

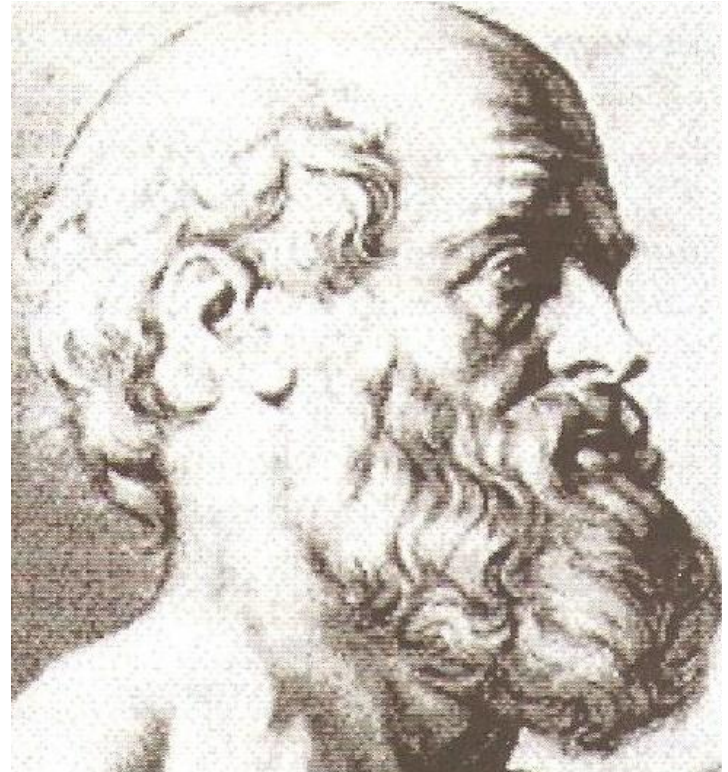
GENERAL ANATOMY

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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)

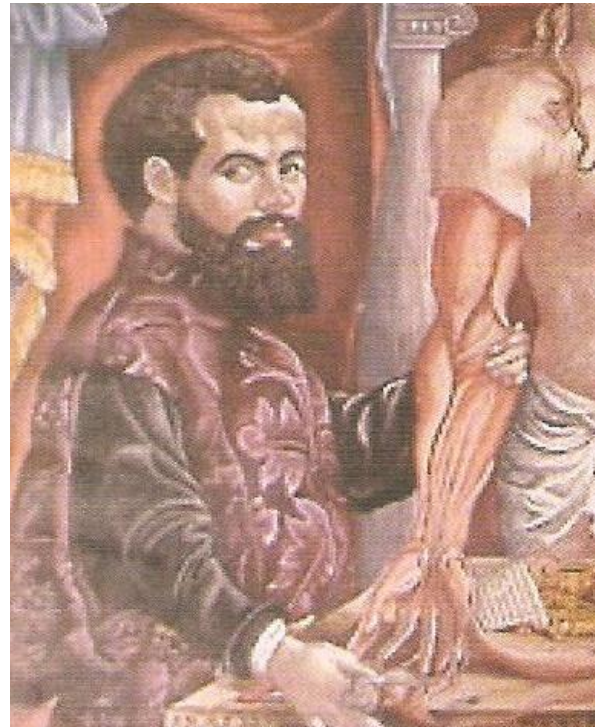
- **Father of Anatomy**
- Performed:
 - vivi-sections (dissections of living humans) and dissections of human cadavers
- regarded brain as seat of intelligence
- described cerebrum, cerebellum, fourth ventricle
- first to identify nerves as sensory or motor.



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

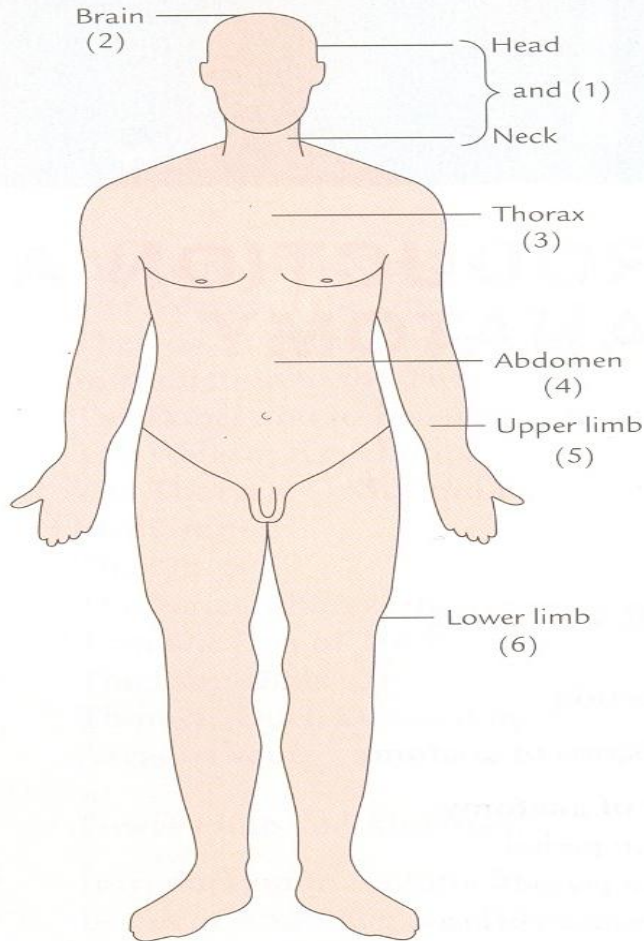
- **REGIONAL ANATOMY**

- 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

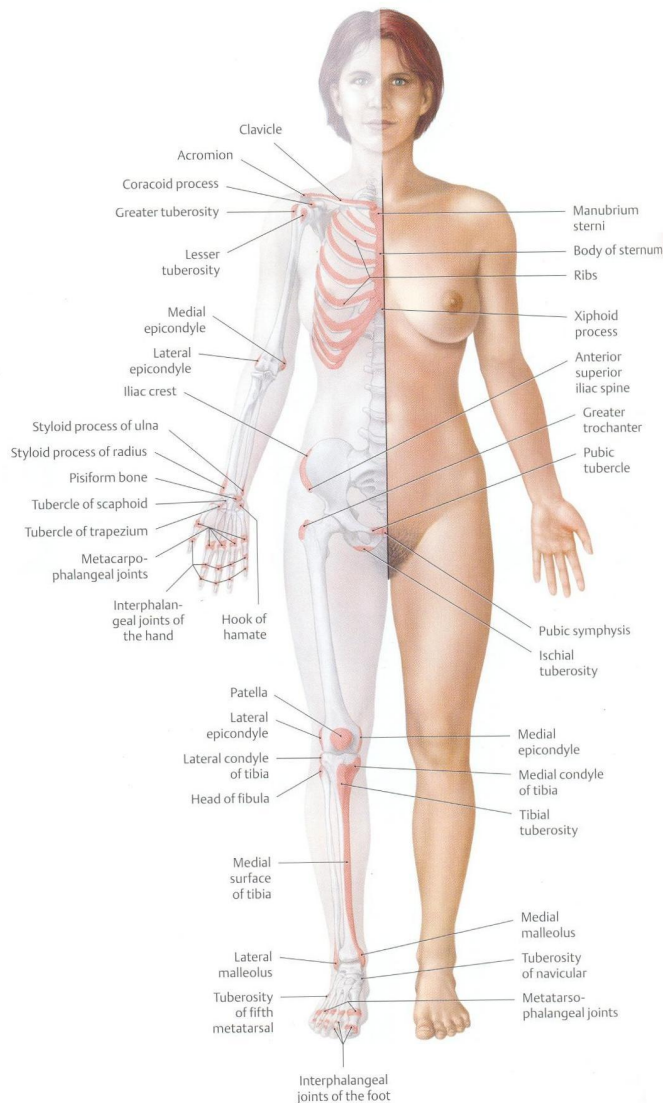
□ Thorax

□ Abdomen and Pelvis

□ Inferior Extremity

Fig. 1.1 Various regions of the body.

ANATOMICAL POSITION



B Surface contours and palpable bony prominences of the trunk and upper and lower limbs in the female
Anterior view.

□ **Standing up right**

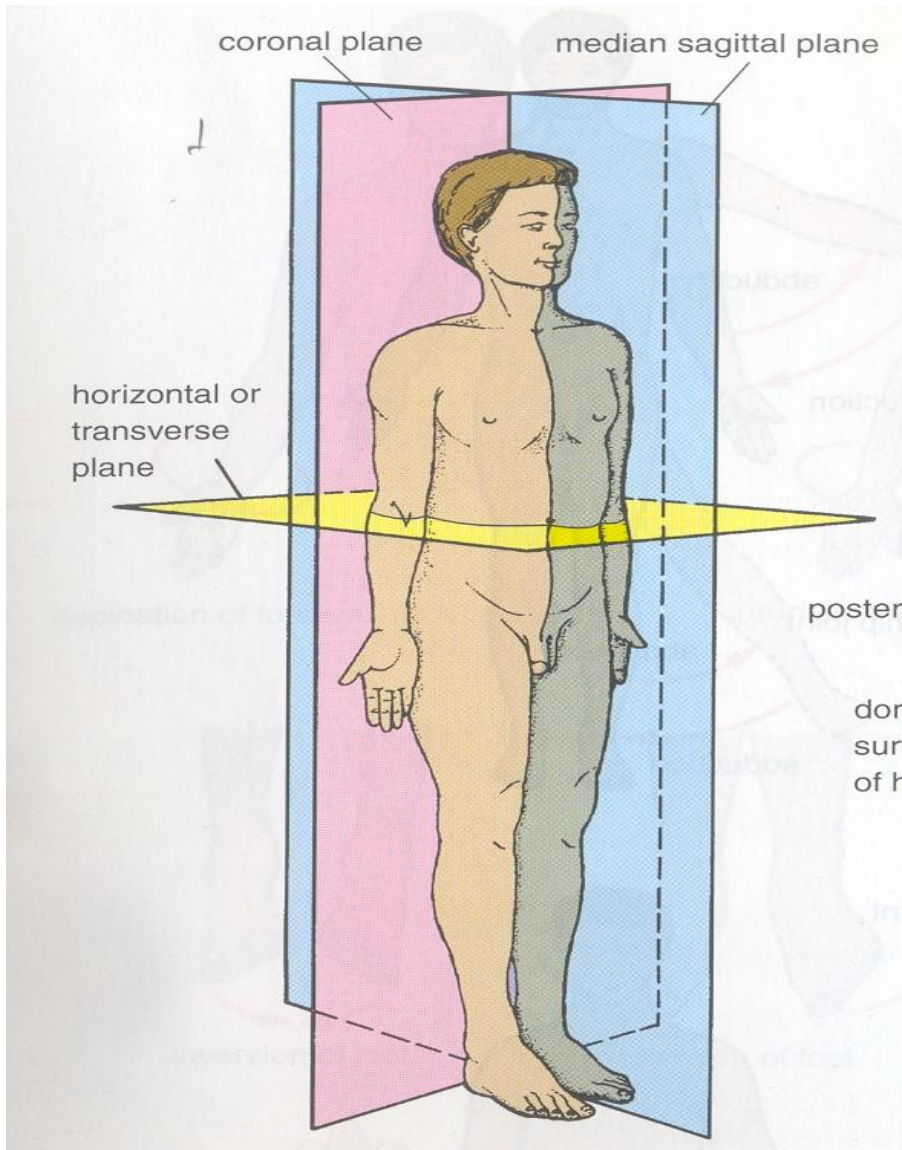
□ **Looking straight towards horizon**

□ **Upper limbs hanging by the side of body**

□ **Palms facing forwards**

□ **Lower limbs are parallel with toes pointing forwards**

TERMS OF PLANES



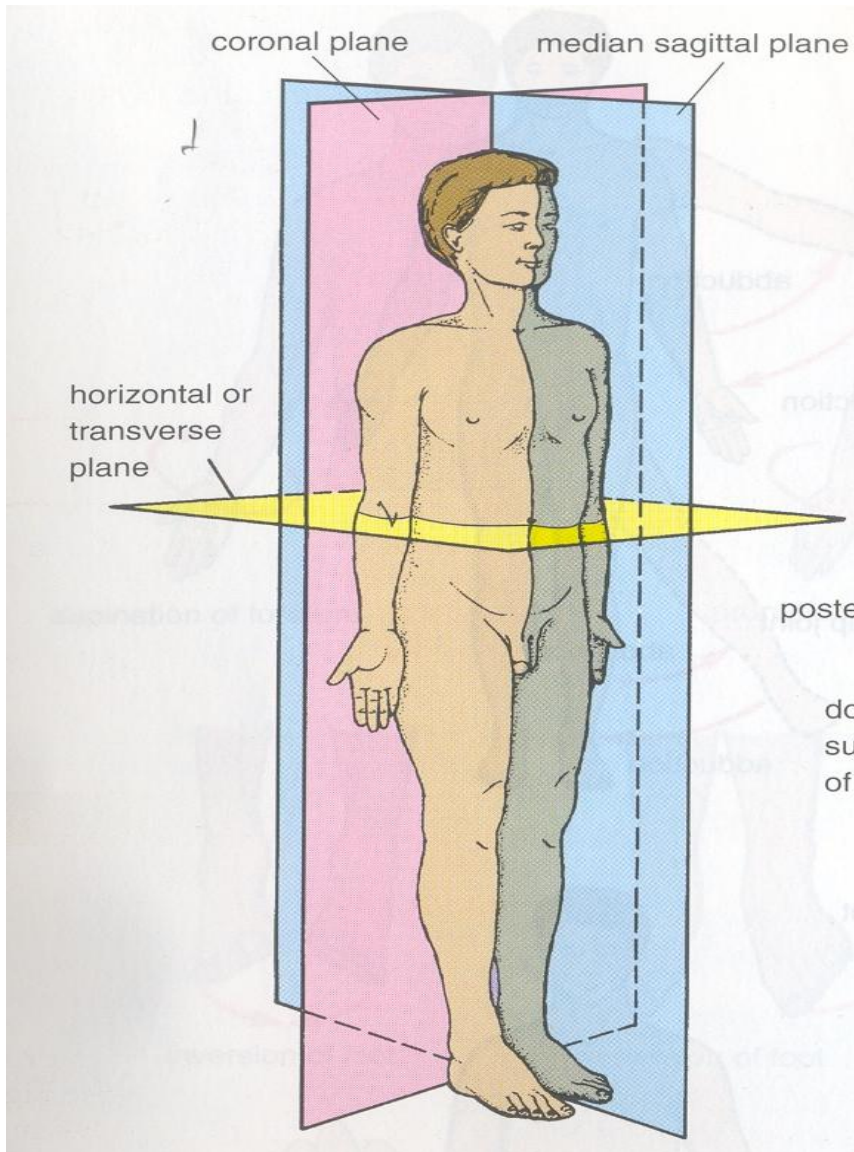
1. MID SAGITTAL (Median Plane):

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:

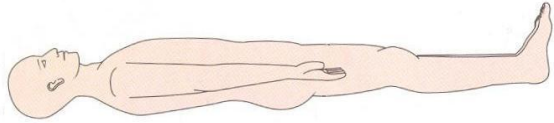
A plane at right angles to the sagittal / coronal plane dividing the body into an upper and lower part.

TERMS OF PLANES

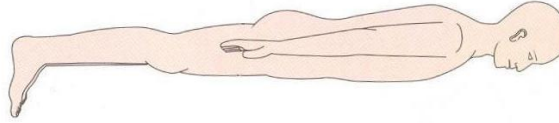
- **HORIZONTAL PLANE:** A plane parallel to the ground.
- **OBLIQUE PLANE:** Any plane other than of aforementioned planes.

TERMS OF POSTURE

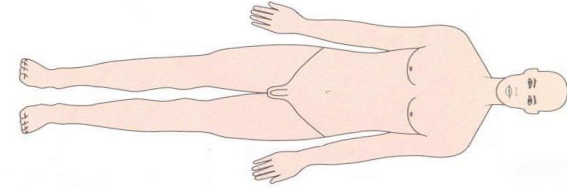
Supine



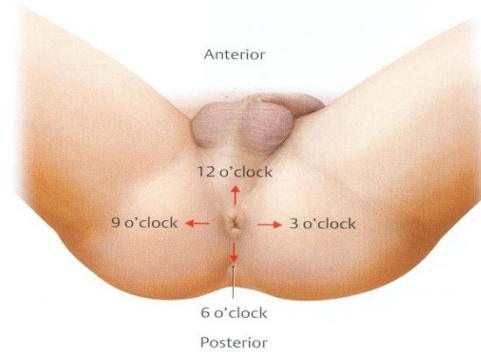
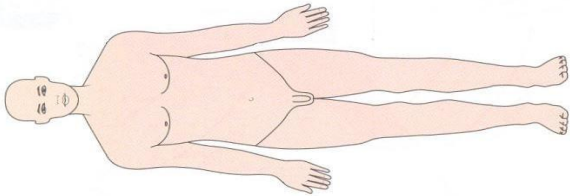
Prone



Left Lateral

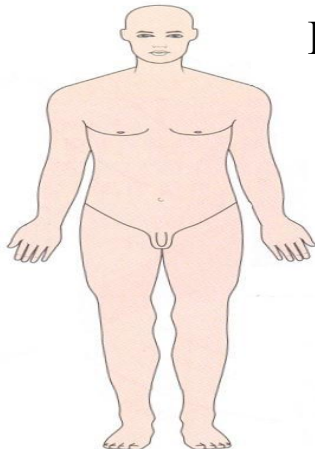


Right Lateral



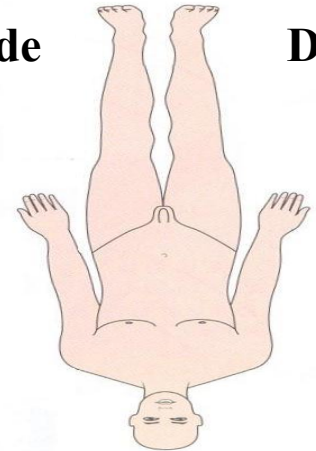
Lithotomy

Erect

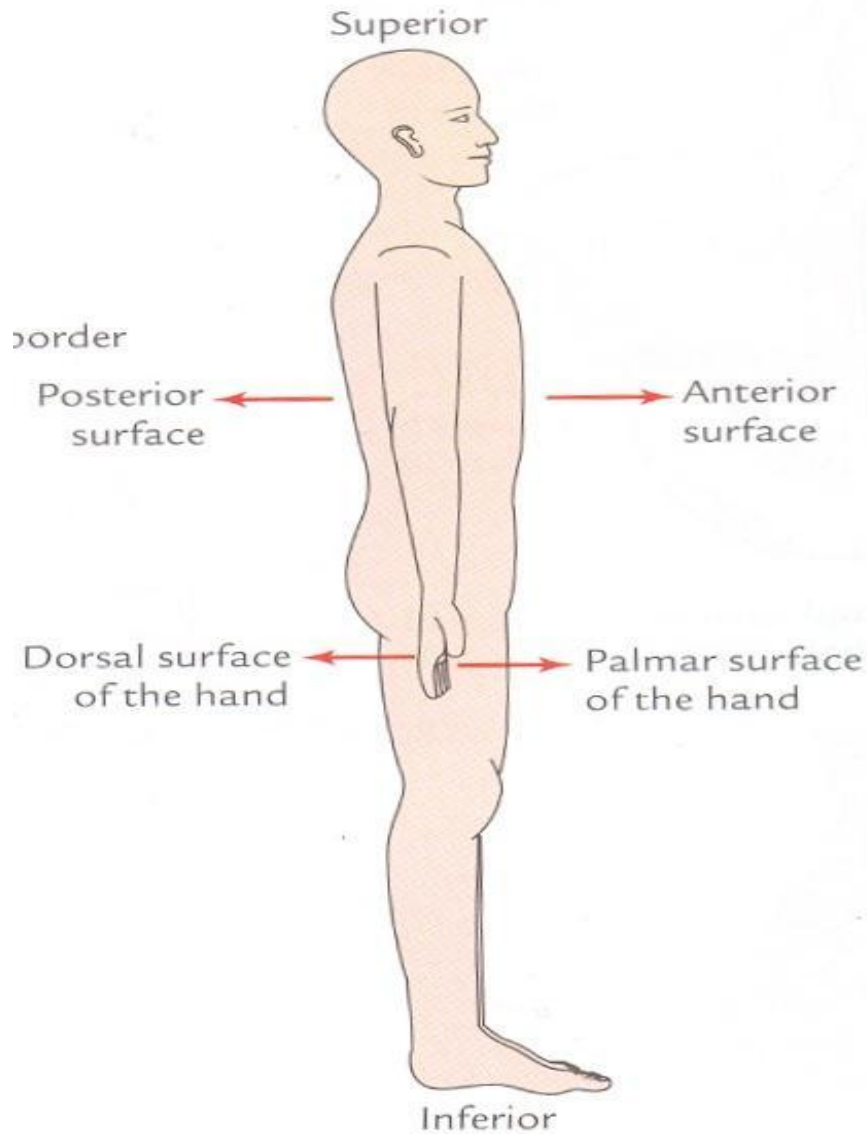


Upside

Down



TERMS OF POSITION

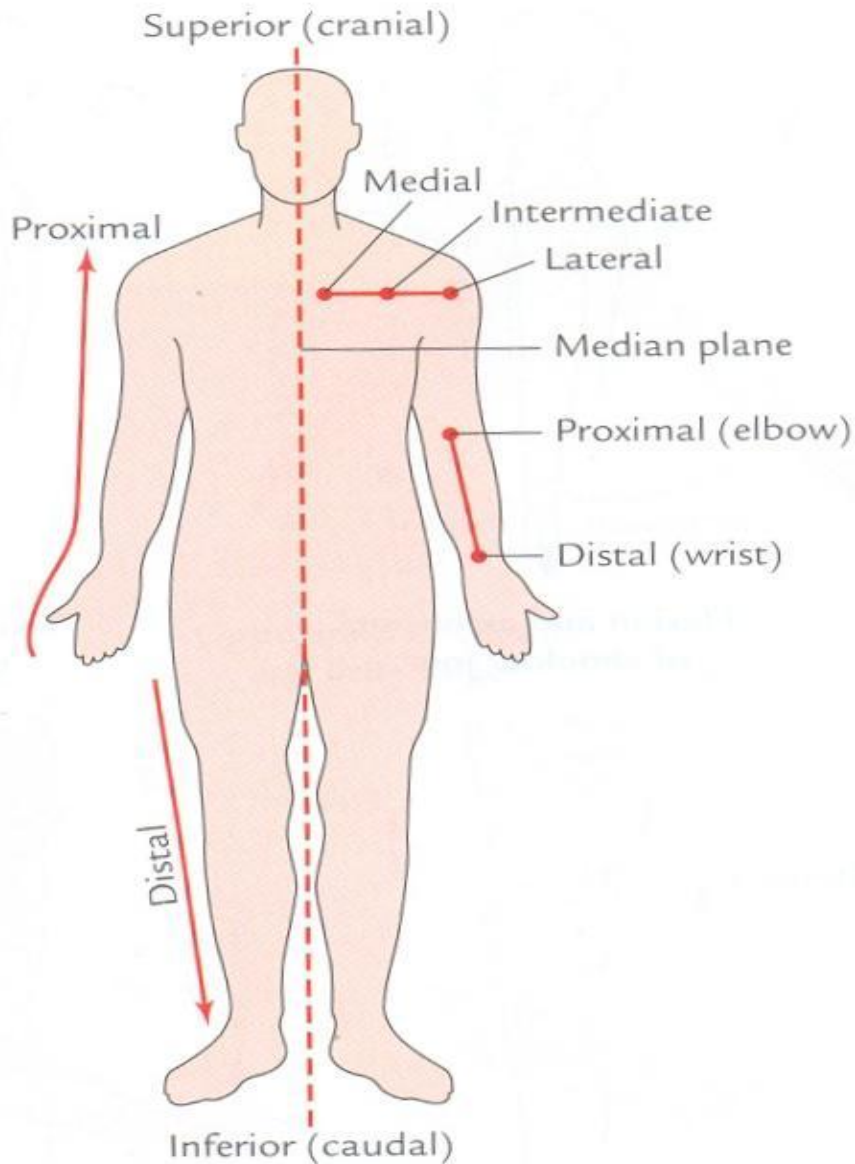


Anterior = Ventral

Intermediate = Middle

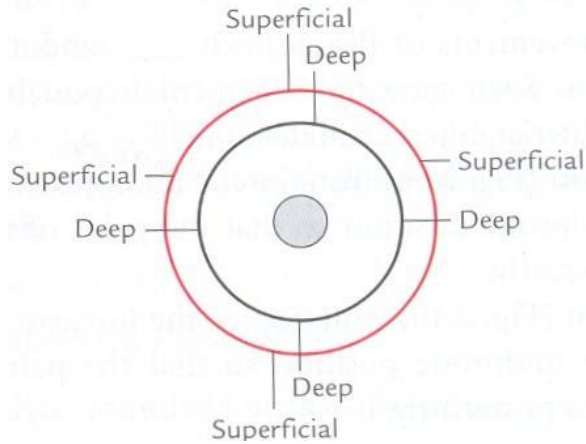
Posterior = Dorsal

TERMS OF POSITION



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

OTHER TERMS



For solid organs:

-Superficial

-Deep

For hollow organs:

-Interior

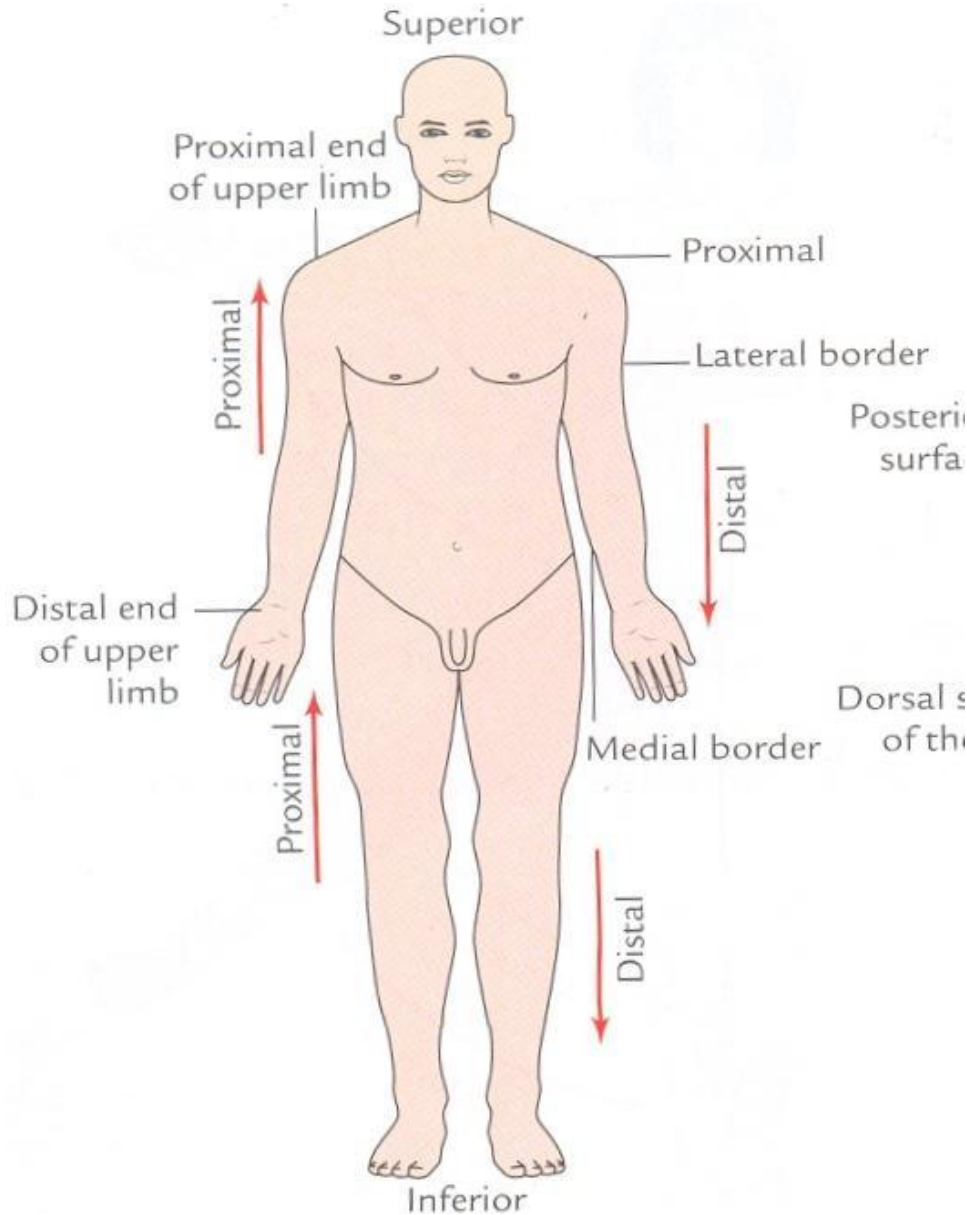
-Exterior

For indicating the side:

-Ipsilateral

-Contralateral

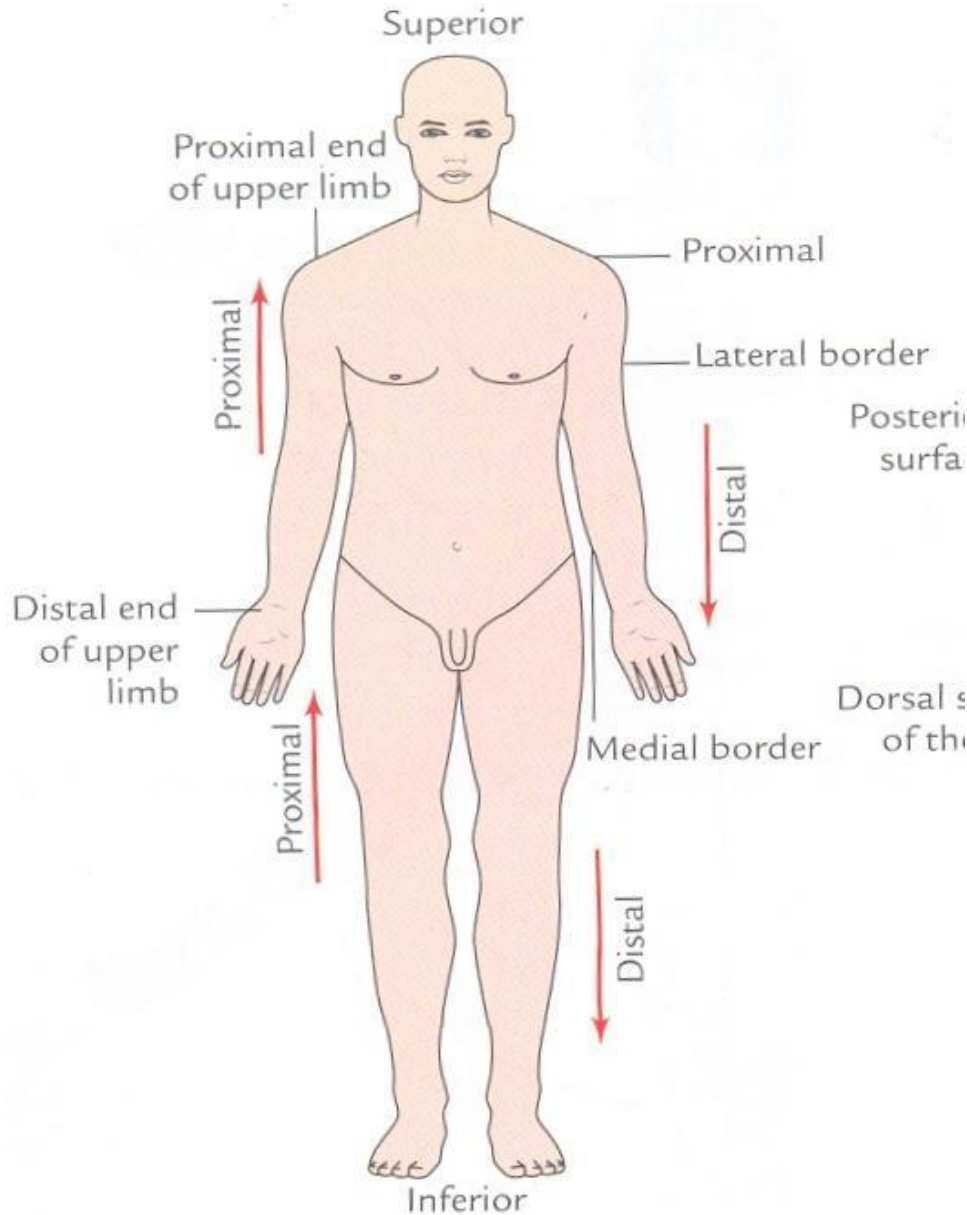
TERMS OF POSITION



Superior = Cephalic

Inferior = Caudal

TERMS FOR LIMBS



Proximal

Distal

Radial

Ulnar

Tibial

Fibular

Preaxial border

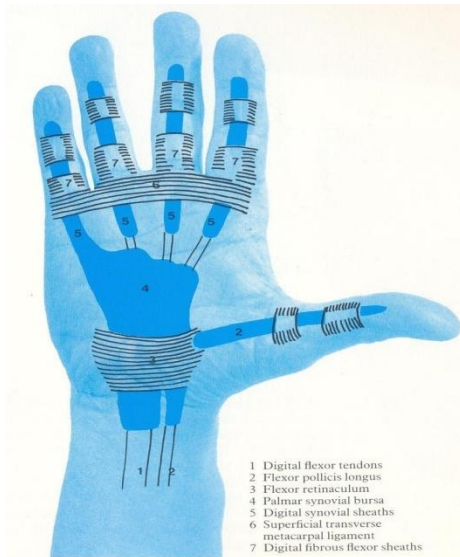
Postaxial border

TERMS OF POSITION



Skull - Inferior surface is called as Base

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



TERMS OF POSITION

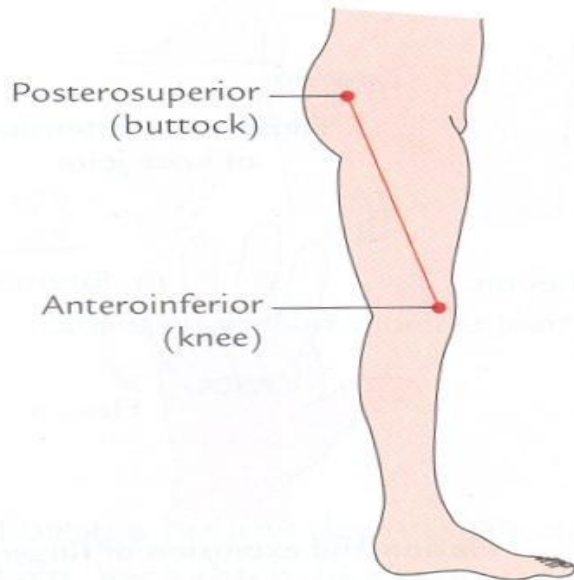
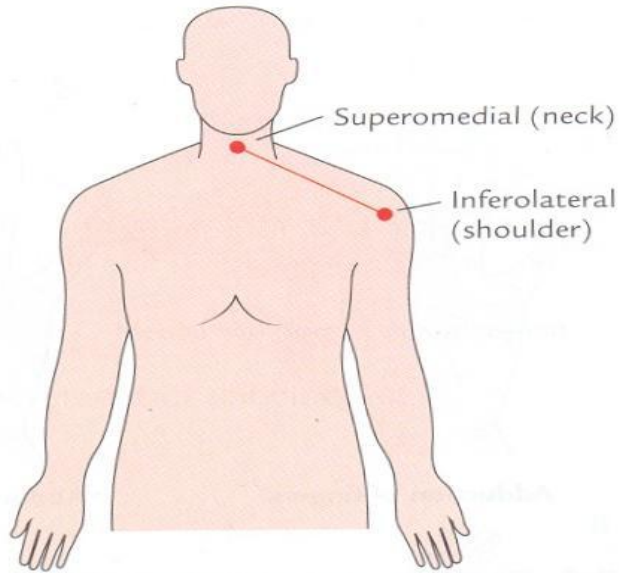
Foot



- Superior surface -
Dorsum of Foot

- Inferior Surface -
Plantar Surface

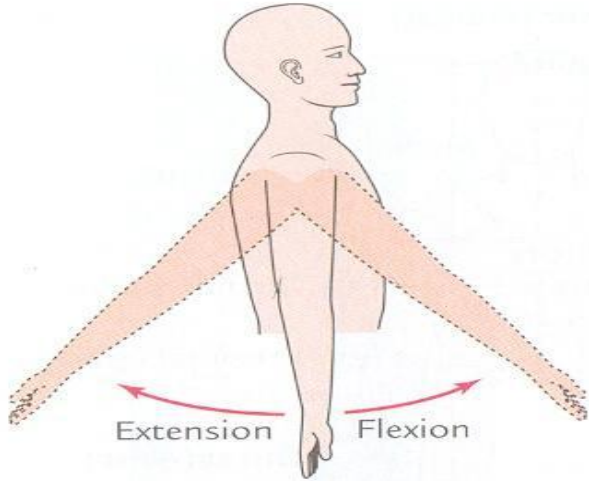
TERMS OF POSITION



Combination of Terms:

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

TERMS OF MOVEMENT

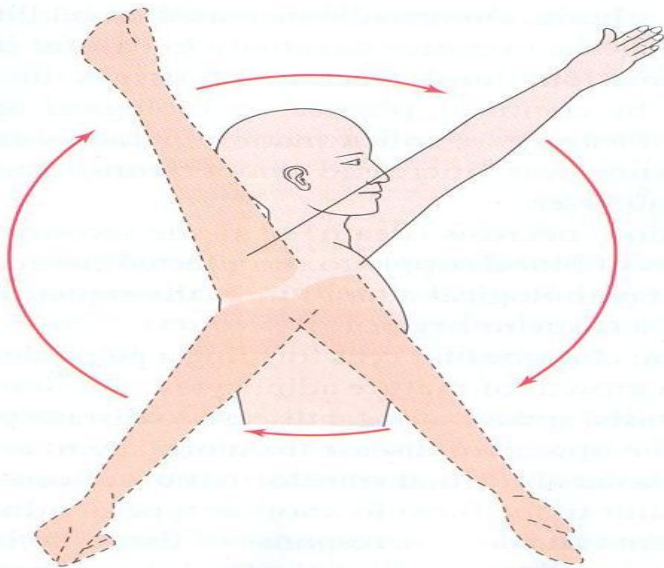


Flexion and extension
of shoulder joint

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

Extension- Moving part is carried
backwards

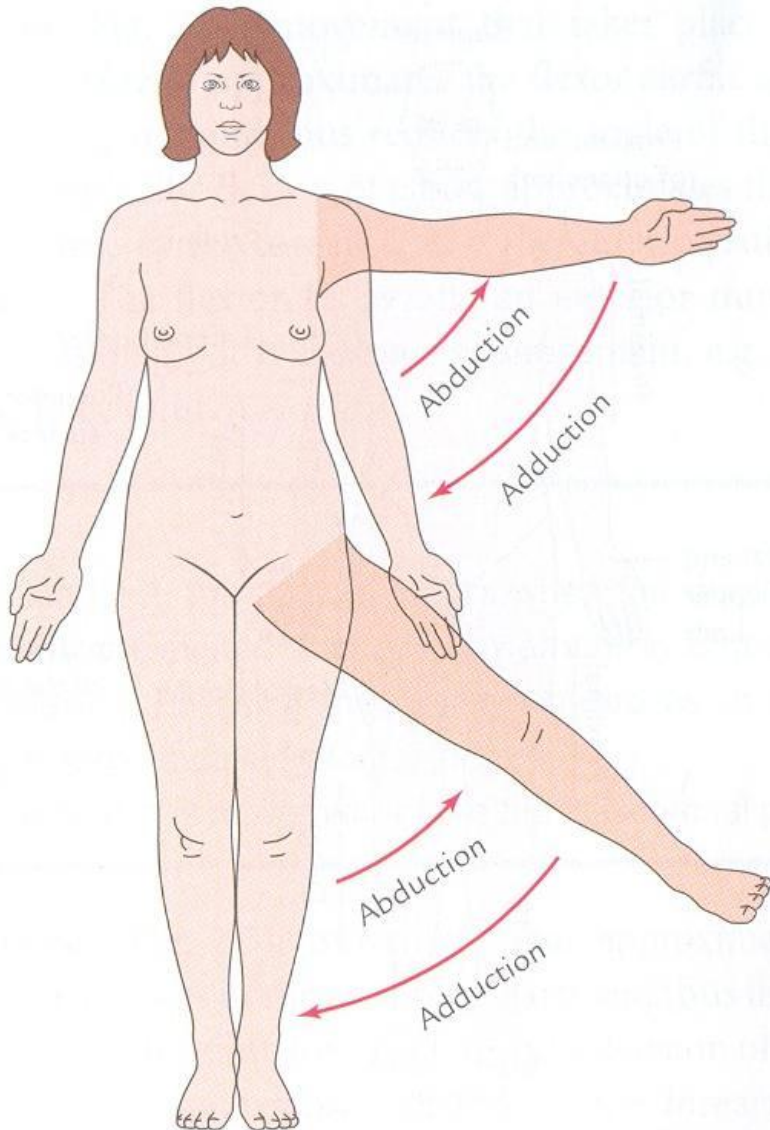
- Movement on the transverse
axis.



Circumduction of shoulder joint.

Circumduction: Moving part forms the
base of a cone

TERMS OF MOVEMENT



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

reference line.

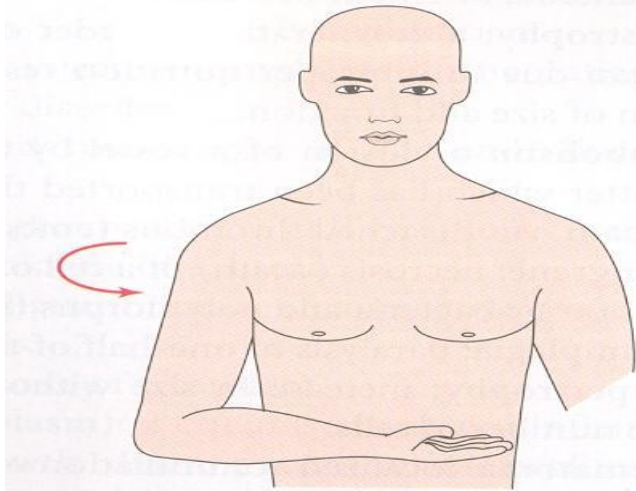
- Movement on antero – posterior axis.

Adduction: - Moving part is carried towards the body /

reference line.

-Movement on antero – posterior axis.

TERMS OF MOVEMENT

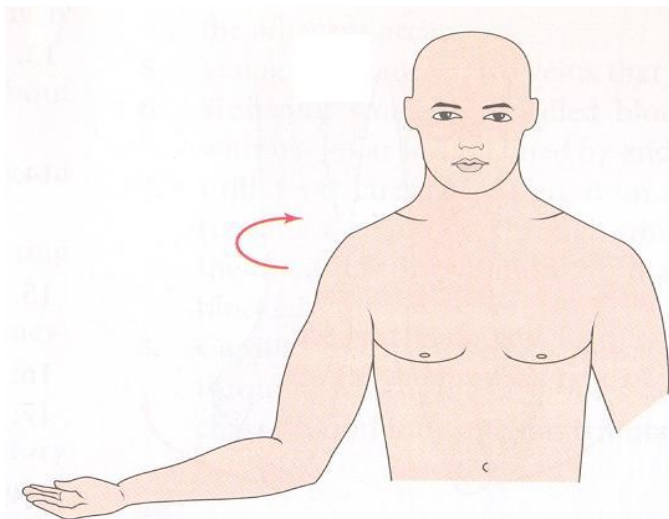


Medial rotation of shoulder joint

Medial Rotation –

-Moving part is rotated towards the mid line.

- Movement on vertical axis.



Lateral rotation of shoulder joint

Lateral Rotation –

- Moving part is rotated away from the mid line.

- Movement on vertical axis.

SPECIAL TERMS OF MOVEMENT



LEG:

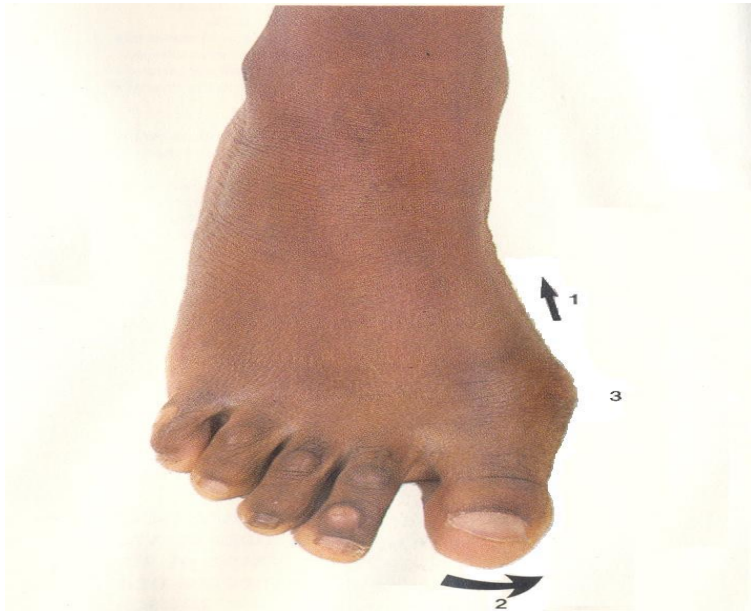
Flexion – A movement on knee joint in which leg is carried backwards.

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



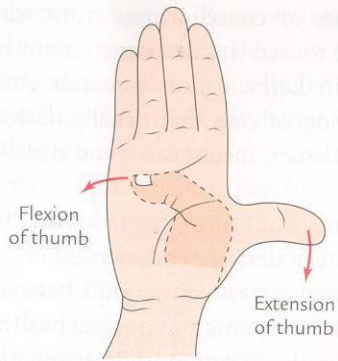
FINGERS:

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

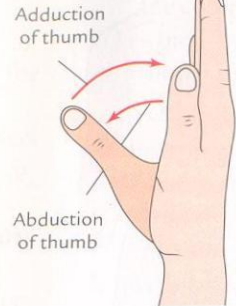


ADDUCTION – Fingers move towards the long axis of middle finger.

SPECIAL TERMS OF MOVEMENT



Flexion and extension of thumb



Adduction and abduction of thumb



Opposition of thumb and little finger

Thumb:

Flexion

Extension

Abduction

Adduction

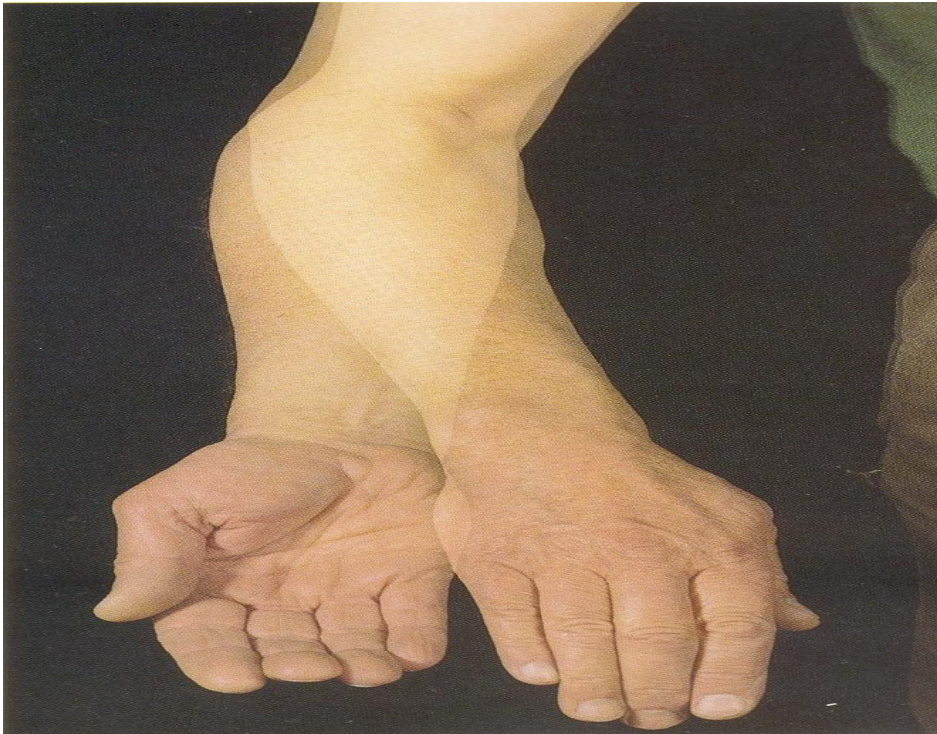
Opposition

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



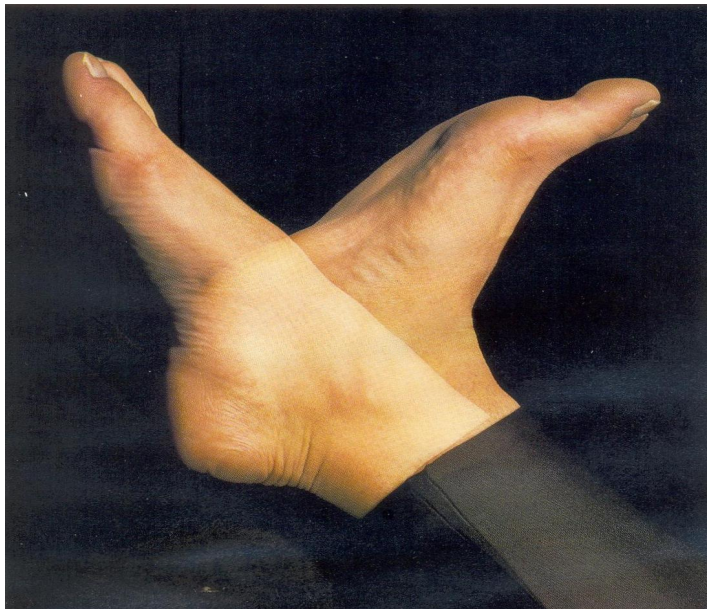
FOOT –

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 closure 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