

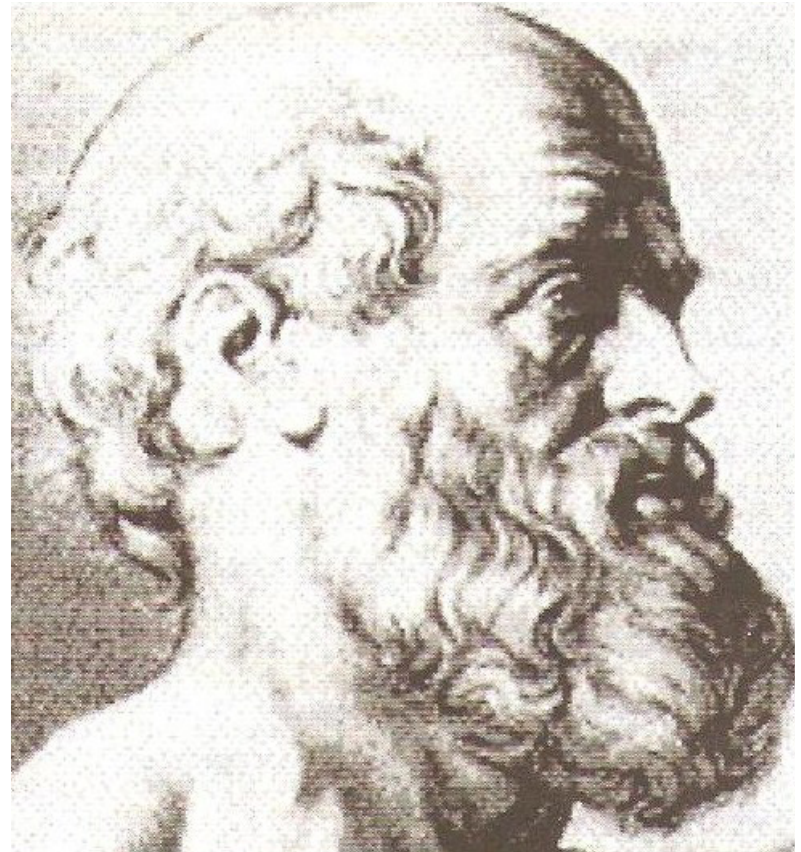
GENERAL ANATOMY



HISTORY OF ANATOMY

HIPPOCRATES(460-377BC)

- Greek physician
- Father of Medicine
- His name is memorialized in the *Hippocratic oath*
- Humoral theory :
Four body humors –
 - blood
 - phlegum
 - yellow bile
 - black bile
- Attributed diseases to natural causes .



GRECIAN PERIOD

HEROPHILUS (about 325BC)

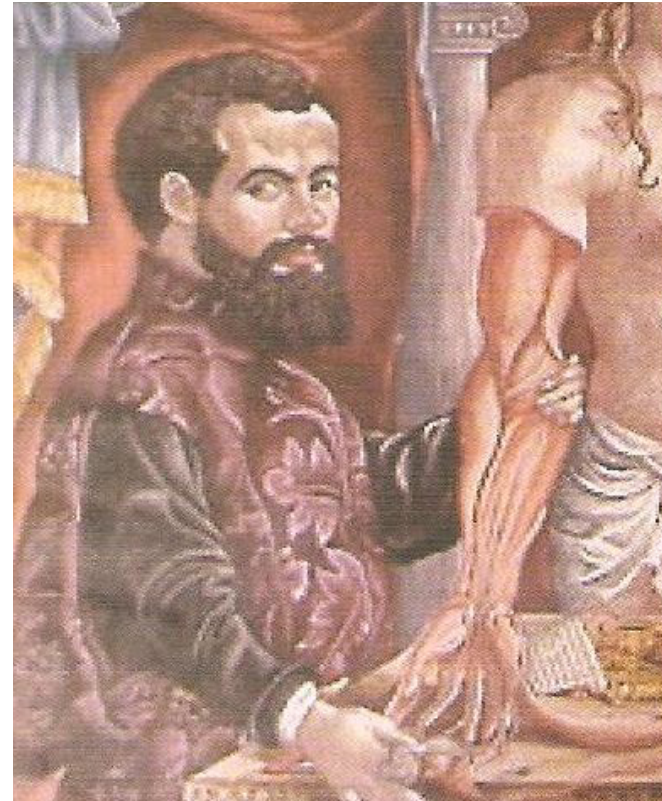
- **Father of Anatomy**
- **Performed:**
 - vivi-sections (dissections of living humans) and dissections of human cadavers
- regarded brain as seat of intelligence
- described cerebrum, cerebellum, fourth ventricle
- first to identify nerves as sensory or motor.



SIXTEENTH CENTURY

VESALIUS(1514- 1654)

- His work *De humani corporis fabrica* written in 7 volumes
- His work revolutionised the teaching of anatomy and ruled for two centuries
- Chose not to have his name attached to the parts of body he described unlike anatomists Sylvius, Fallopius, Eustachius.
- **Father of Modern Anatomy**
- **'Reformer of Anatomy'**



GENERAL ANATOMY

Anatomy = Ana (Gr) Tome (Gr)

Apart

To Cut



Dissection = Dissecare (Latin)

To cut apart



SUBDIVISIONS OF ANATOMY

- **Gross/ Cadaveric Anatomy**
- **Microscopic Anatomy (Histology)**
- **Developmental Anatomy (Embryology)**
- **Living Anatomy**
- **Clinical Anatomy (Applied)**
- **Neuroanatomy**
- **Surface (Topographic) Anatomy**
- **Radiographic Anatomy**
- **Comparative Anatomy**
- **Sectional Anatomy**



GROSS ANATOMY

- **REGIONAL ANATOMY**

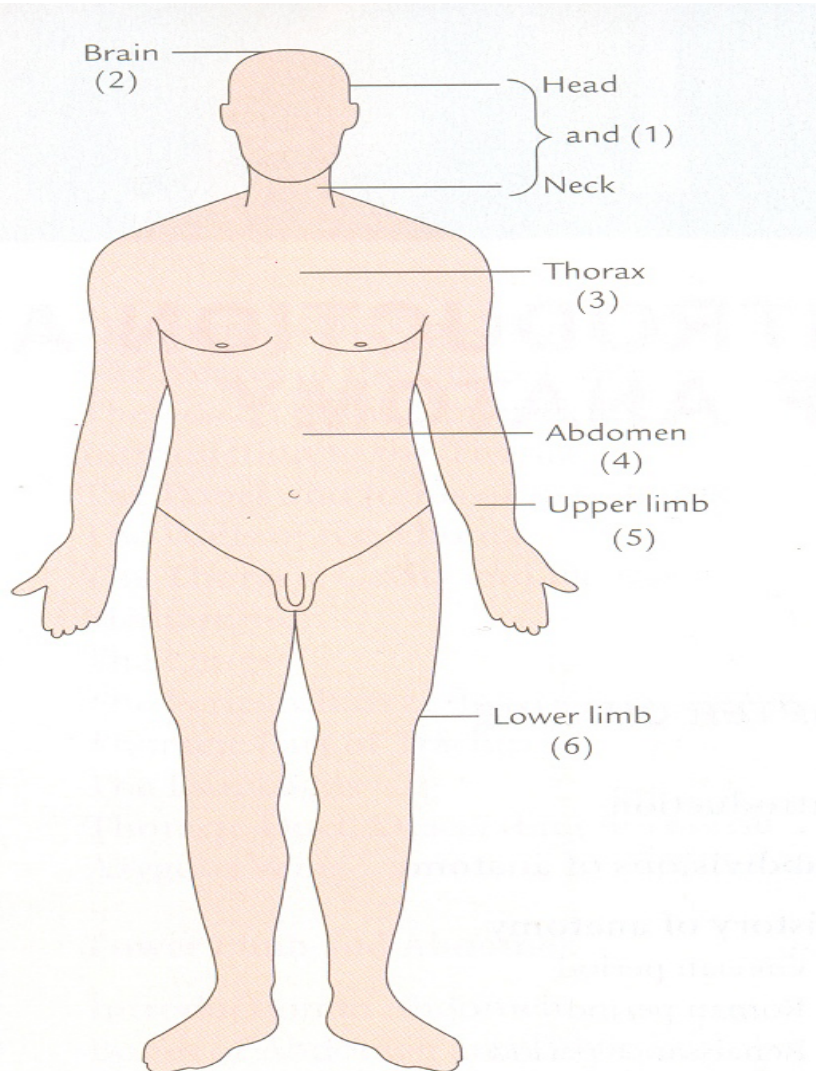
- Head and neck
- Brain
- Thorax
- Abdomen
- Upper limb
- Lower limb

- **SYSTEMIC ANATOMY**

- Integumentary system
- Skeletal system
- Muscular system
- Nervous system
- Cardiovascular system
- Lymphatic system
- Endocrine system
- Digestive system, Respiratory system, Urogenital system



SUB - DIVISIONS OF BODY



➤ Head and Neck

➤ Brain

➤ Superior Extremity

➤ Thorax

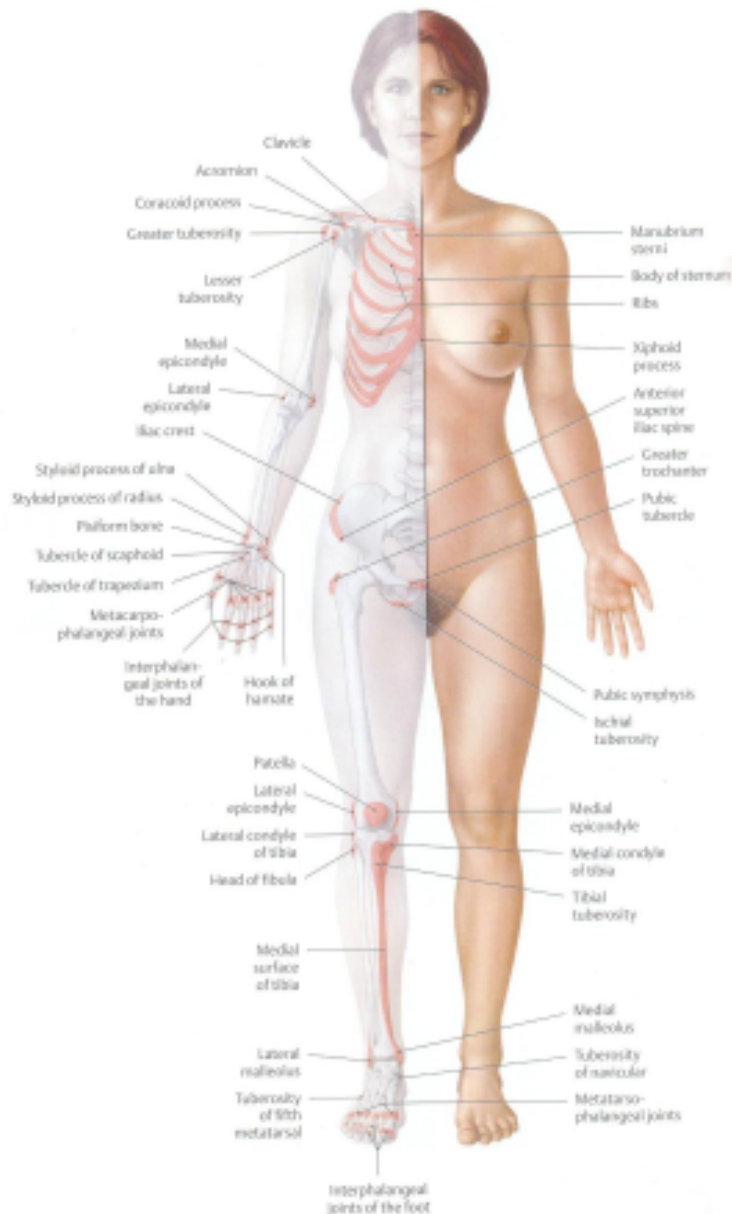
➤ Abdomen and Pelvis

➤ Inferior Extremity

Fig. 1.1 Various regions of the body.



ANATOMICAL POSITION



➤ Standing up right

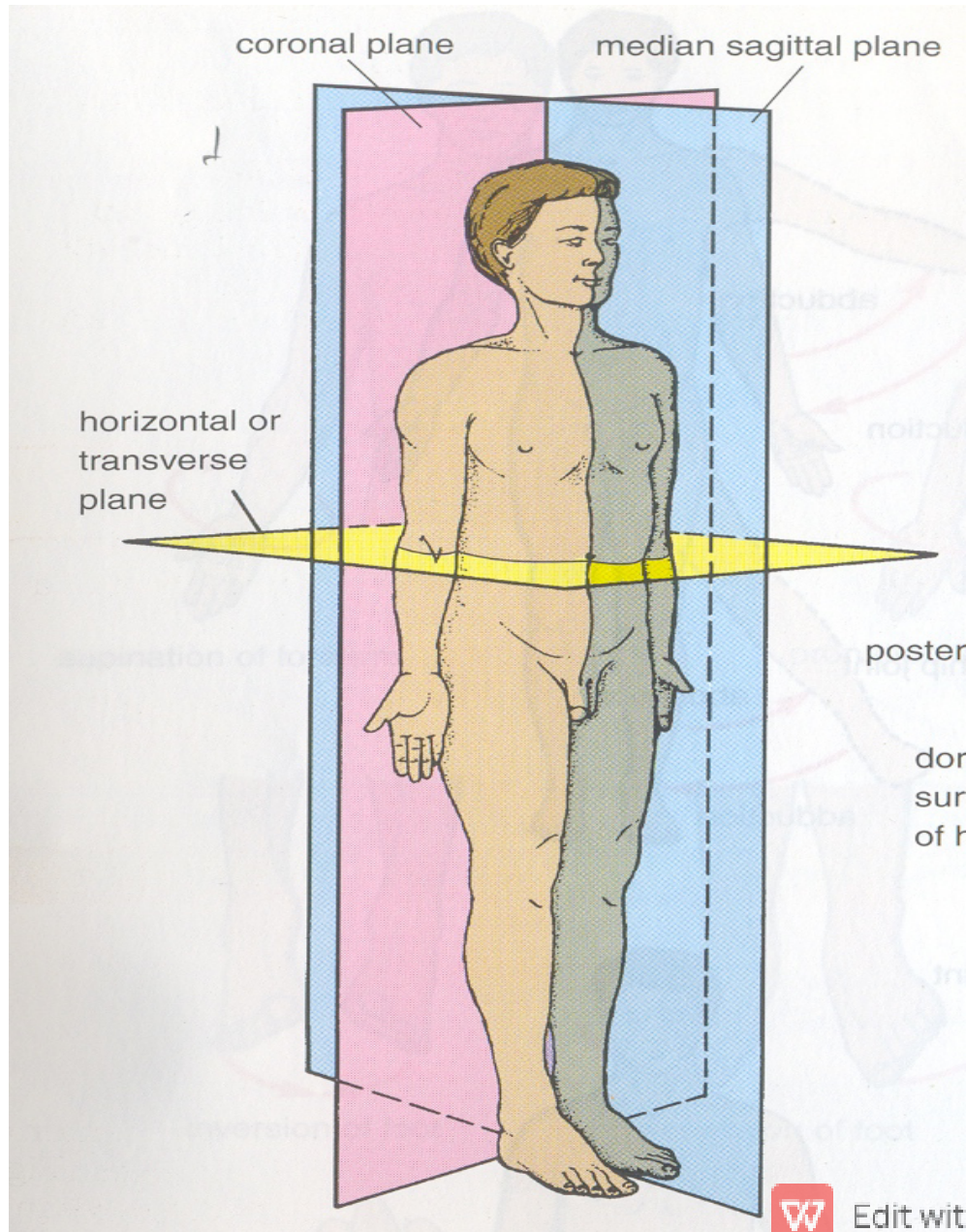
➤ Looking straight towards horizon

➤ Upper limbs hanging by the side of body

➤ Palms facing forwards

➤ Lower limbs are parallel with toes pointing forwards

TERMS OF PLANES



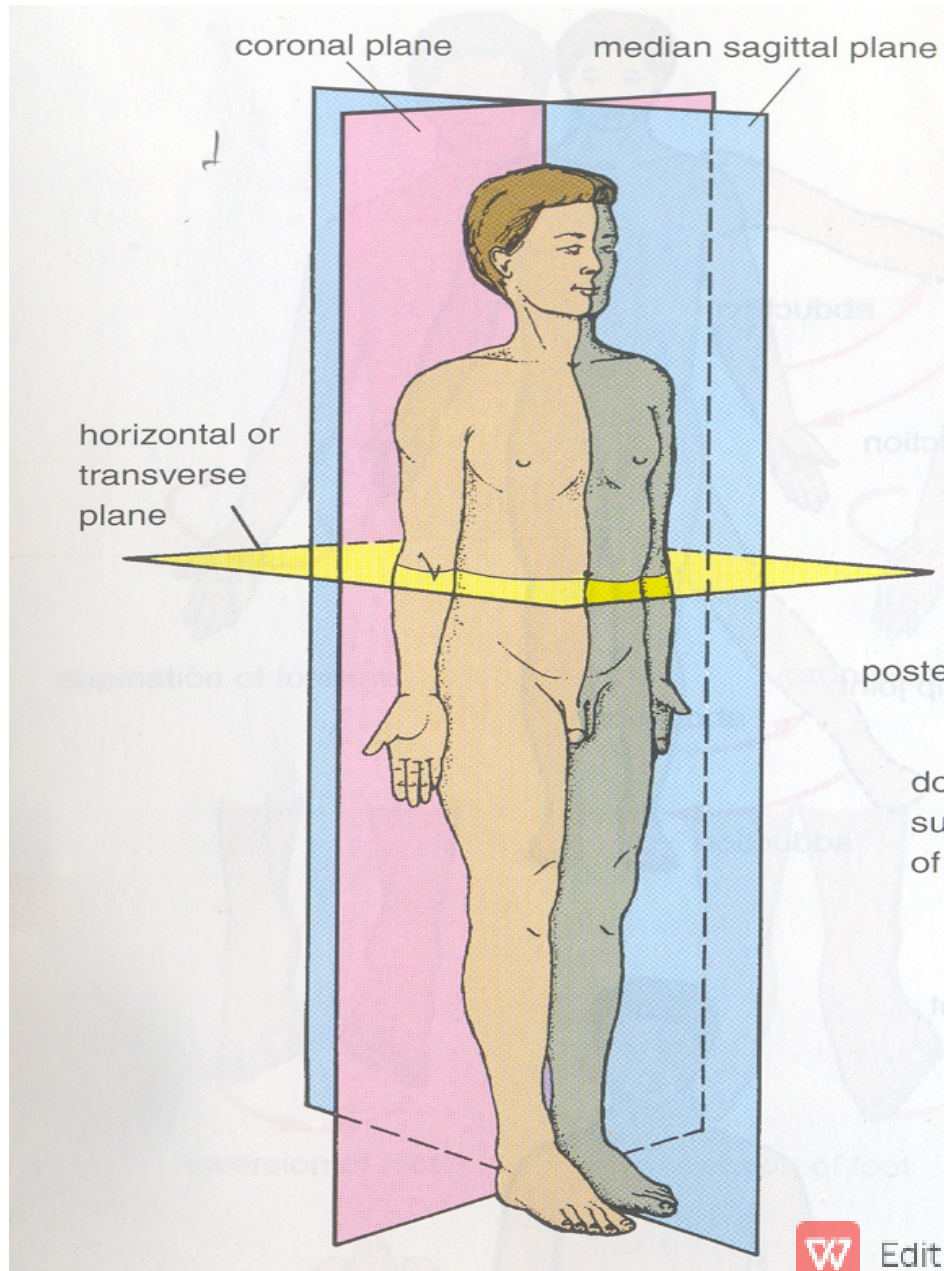
1. MID SAGITTAL (Median Plane):

A vertical plane dividing the body into right and left equal halves.

2. SAGITTAL:

A vertical plane which is parallel to the sagittal plane.

TERMS OF PLANES



3. CORONAL PLANE

(Frontal Plane):

A vertical plane which is at right angles to the median plane dividing the body into an anterior and a posterior part.

4. TRANSVERSE PLANE:

A plane at right angles to the sagittal / coronal plane dividing the body into an upper and lower part.

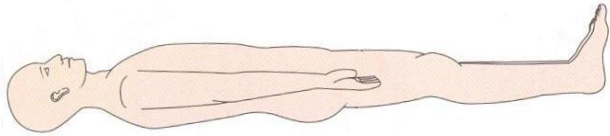
TERMS OF PLANES

- ✘ **HORIZONTAL PLANE:** A plane parallel to the ground.
- ✘ **OBLIQUE PLANE:** Any plane other than of aforementioned planes.

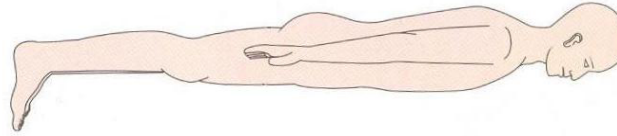


TERMS OF POSTURE

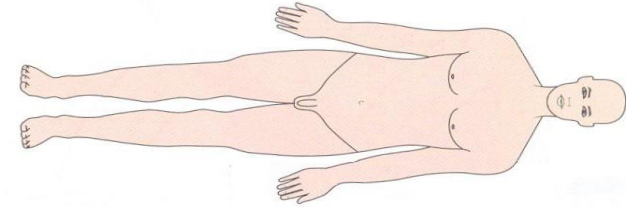
Supine



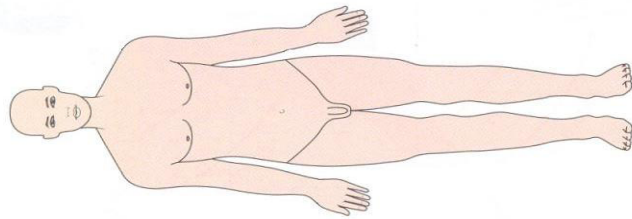
Prone



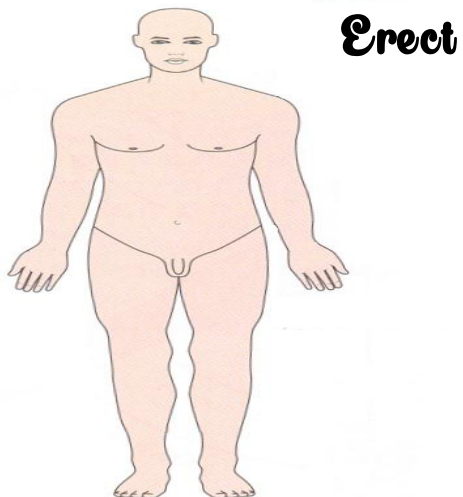
Left Lateral



Right Lateral



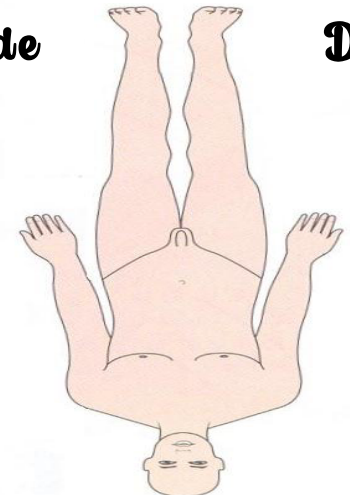
Lithotomy



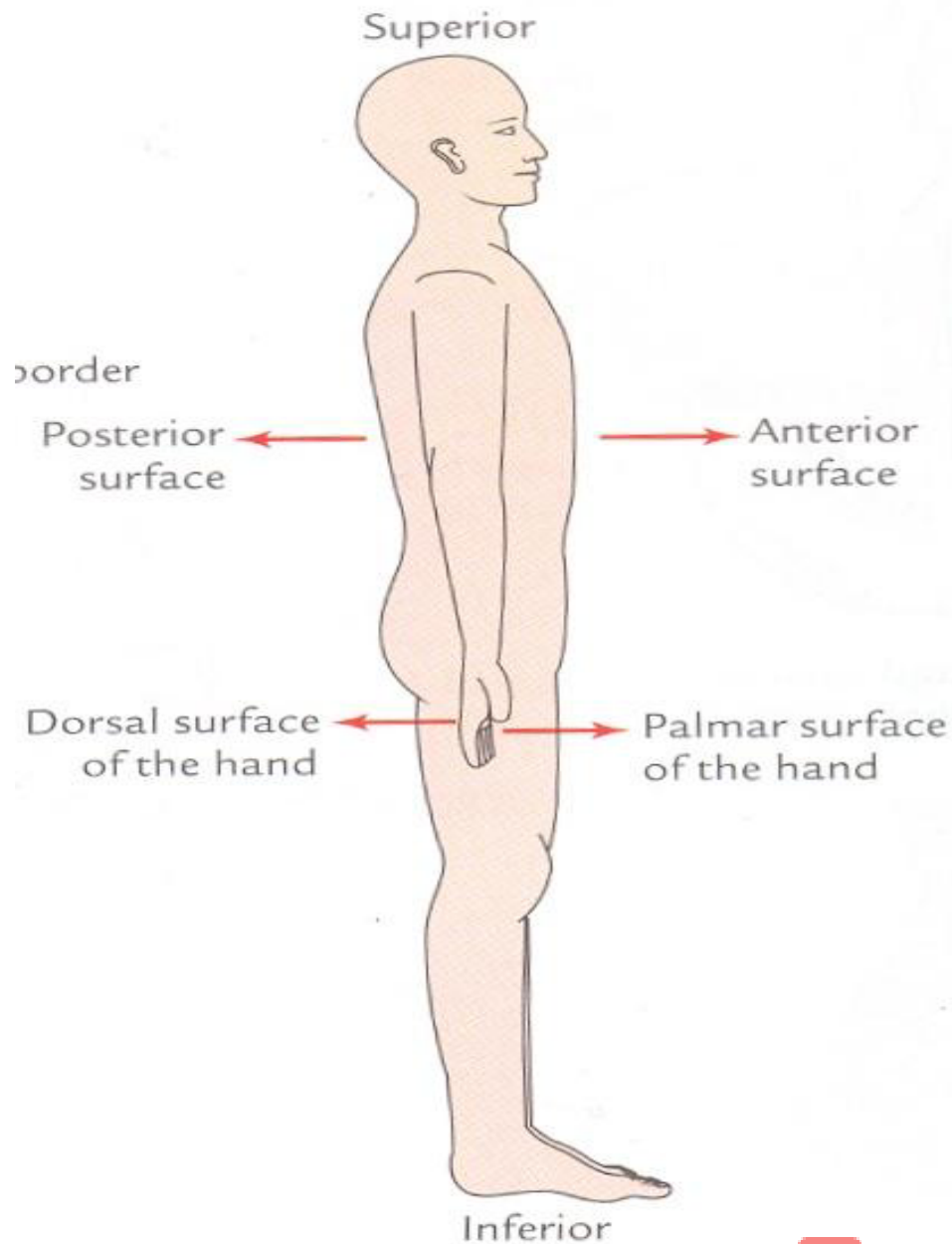
Erect

Upside

Down



TERMS OF POSITION

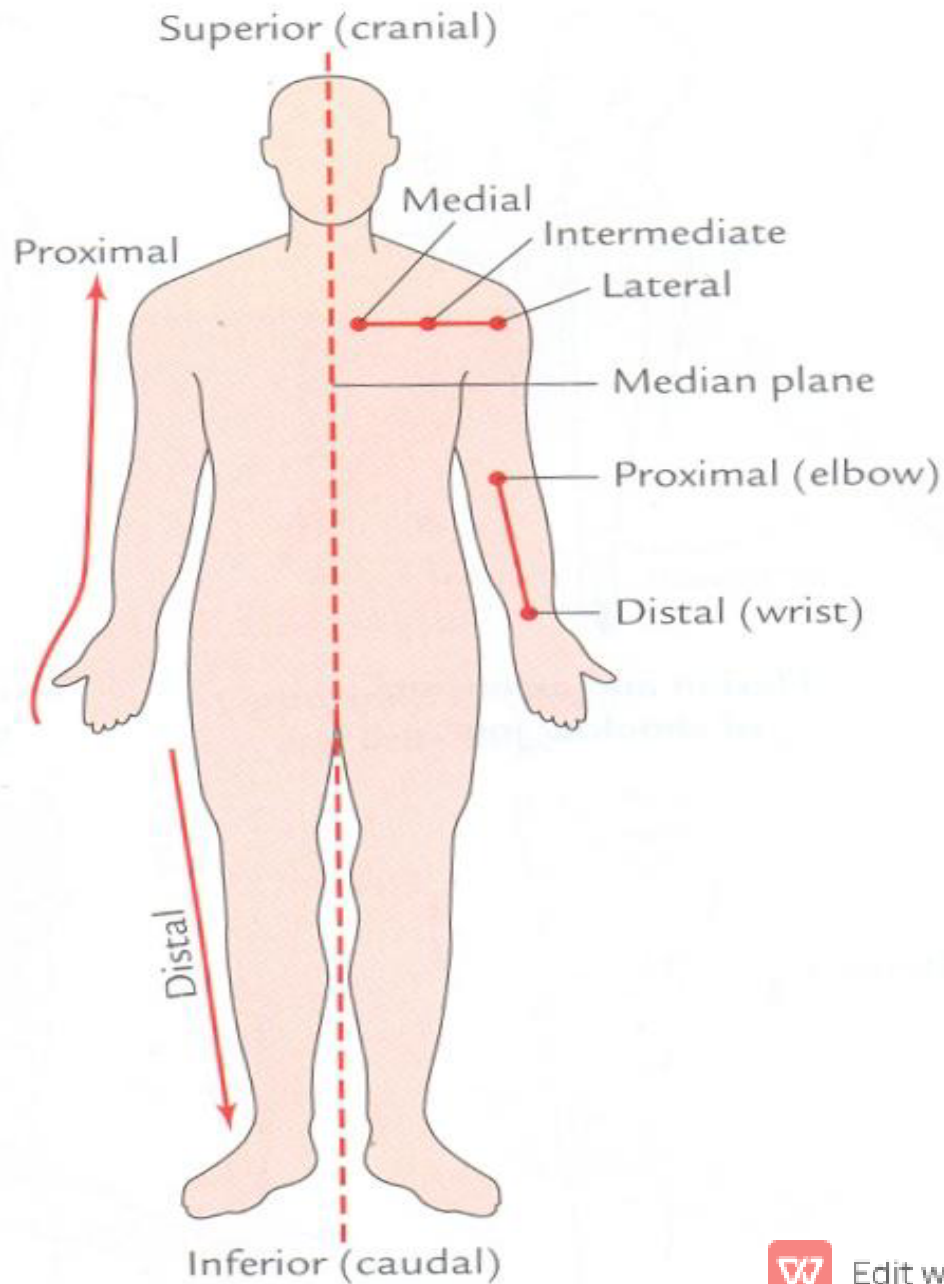


Anterior = Ventral

Intermediate = Middle

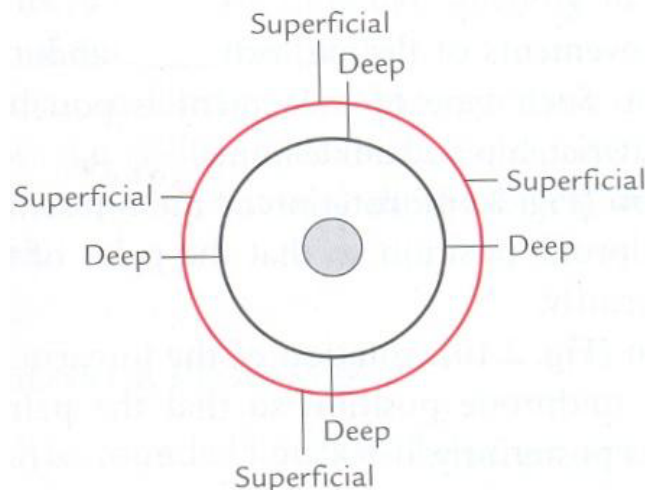
Posterior = Dorsal

TERMS OF POSITION



- **Lateral**
- **Intermediate**
- **Medial**
- **Median**

OTHER TERMS



For solid organs:

-Superficial

-Deep

For hollow organs:

-Interior

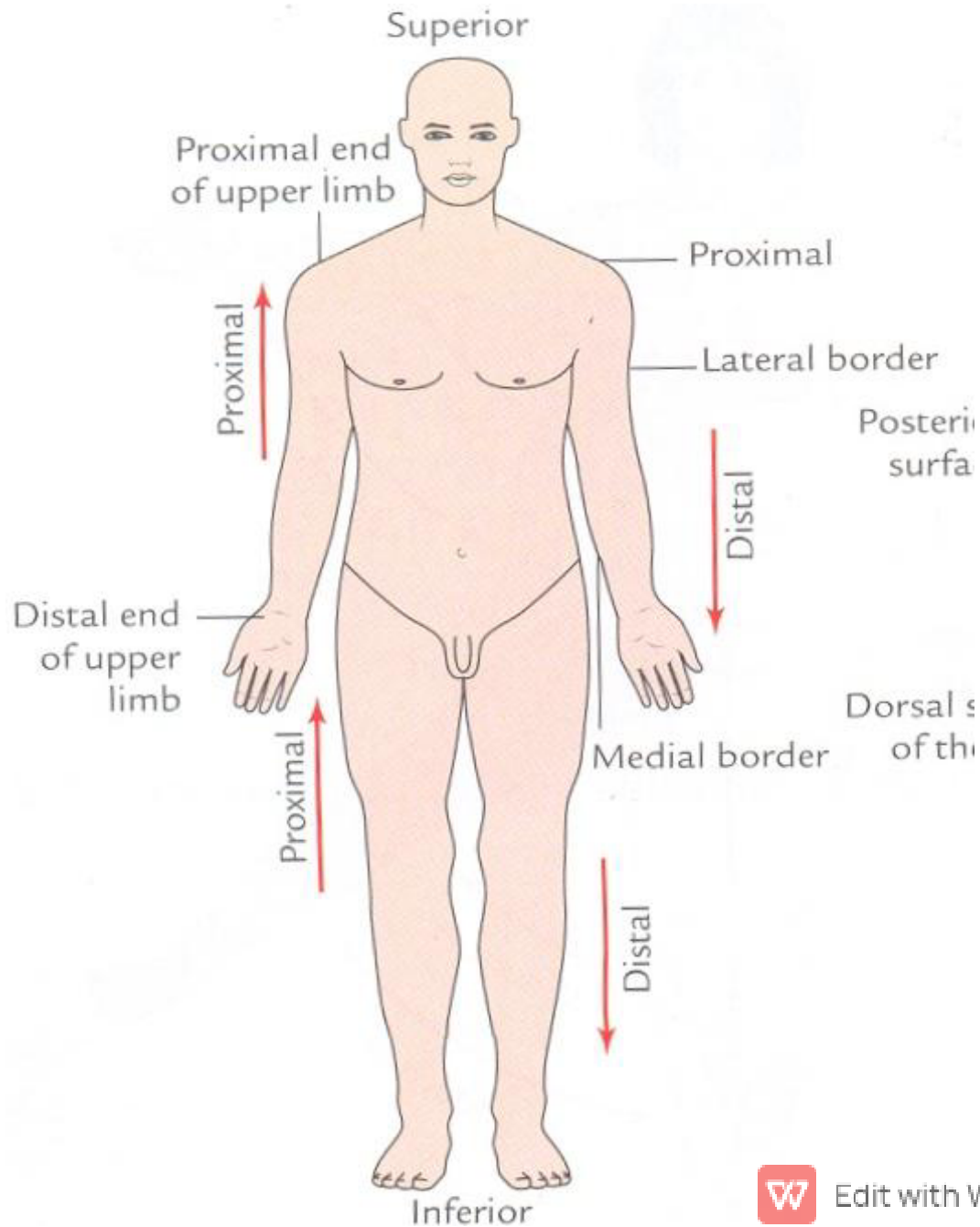
-Exterior

For indicating the side:

-Ipsilateral

-Contralateral

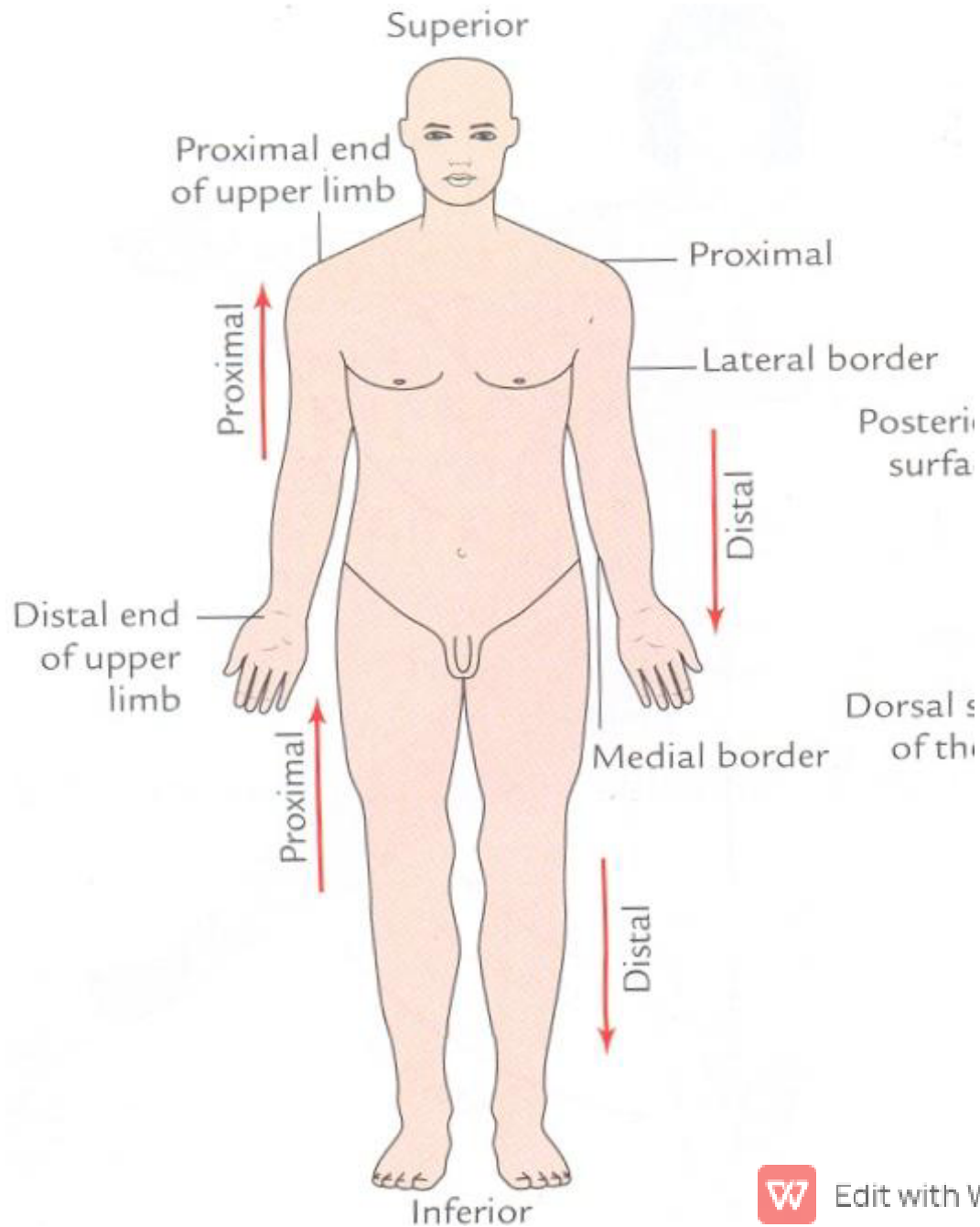
TERMS OF POSITION



Superior = Cephalic

Inferior = Caudal

TERMS FOR LIMBS



Proximal

Distal

Radial

Ulnar

Tibial

Fibular

Preaxial border

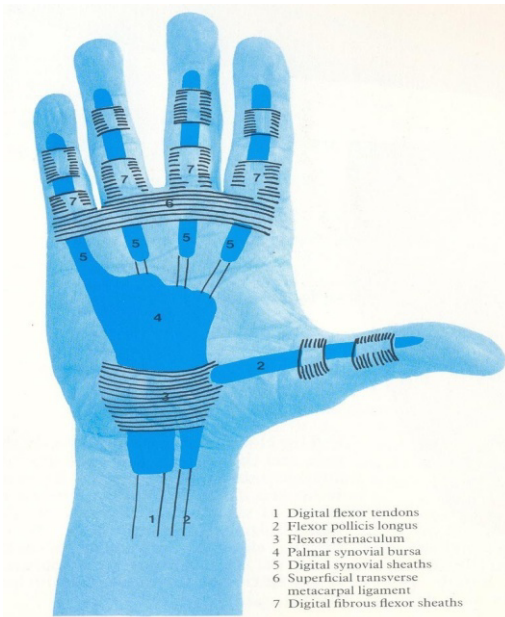
Postaxial border

TERMS OF POSITION



Skull - Inferior surface is called as Base

Hand - Posterior surface - Dorsum of Hand
- Anterior surface - Palmar surface



TERMS OF POSITION

Foot

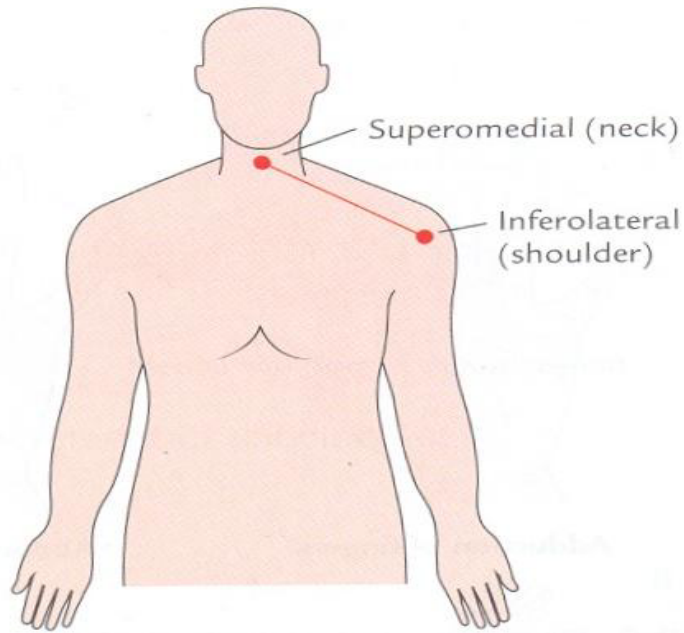


- Superior surface -
Dorsum of Foot

- Inferior Surface -
Plantar Surface

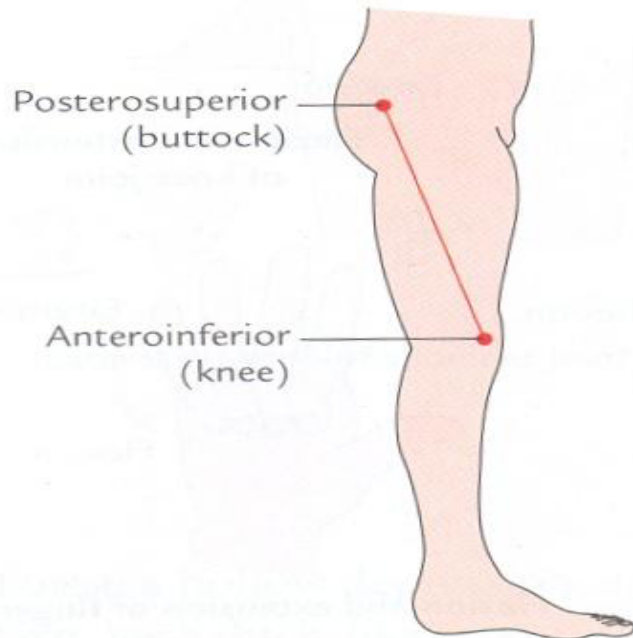


TERMS OF POSITION

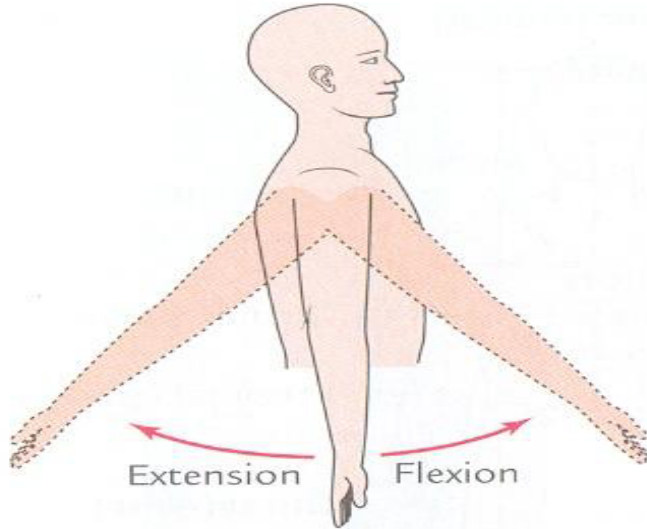


Combination of Terms:

- **Supero medial**
- **Infero lateral**
- **Postero superior**
- **Antero inferior**



TERMS OF MOVEMENT

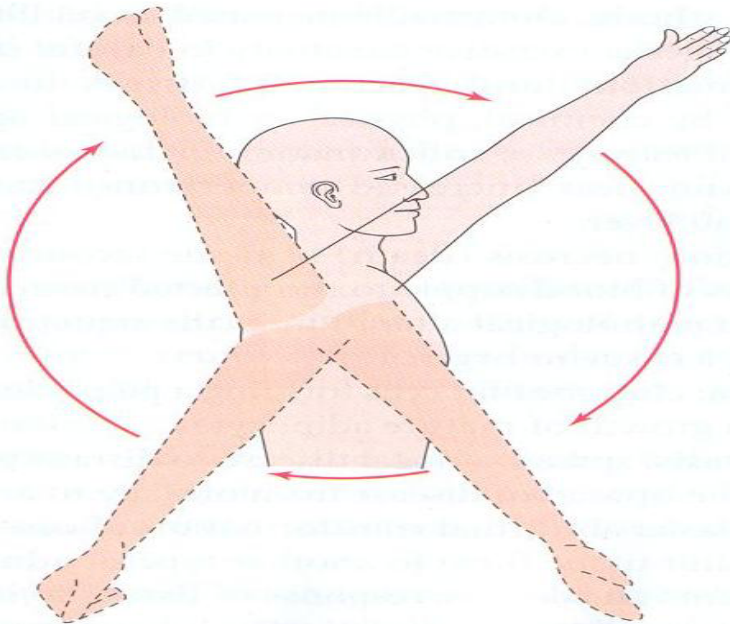


Flexion and extension
of shoulder joint

Flexion: - Moving part is carried forwards
- Movement on the transverse axis

Extension- Moving part is carried
backwards

- Movement on the transverse axis.

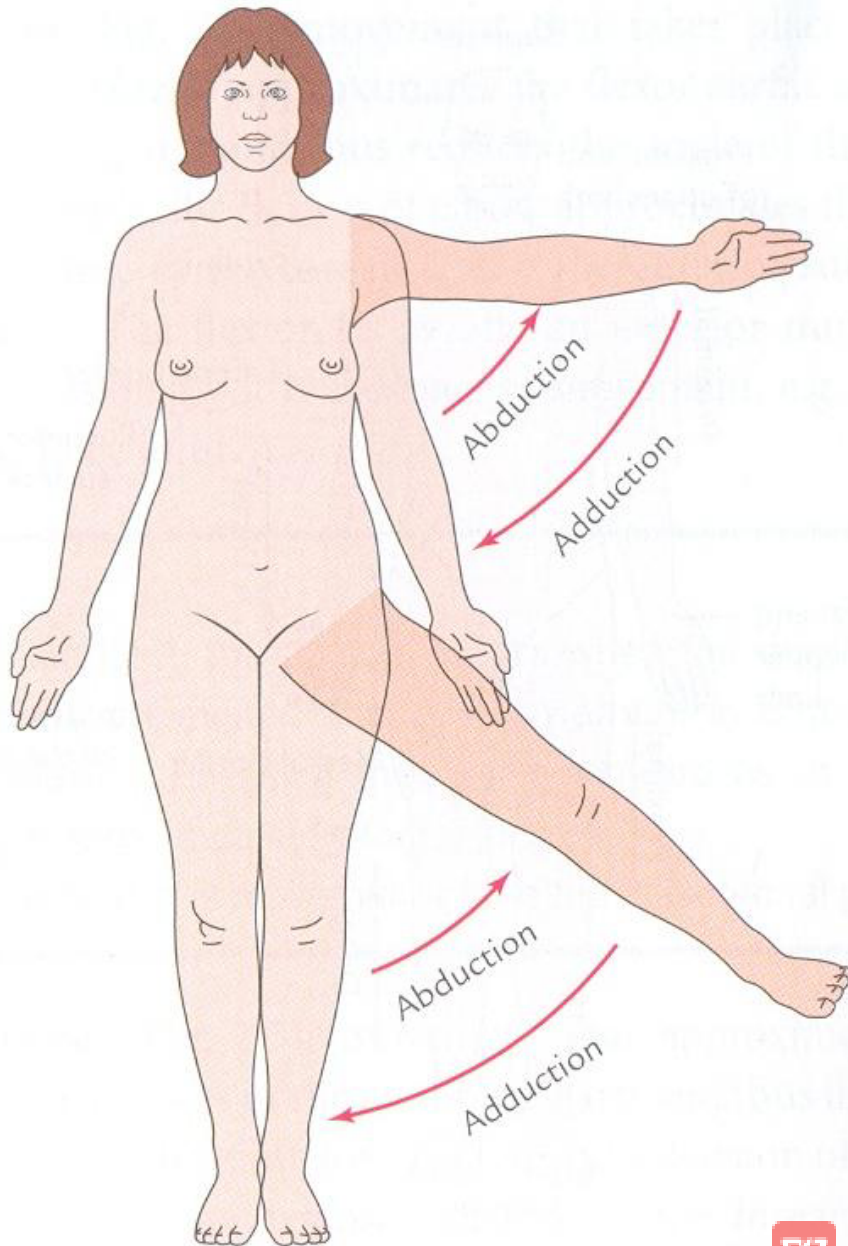


Circumduction: Moving part forms the
base of a cone

Circumduction of shoulder joint.



TERMS OF MOVEMENT



Abduction: - Moving part is carried away from the body/

reference line.

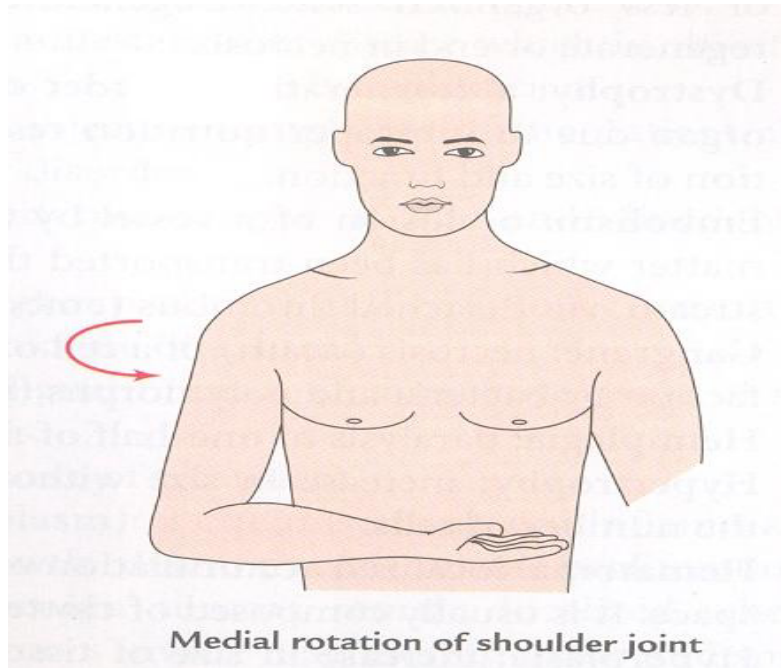
- Movement on antero - posterior axis.

Adduction: - Moving part is carried towards the body /

reference line.

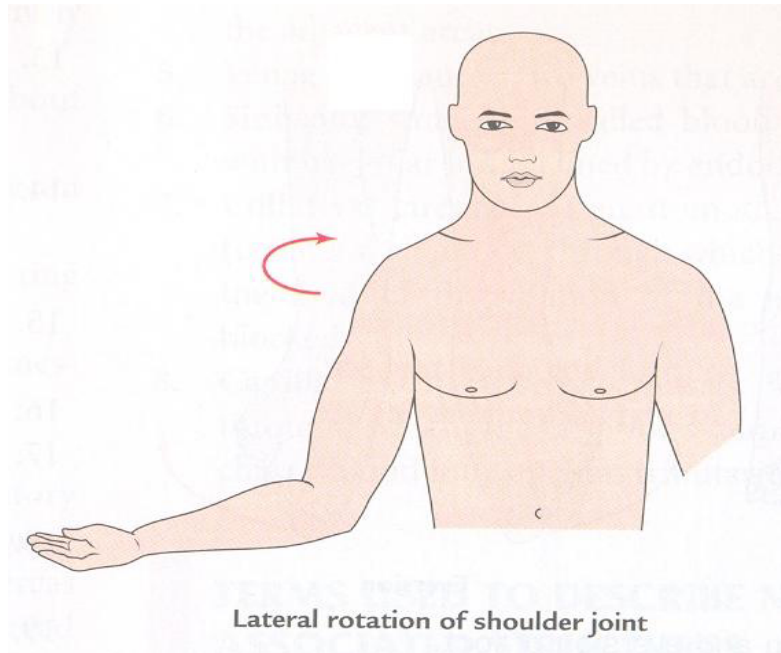
-Movement on antero - posterior axis.

TERMS OF MOVEMENT



Medial Rotation –

- Moving part is rotated towards the mid line.
- Movement on vertical axis.



Lateral Rotation –

- Moving part is rotated away from the mid line.
- Movement on vertical axis.

SPECIAL TERMS OF MOVEMENT



LEG:

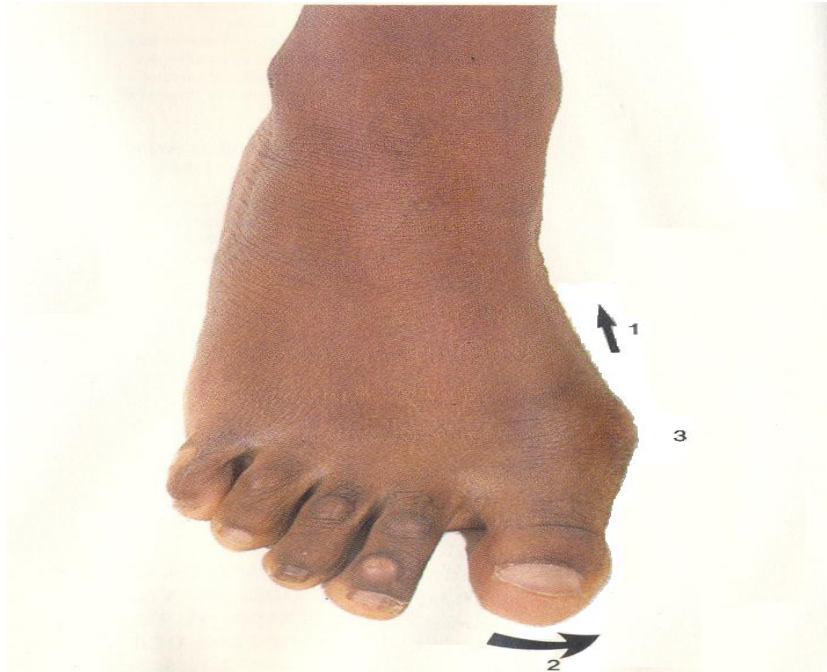
Flexion – A movement on knee joint in which leg is carried backwards.

Extension – A movement on knee joint in which leg is carried forwards.

TOES:

Abduction – Toes move away from the long axis of 2nd toe.

Adduction – Toes move towards long axis of the 2nd toe.



SPECIAL TERMS OF MOVEMENT



NECK:

- Flexion
- Extension



ROTATION:

- Right
- Left

- LATERAL FLEXION

- Right
- Left



SPECIAL TERMS OF MOVEMENT



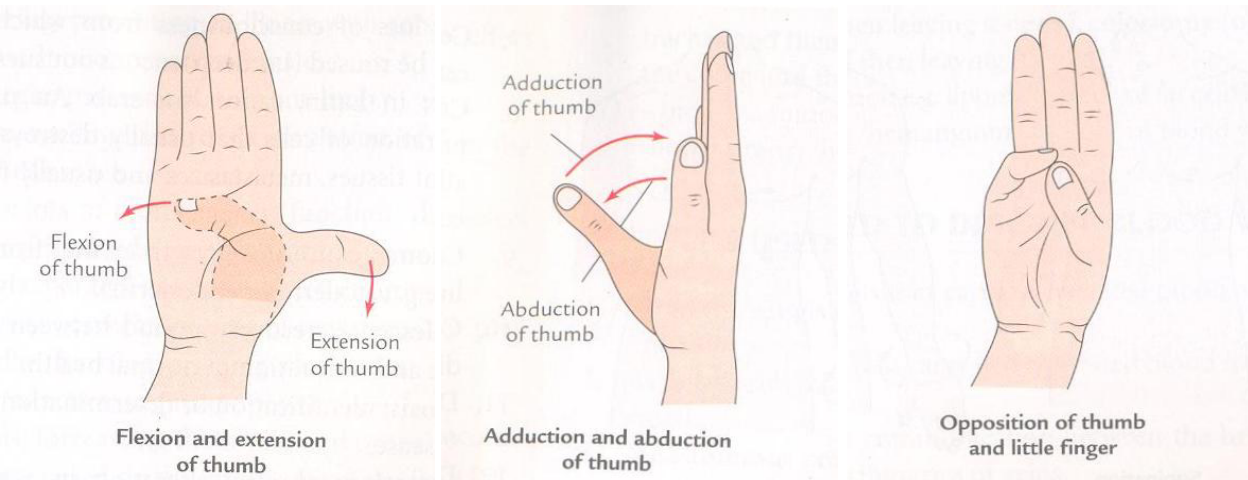
FINGERS:

ABDUCTION – Fingers move away from the long axis of middle finger.



ADDUCTION – Fingers move towards the long axis of middle finger.

SPECIAL TERMS OF MOVEMENT



Thumb:

Flexion

Extension

Abduction

Adduction

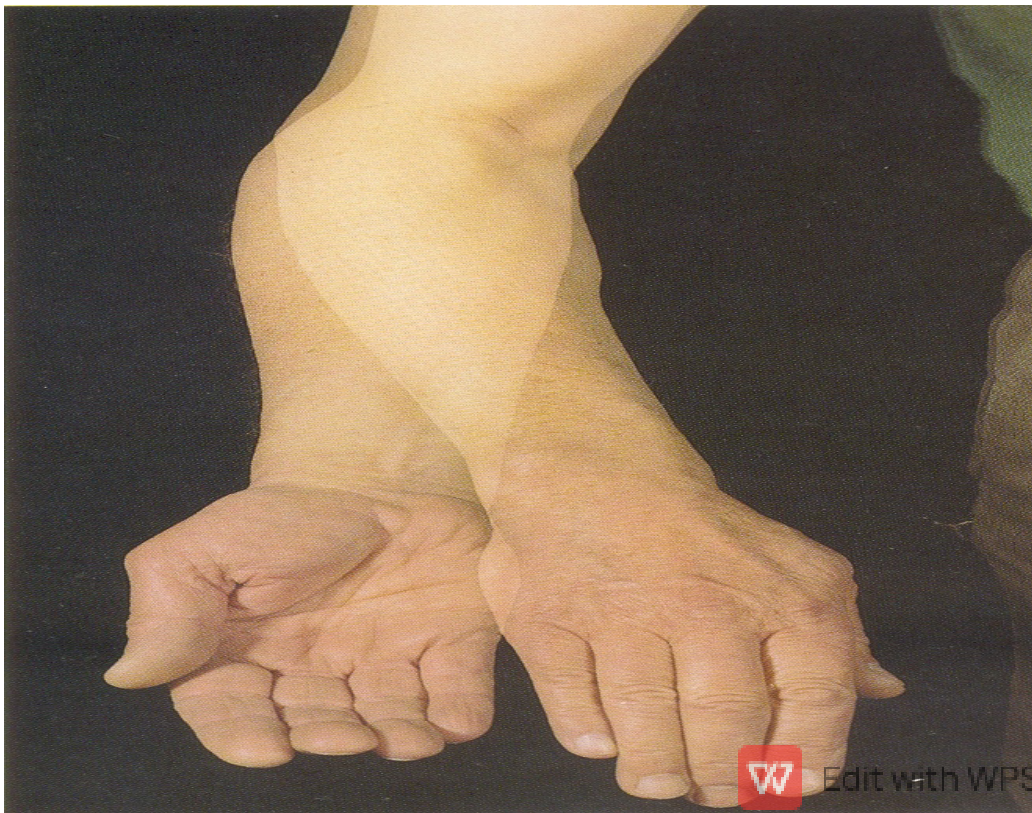
Opposition

Forearm:

Pronation – Forearm is rotated that the palm faces towards ground.

Supination – Forearm is rotated that the palm faces above.

Mid Prone Position



SPECIAL TERMS OF MOVEMENT



FOOT –

Inversion – Sole of the foot faces medially.

Eversion – Sole of the foot faces laterally.

Dorsiflexion – A movement of foot in which the dorsal surface of foot comes close to the front of leg.



Plantarflexion – A movement of foot in which the dorsal surface of foot goes away from the front of leg.

SPECIAL TERMS OF MOVEMENT



Trunk:

Flexion

Extension



Rotation - Left



SPECIAL TERMS OF MOVEMENT



Rotation - Right



**Lateral Flexion - Right
- Left**



REFERENCES

1. *Cunningham's Manual of Practical Anatomy, Vol.1.*
2. *Grant's Method of Anatomy, 11th Edition.*
3. *Vishram Singh. General Anatomy, 1st Edition.*



MCQs

1. Who is the Father of Anatomy:

- a) Galen**
- b) Herophilus**
- c) Vesalius**
- d) Hippocrates**



MCQs

2. The meaning of term anatomy is:

- a) To analyze**
- b) To observe**
- c) To cut up**
- d) To make**



MCQs

3. The sectional plane that divides the body into anterior and posterior portions is:

- a) Transverse plane**
- b) Sagittal plane**
- c) Coronal plane**
- d) Oblique plane**



MCQs

4. Lying down position with the face directed down is called as:

- a) Supine**
- b) Prone**
- c) Anatomical**
- d) Lithotomy**



MCQs

5. During flexion of the arm, the arm moves:

- a) Upwards**
- b) Downwards**
- c) Medial**
- d) Lateral**

