

Anatomy:

Is the science that studies the structure of the body parts according to their shape, place, work and their relationships one to another. It derived from the Greek words meaning (to **cut parts**) ana (up) and tome (cutting) that mean **cutting up**.

Anatomical Position:

To describe body parts and position accurately, we need an initial reference point and must indicate direction. The anatomical reference point is a standard body position called the **anatomical position**.

All the anatomical descriptions are based on the anatomical position.

Anatomical position: it is the position in which the body:

- a. erect standing position on the feet.
- b. the arms on the sides.
- c. the face and the palms of the hands directed foreword.

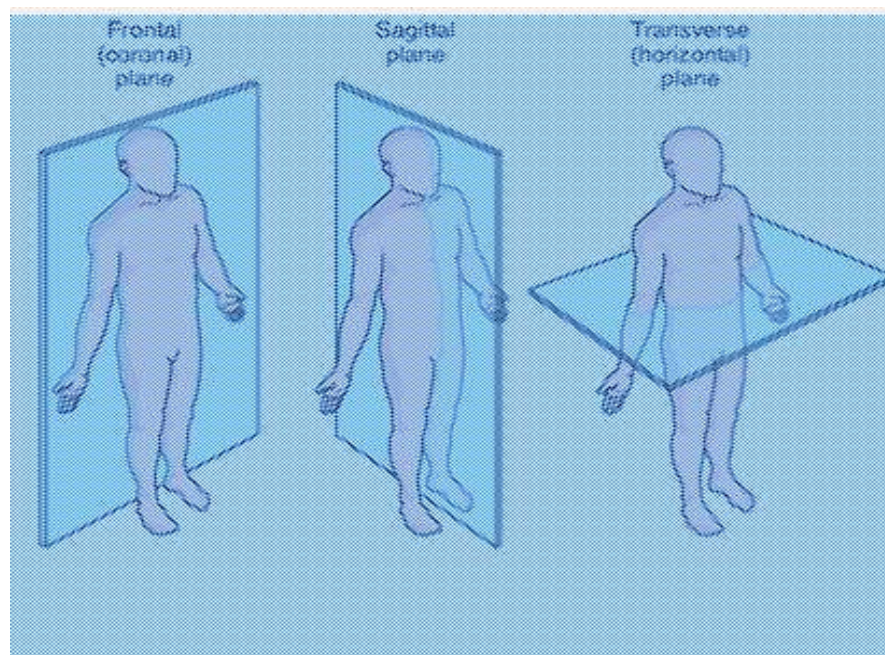
Anatomical terminology:

Terms related to position:

Anatomical planes:

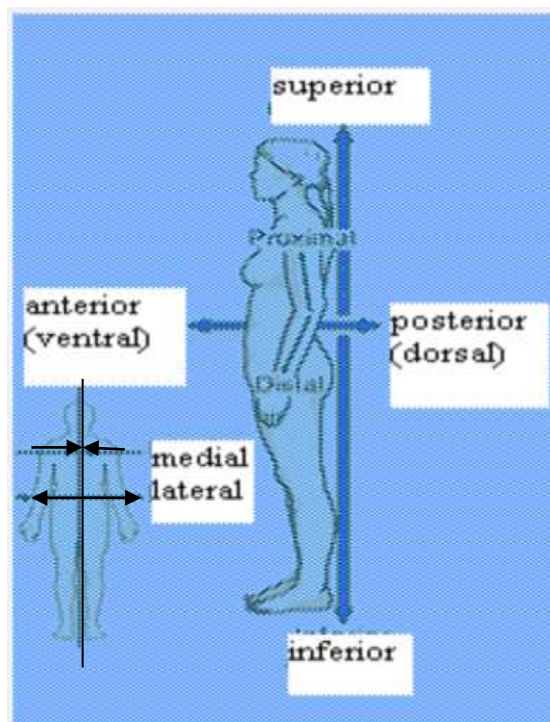
For anatomical studies, the body is often sectioned (cut) along a flat surface called a plane. The various parts of the body described in relation to certain imaginary planes. The most frequently used body planes are sagittal, coronal, and transverse planes, which are lie at right angles to one another:

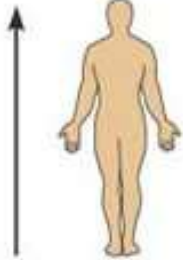
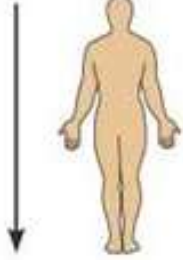
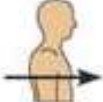
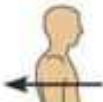
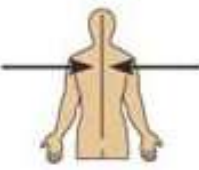
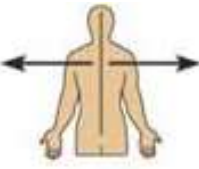
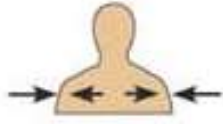
1. **Median plane, or median Sagittal plane:** is the imaginary vertical plain that dividing the body into two equal parts (halves) left and right from the anterior to the posterior passing through the center along the body in vertical direction that lies exactly in the midline.
2. **Coronal plane or frontal plane:** is the vertical plane that intersects with the median plane at right angle separating the body into anterior and posterior parts.
3. **Horizontal plane or transverse plane:** is the plane runs horizontally from right to left, dividing the body into superior and inferior parts in horizontal direction.



Direction terms:

1. **Medial:** is the term used when the structure located nearer to the medial plain of the body. Example the heart is medial to the arm.
2. **Lateral:** is the term used when the structure located further away from the medial plain of the body. Example: the arms are lateral to the heart.
3. **Superior:** is the term indicate to the nearest parts to the head (upper)
Example: the head superior to the abdomen.
4. **Inferior:** is the term indicate to the farther parts to the head (lower)
Example: the foot is inferior to the abdomen.
5. **Internal:** is the term indicate to the inside the body cavity (inner) (deep). Example: the lungs are deep to the skin.
6. **External:** is the term used to indicate to the site of the some structures or organs to the body surface (outer) (superficial).
Example: the skin is superficial to the muscles.
7. **Anterior:** is the term used to indicate the front of the body also called **ventral**.
8. **Posterior:** is the term used to indicate to the back of the body also called **dorsal**.



TERM	DEFINITION	EXAMPLE
Superior (cranial)	Toward the head end or upper part of a structure or the body; above	
Inferior (caudal)	Away from the head end or toward the lower part of a structure or the body; below	
Ventral (anterior)*	Toward or at the front of the body; in front of	
Dorsal (posterior)*	Toward or at the back of the body; behind	
Medial	Toward or at the midline of the body; on the inner side of	
Lateral	Away from the midline of the body; on the outer side of	
Intermediate	Between a more medial and a more lateral structure	
Superficial (external)	Toward or at the body surface	
Deep (internal)	Away from the body surface; more internal	