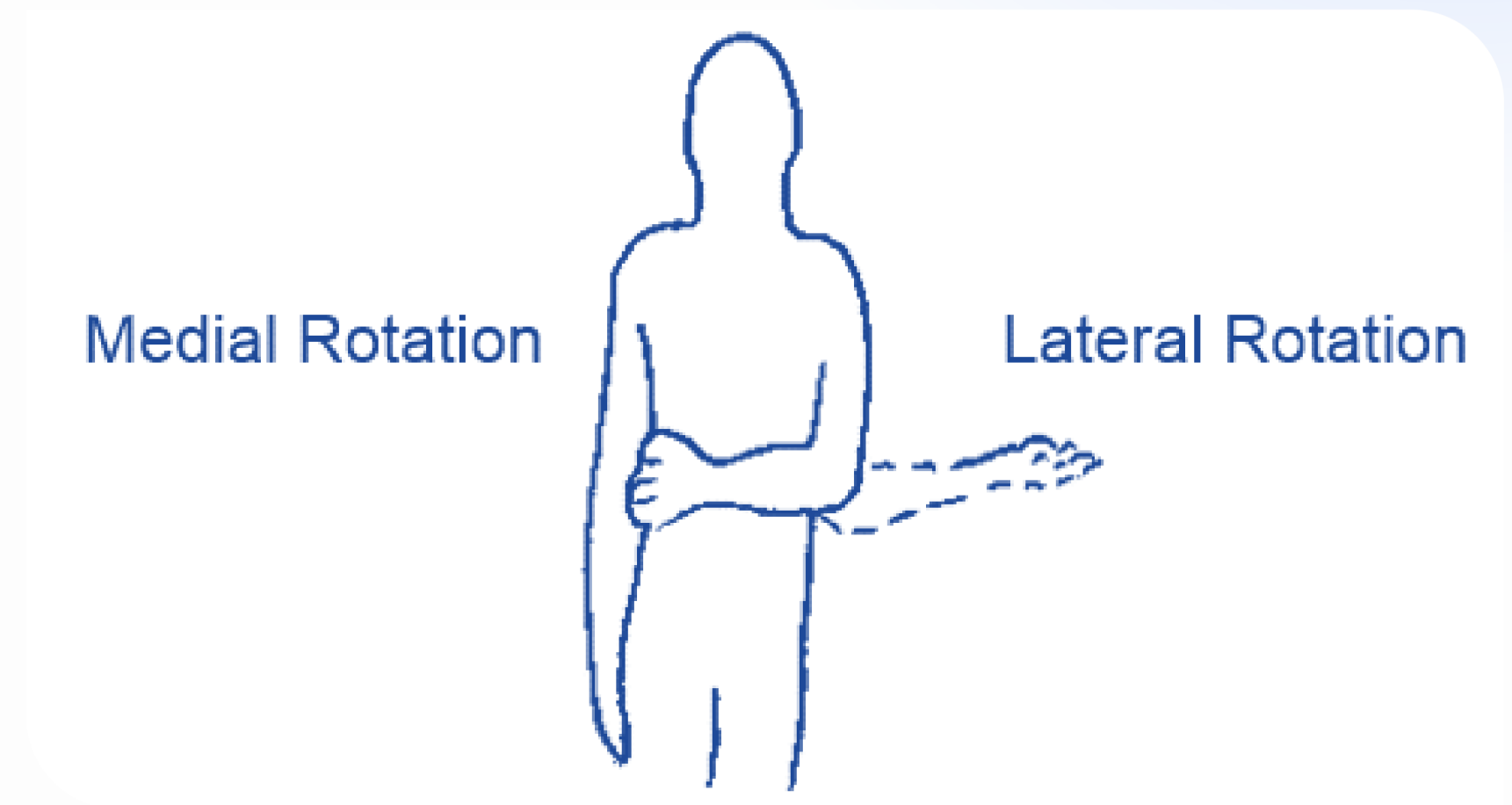
- **Abduction:** Movement of the part away from the middle line (in fingers: from the axis of the middle finger, and in toes: from the axis of the second toe).

- **Adduction:** Movement of the part towards the trunk (in fingers towards the axis of the middle finger, and in toes towards the axis of the second toe).

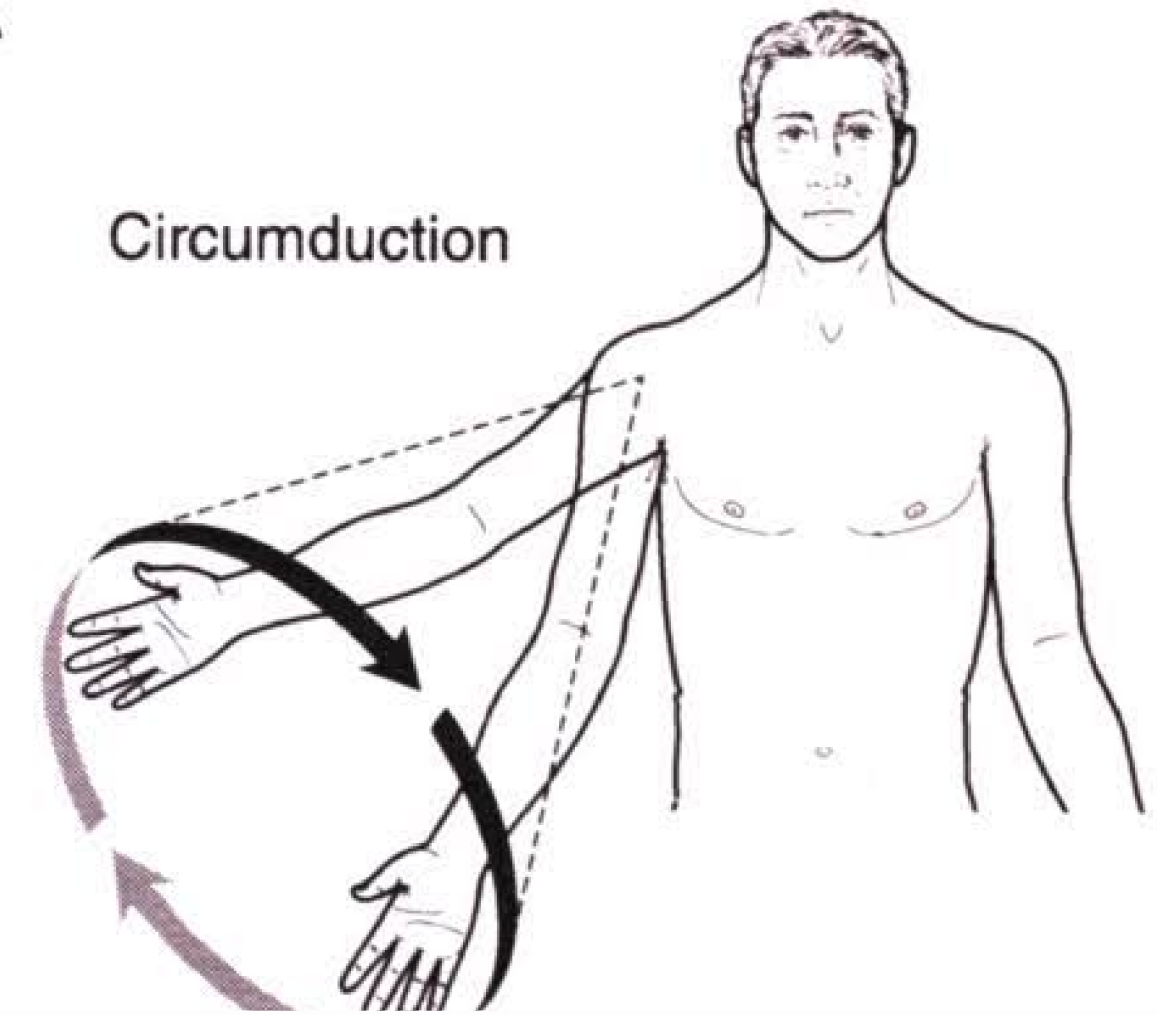


- **Medial rotation: Internal or medial rotation of a part around its long axis.**

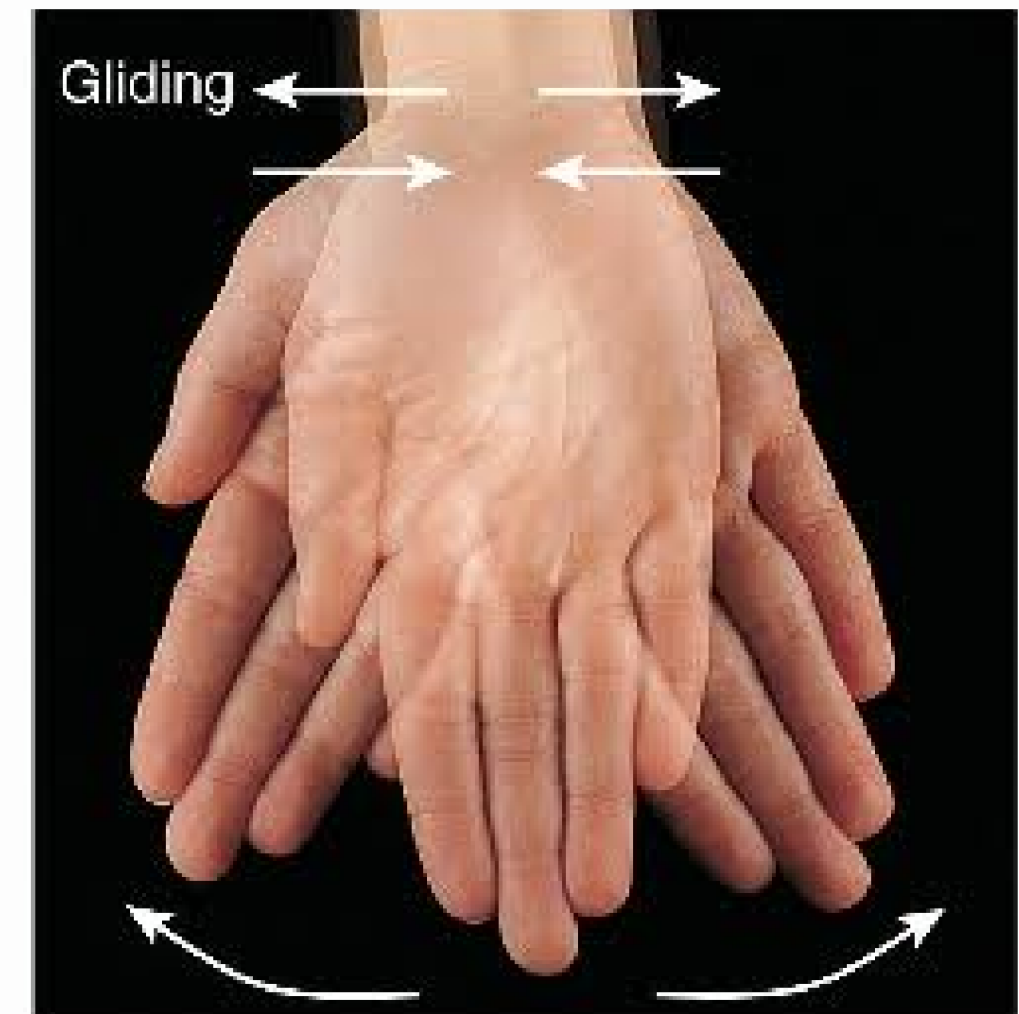
- **Lateral rotation: External or lateral rotation of a part around its long axis.**



- **Circumduction: Successive combination of flexion, adduction, extension and abduction.**



- **Gliding: Sliding with no axial movement.**

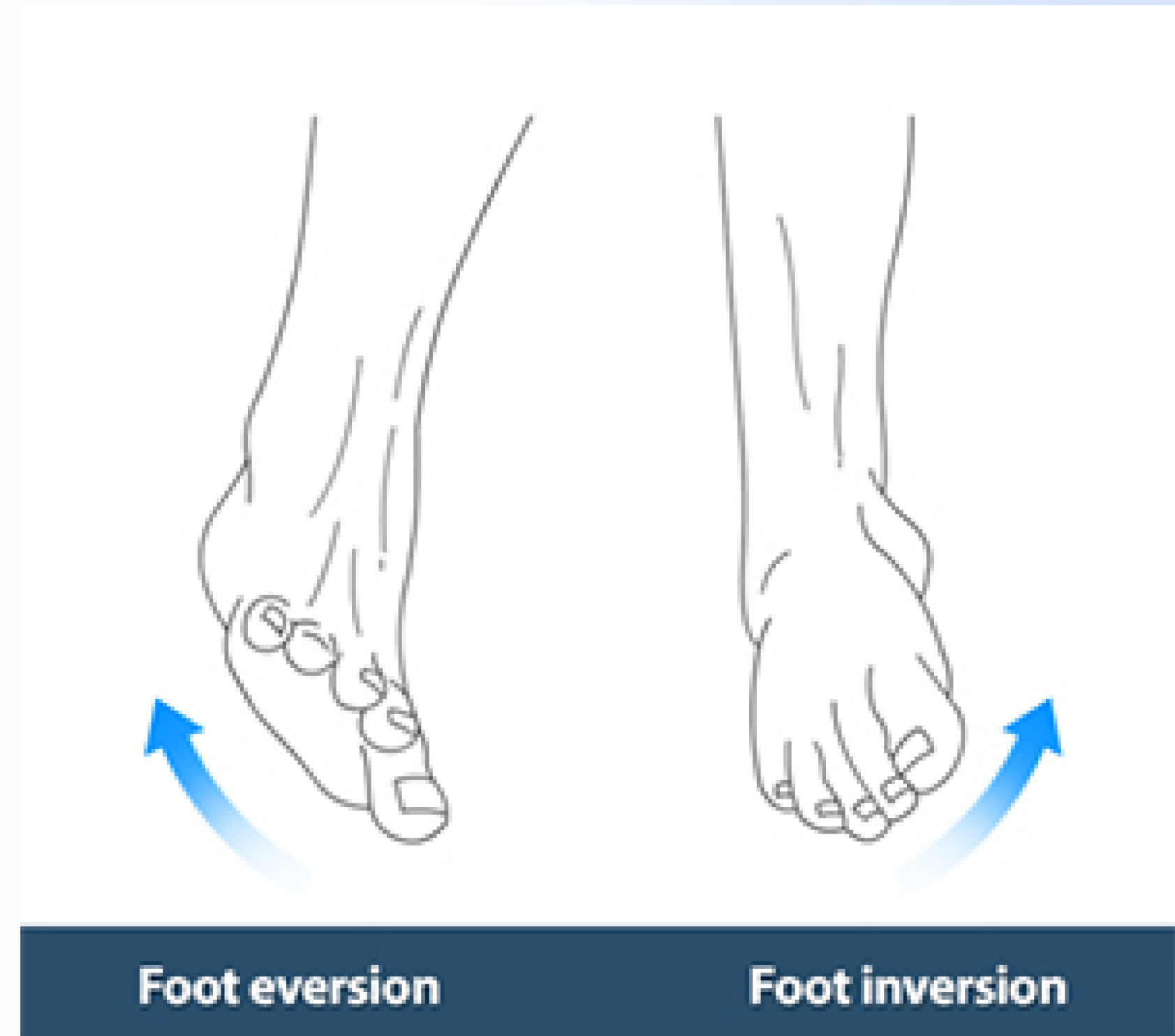


Special movement

- **Pronation (in the forearm and the hand):** Rotation of the forearm so that the palm of the hand looks backwards and the thumb looks medially.
- **Supination (in the forearm):** Rotation of the forearm so that the palm of the hand looks forwards and the thumb looks laterally.



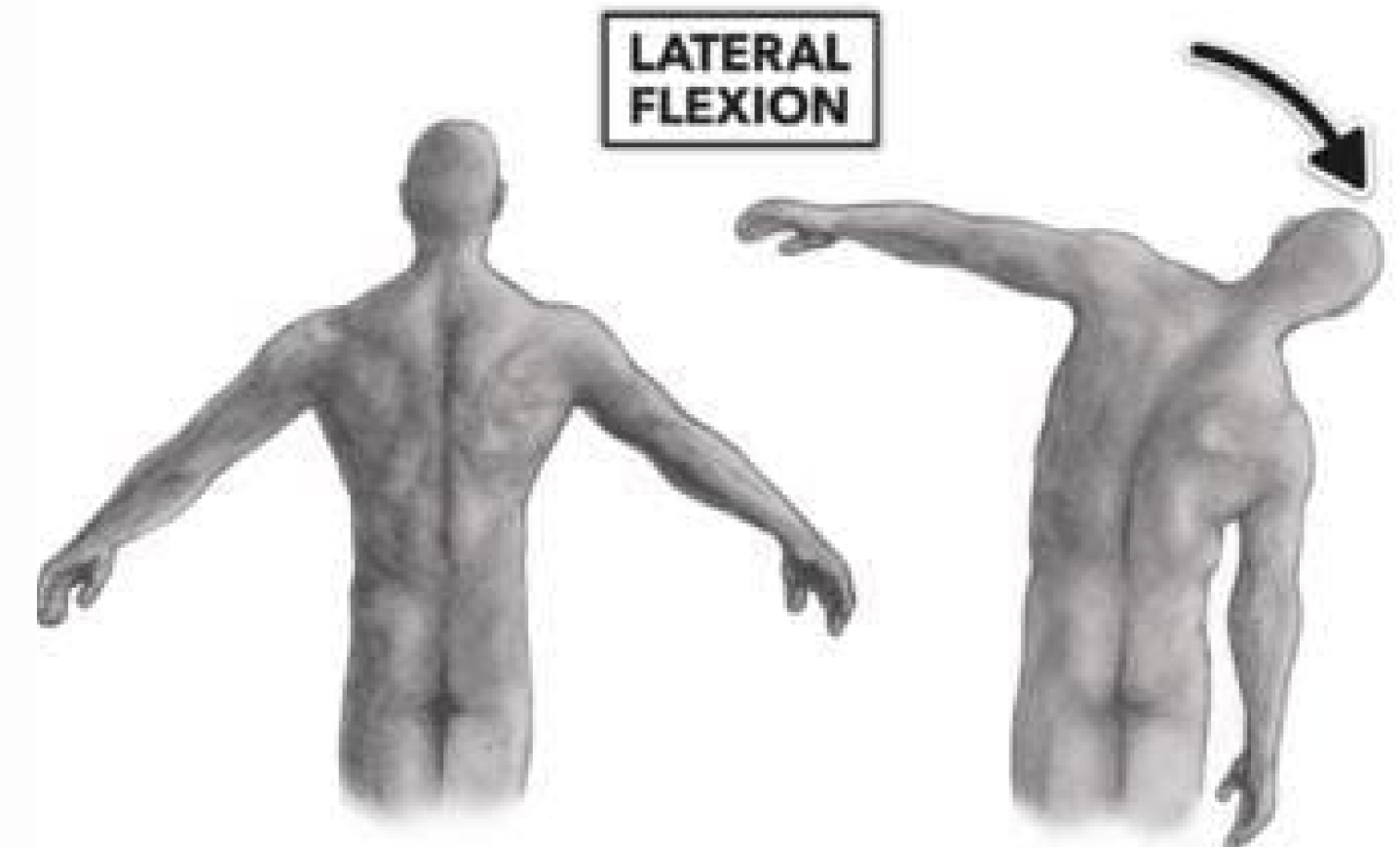
- **Inversion (in the foot):** The medial border of the foot is raised up and the sole looks medially. It is accompanied with plantar flexion of the foot.
- **Eversion (in the foot):** The lateral border of the foot is raised up and the sole looks laterally. It is accompanied with some degree of dorsiflexion of the foot.



Opposition: It is flexion and medial rotation of the thumb so as it gets in contact with the tips of the medial four fingers.



Lateral flexion of the trunk: Bending the trunk to one side.





Skin & Fascia

The Skin

Epidermis

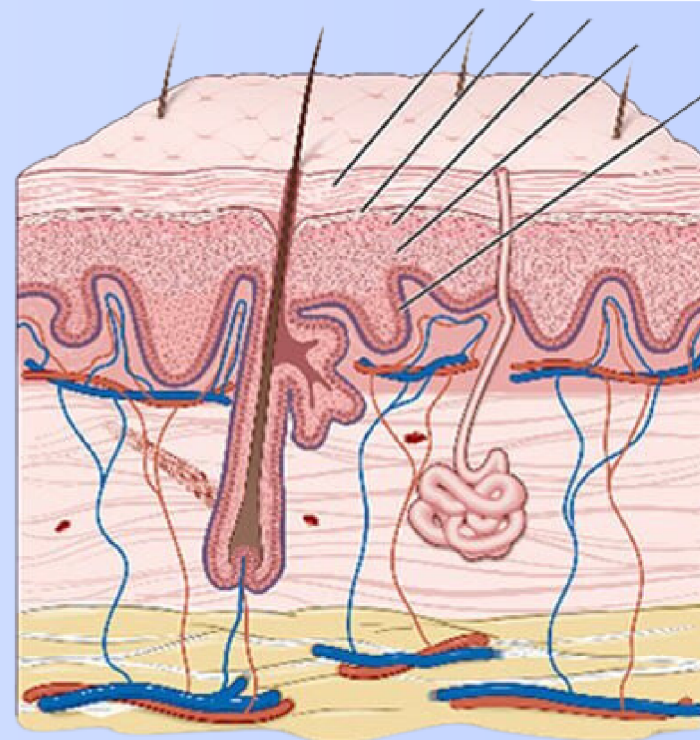
It is formed of stratified squamous epithelium covered by Keratin layer

It invaginates the deeper layer (dermis) to form:

- a. Sweat gland
- b. Hair follicle
- c. Sebaceous glands

Dermis

Consists of collagen and elastic fibers, blood vessels, lymphatics and nerves.



Skin appendages

1-Hair

2-Nails: It develops from epidermis. It is formed of root body and free border.

3- Sebaceous gland: It is located in the angle between hair follicle and the hair erector muscle. Their ducts open in the hair follicles.

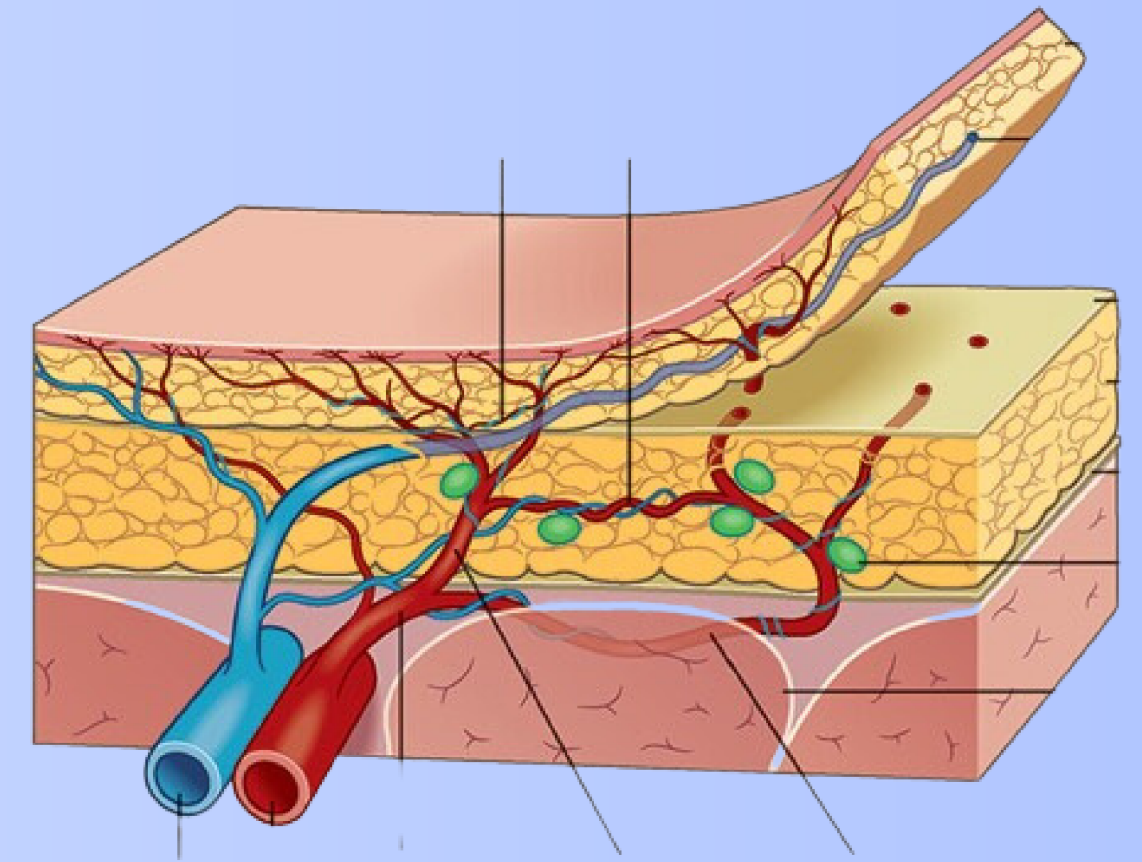
4- Sweat glands: It is simple coiled tubular glands open on the surface of the skin.

Fascia: collection of connective tissue under the skin

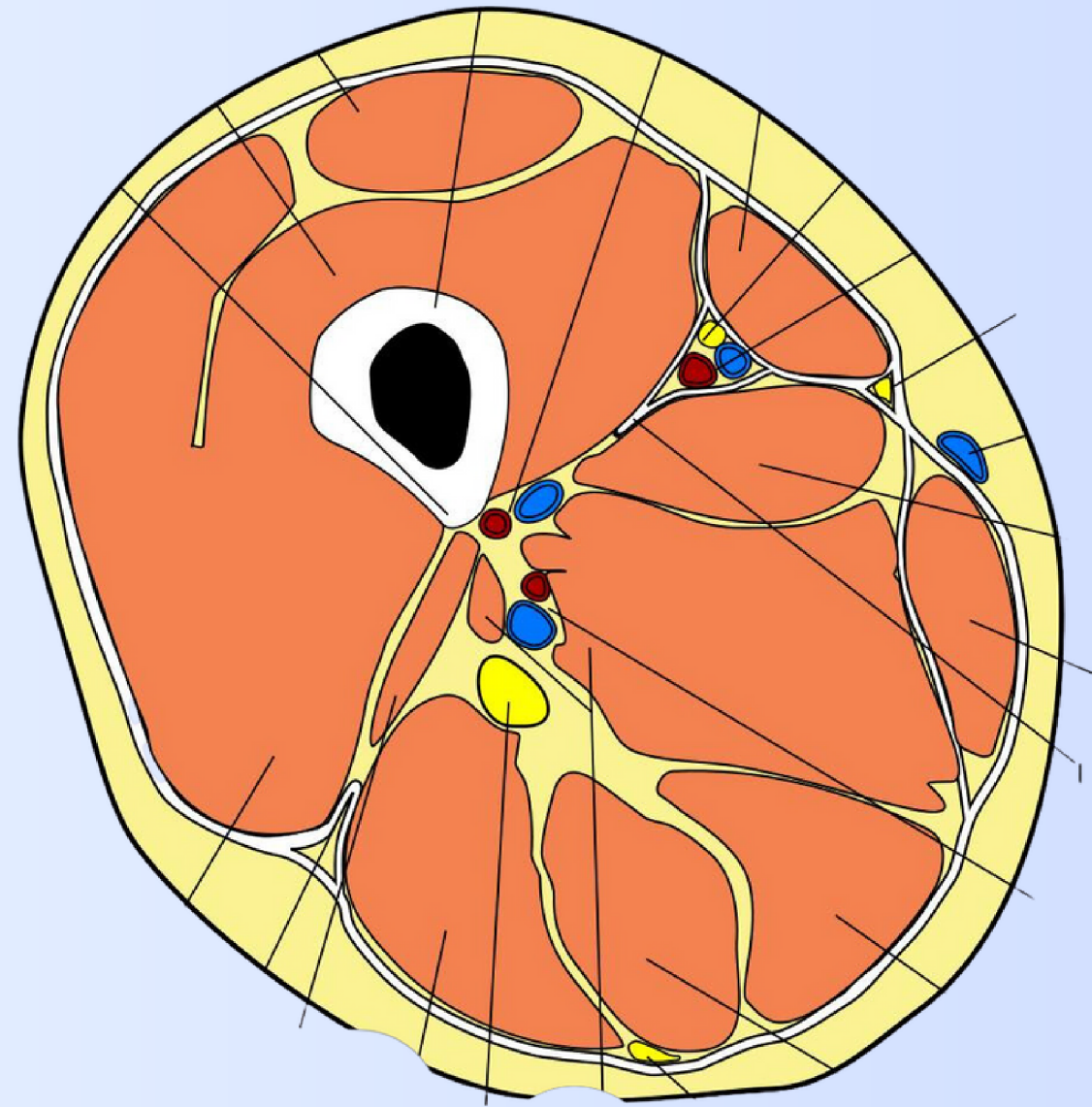
Superficial fascia

Functions of superficial fascia:

- 1- Retains warmth of the body.
- 2- Acts as a reservoir of fat.
- 3- Facilitates movement of skin.
- 4- Acts as a soft bed for passage of vessels and nerves to skin.



Fascia: collection of connective tissue under the skin



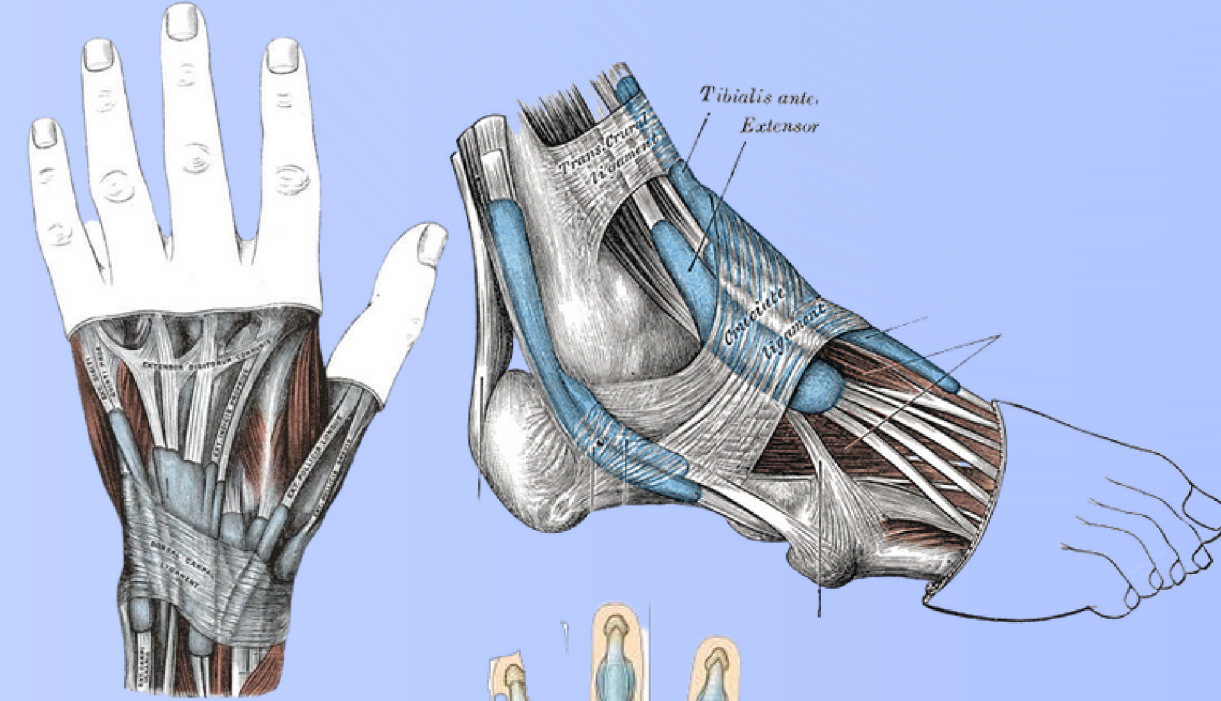
Deep fascia

Function of deep fascia:

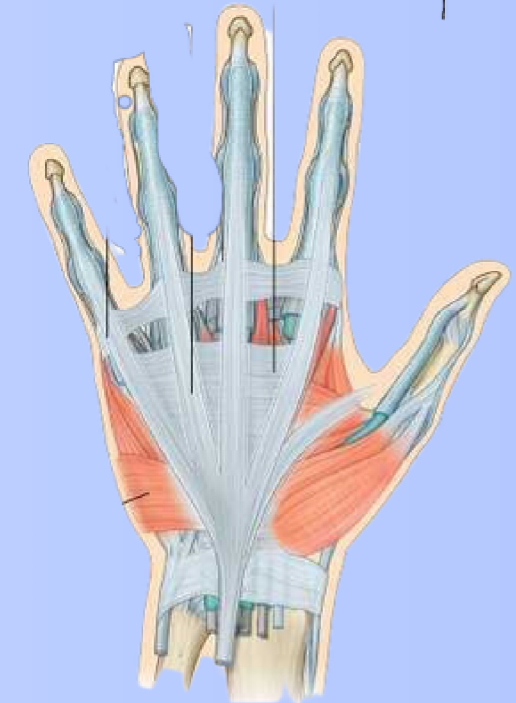
- 1- Keeps the underlying structures in position.
- 2- Binds the muscle into groups and extends between them as intermuscular septa.
- 3- It forms interosseous membranes that bind bones together.
- 4- Formation of fibrous sheaths around flexor tendons of hands and feet.

Sites of condensation of the deep fascia:

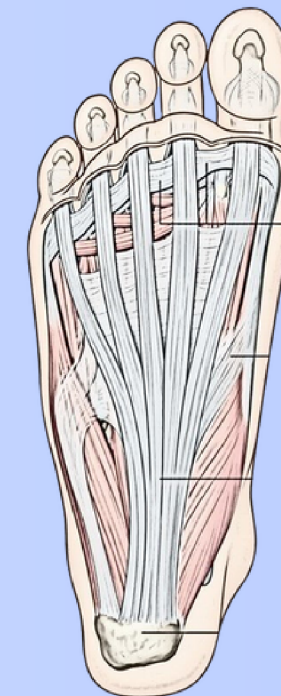
1- At wrist and ankle joints.



2- At the palm of the hand.




3- At the sole of the foot.





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