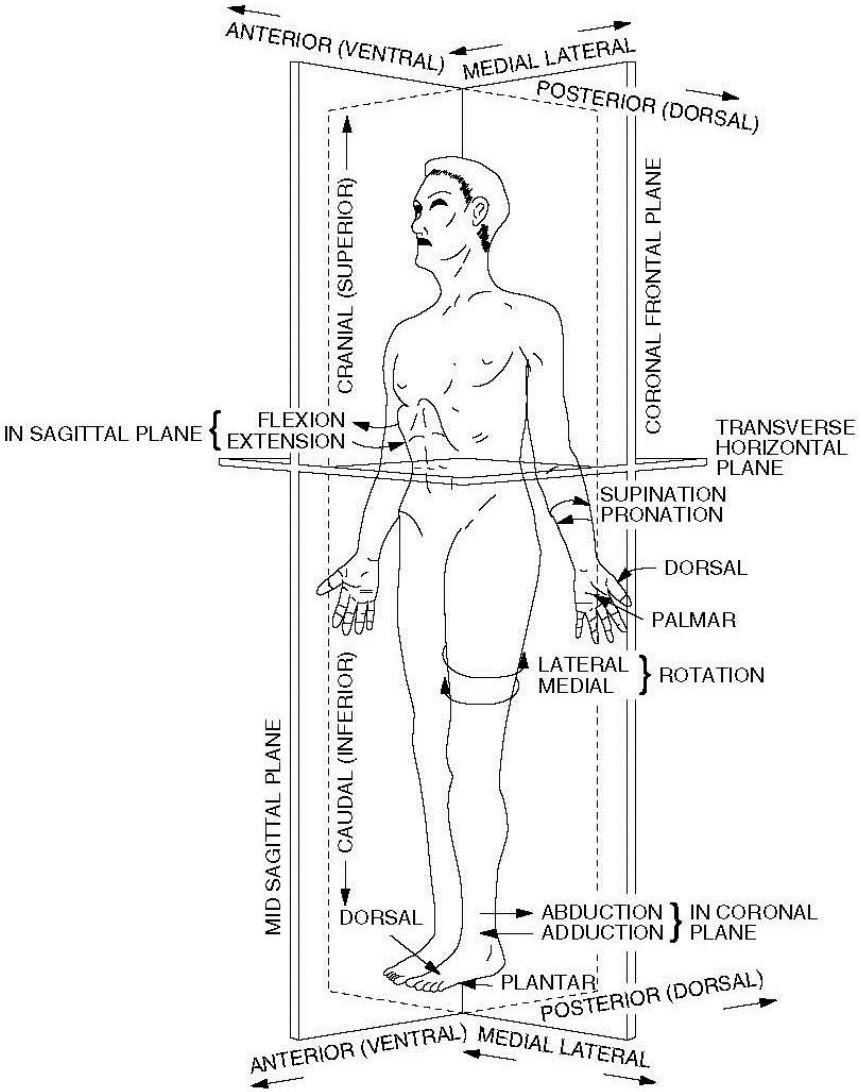
Biomechanics

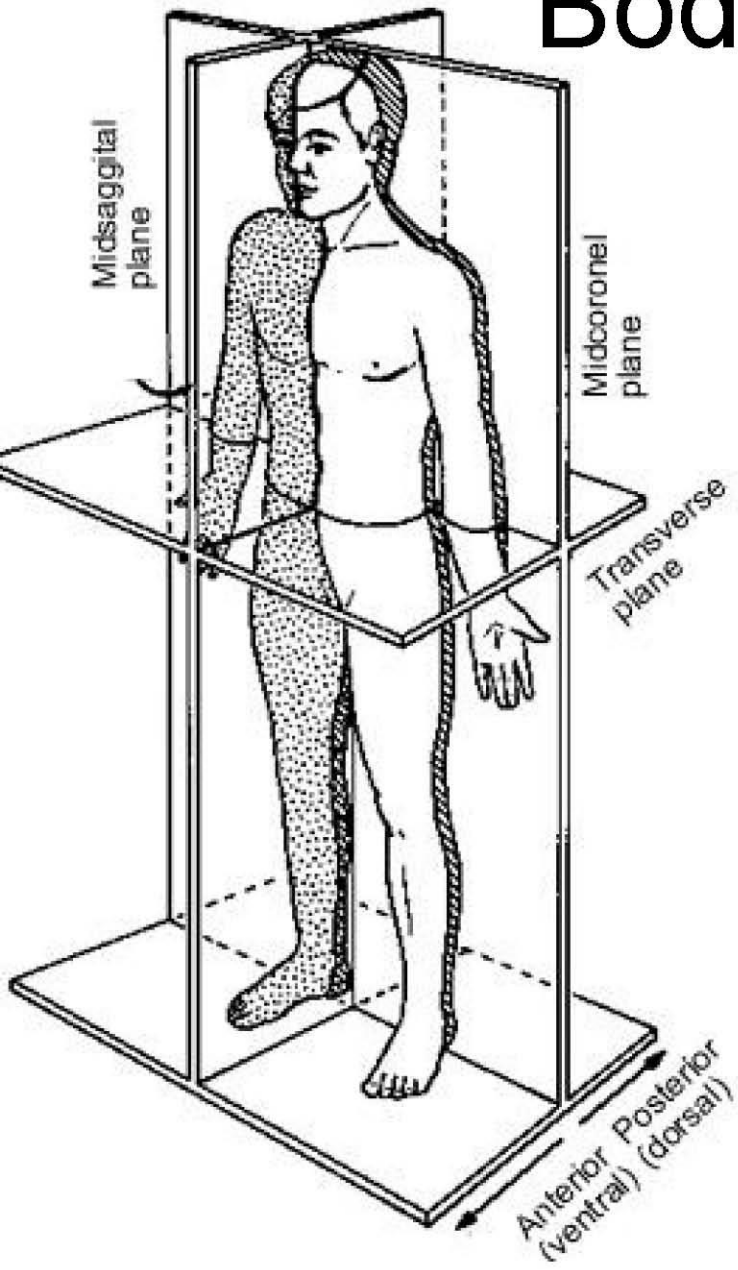
2. Anatomical Planes

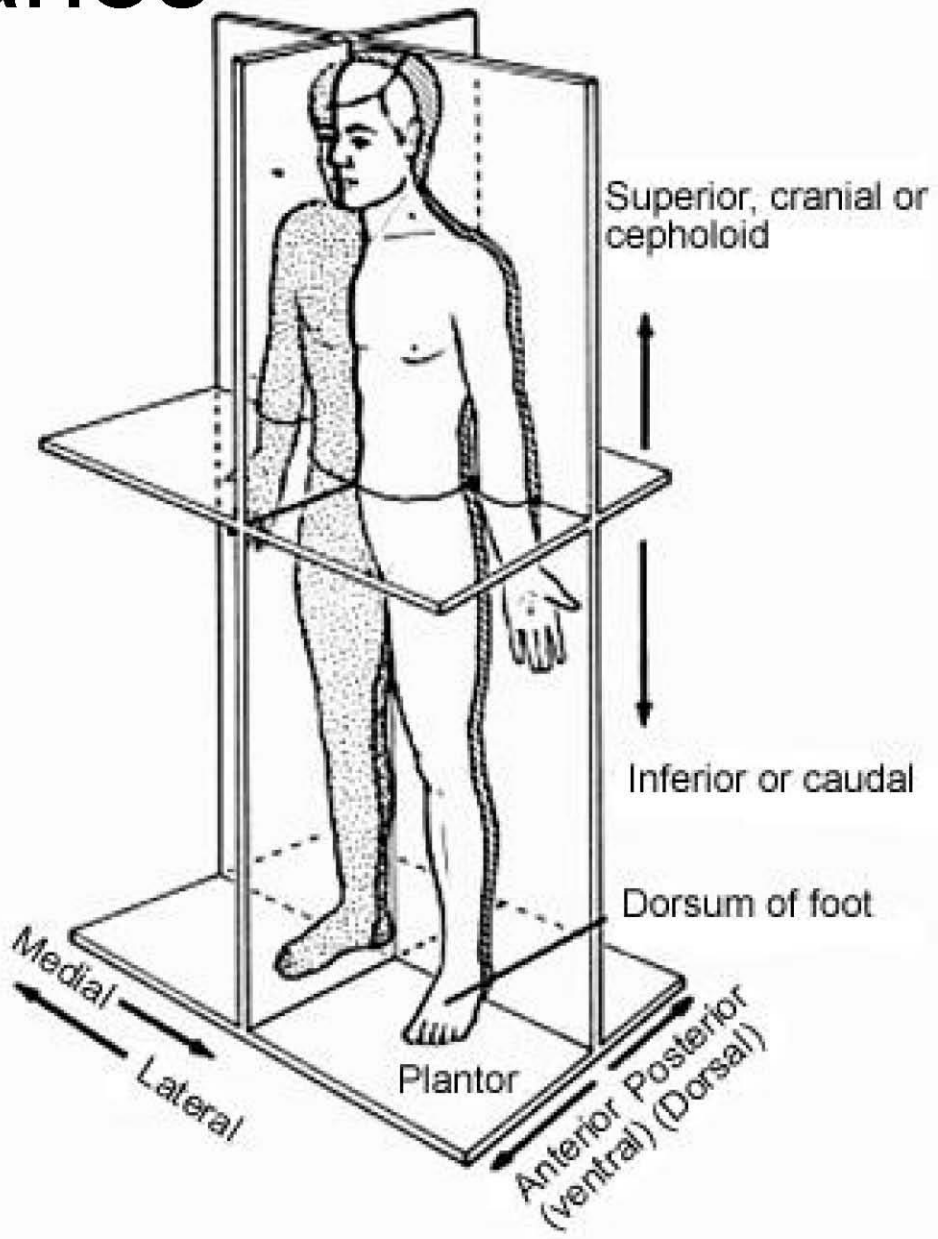
Prepared by: M.A. Nazari

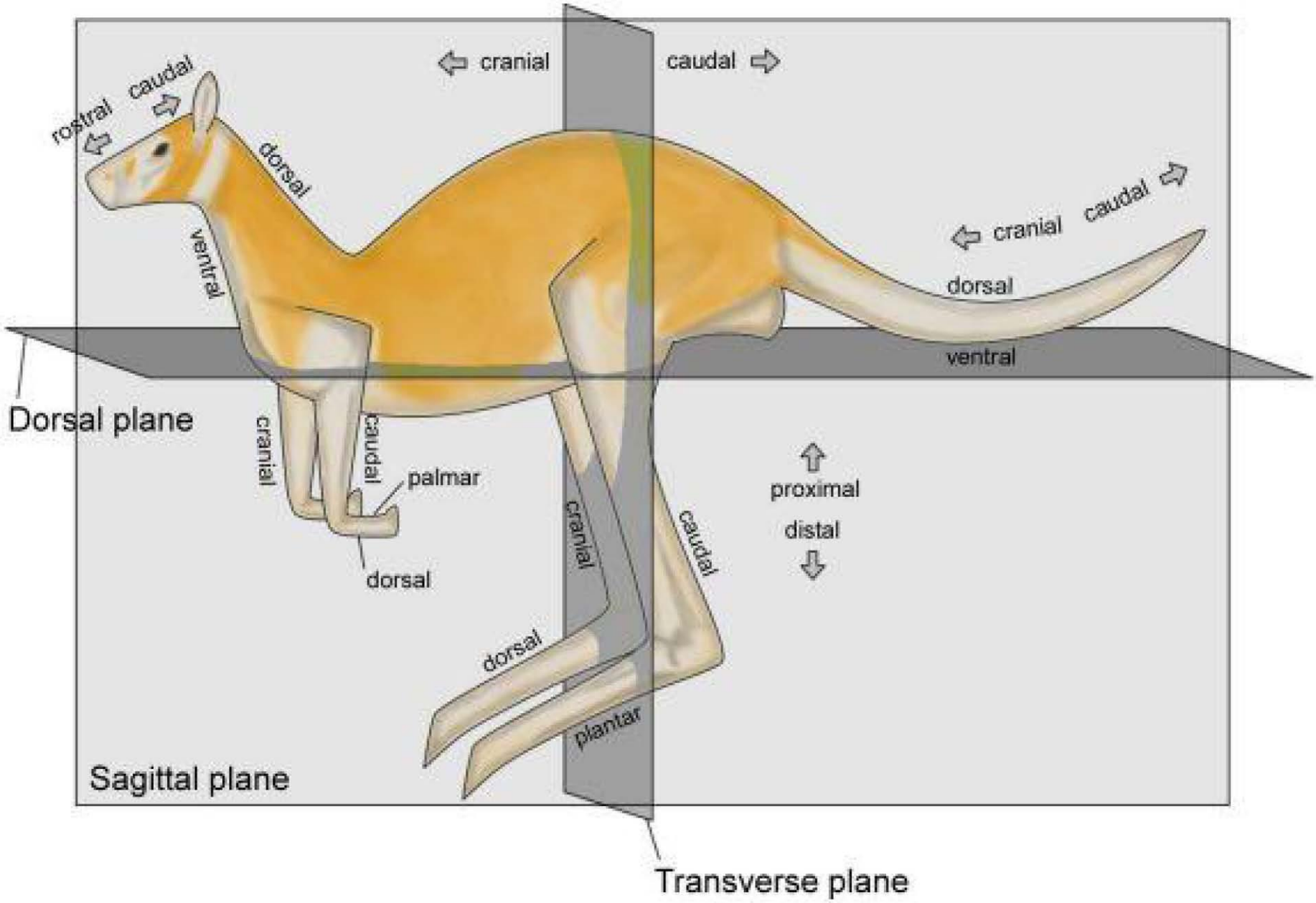


Anatomical Planes

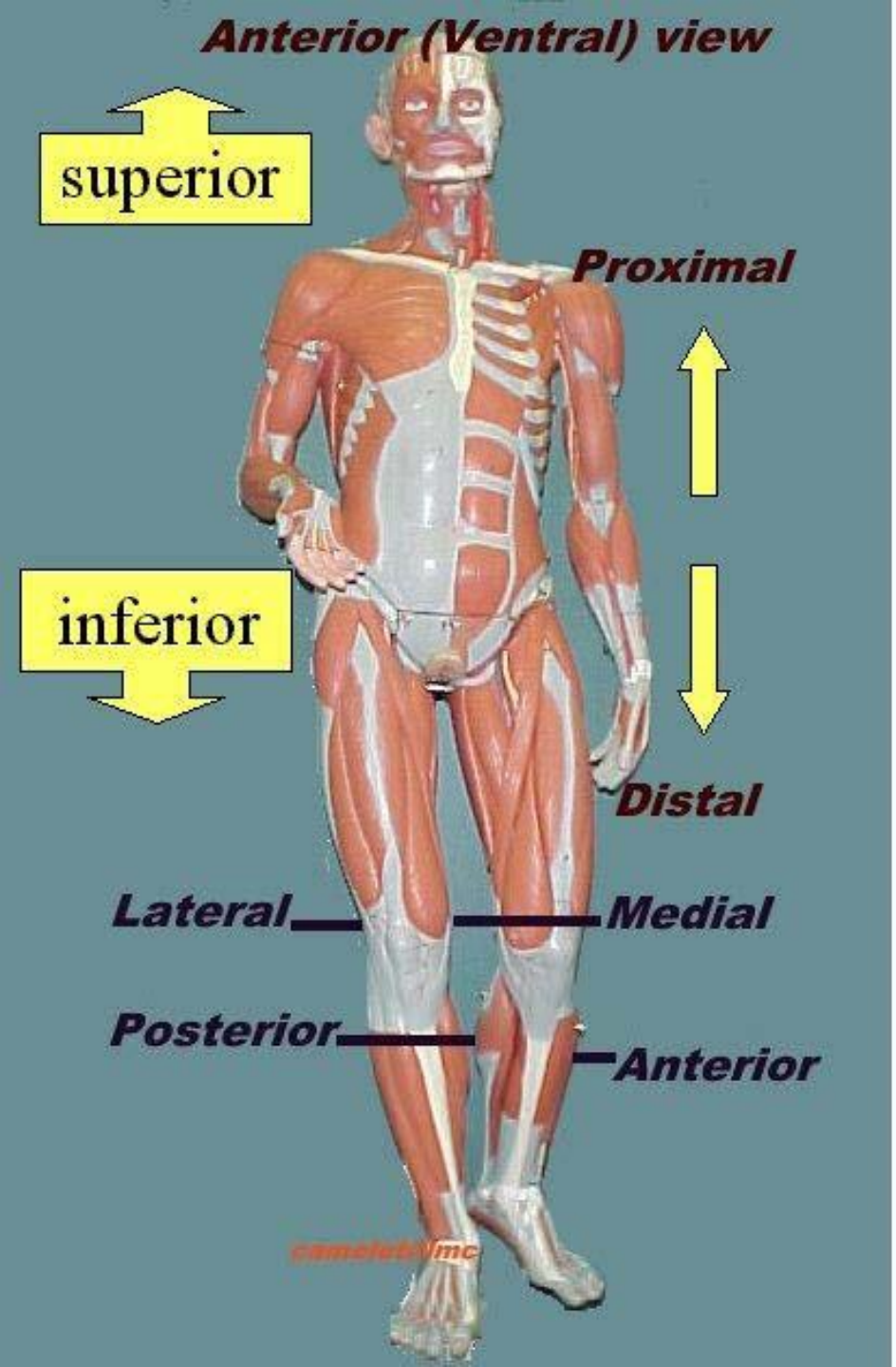
Body Planes


Midsaggital plane
Midcoronel plane
Transverse plane
Anterior (ventral)
Posterior (dorsal)


Superior, cranial or cepholoid
Inferior or caudal
Dorsum of foot
Medial
Lateral
Plantor
Anterior (ventral)
Posterior (Dorsal)

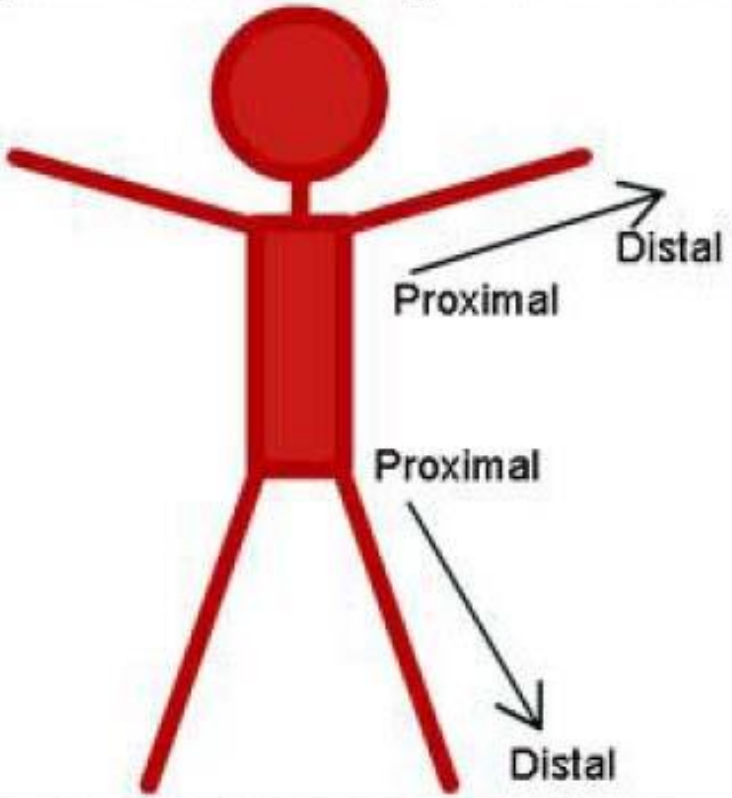


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Anatomical Directions

Figure F-4: Meaning of Proximal



Proximal muscles are closer to the center of the body.



Supine



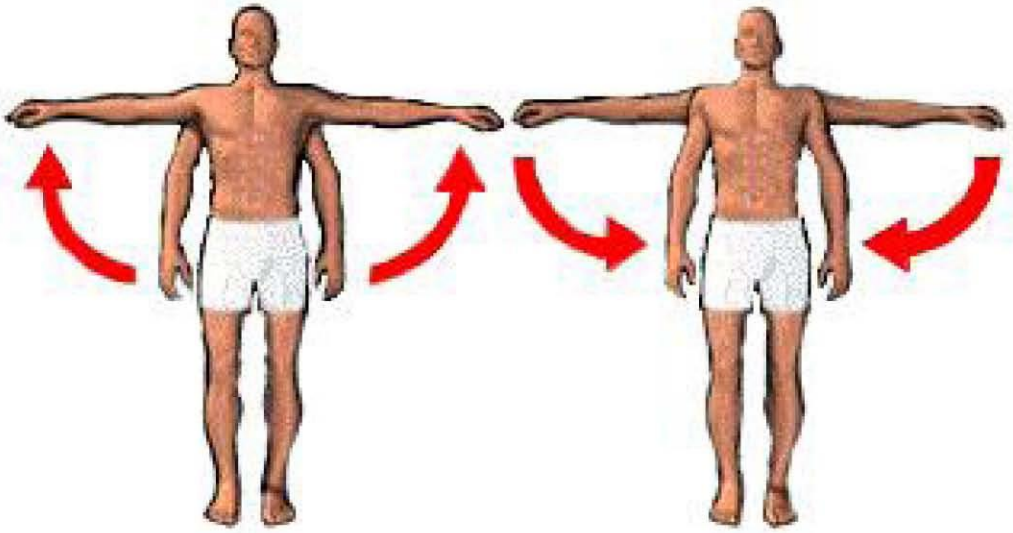
Prone



Right Lateral Recumbent

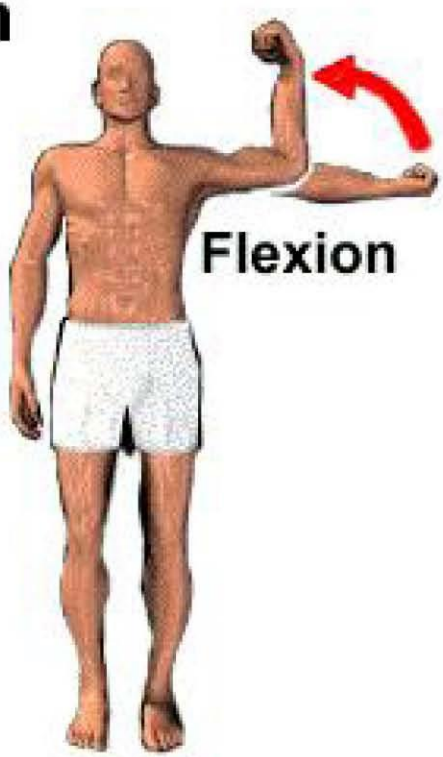


Left Lateral Recumbent



Abduction

Adduction

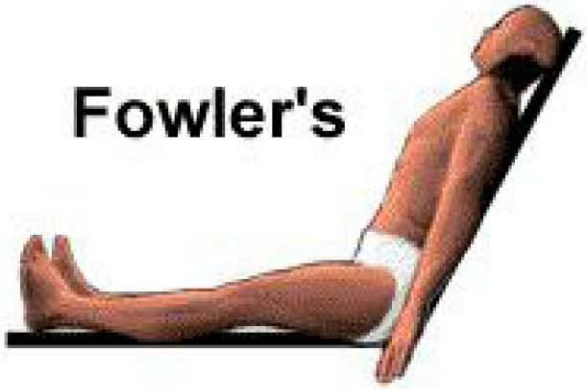


Flexion



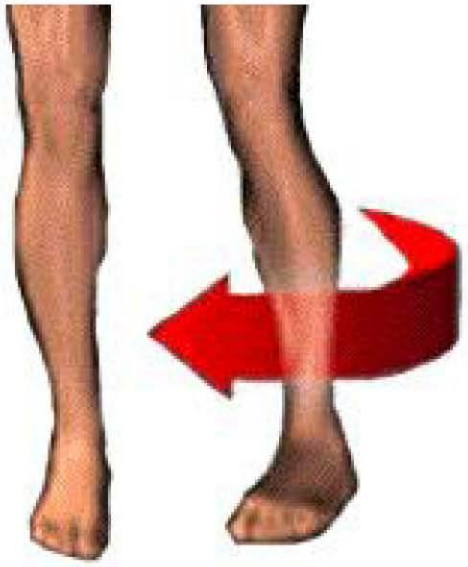
Extension

Fowler's

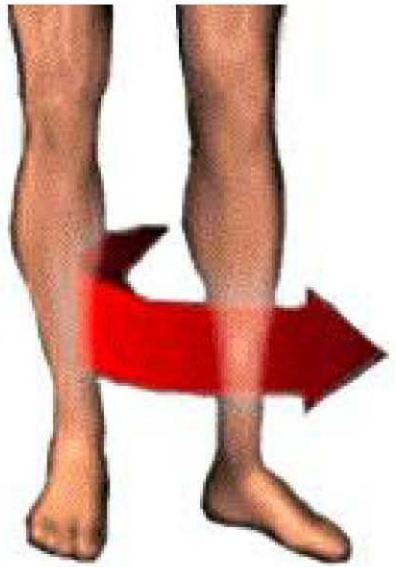


Trendelenberg





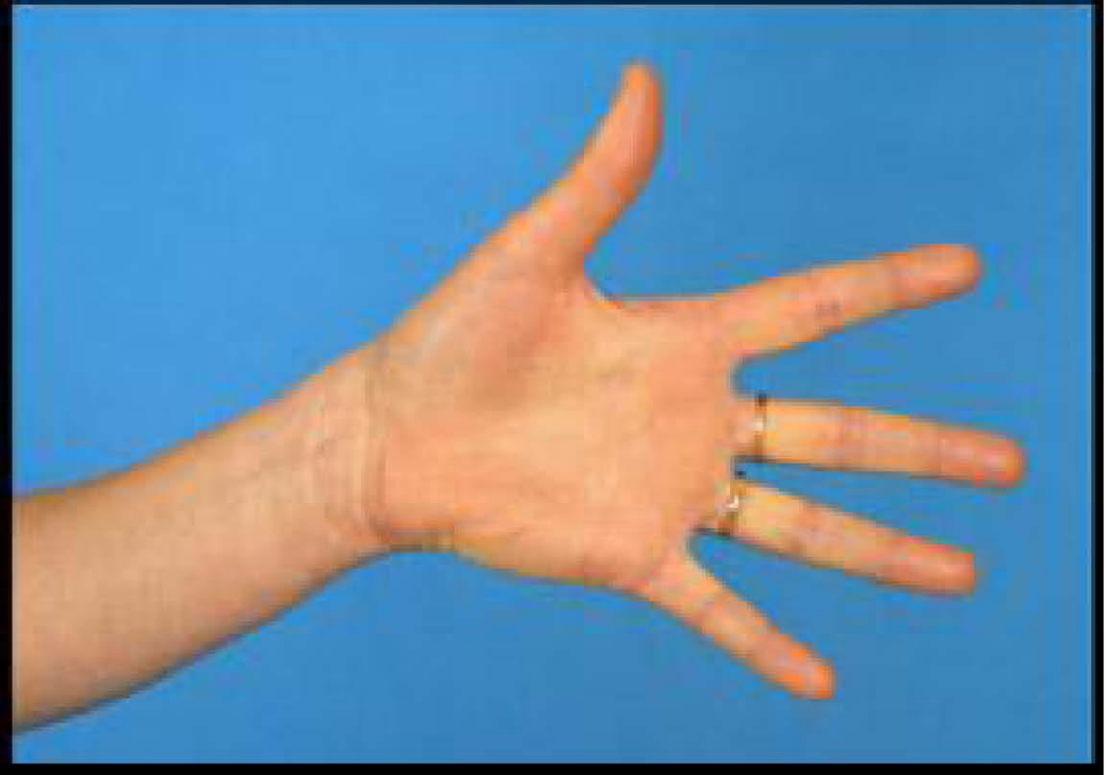
Medial Rotation



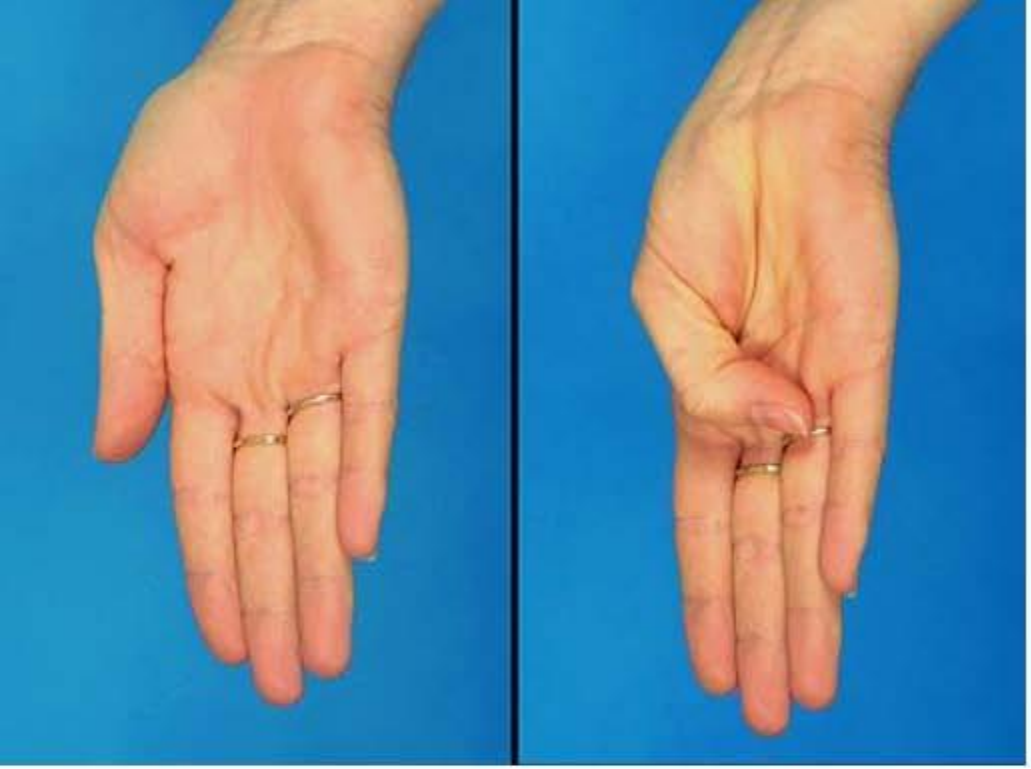
Lateral Rotation



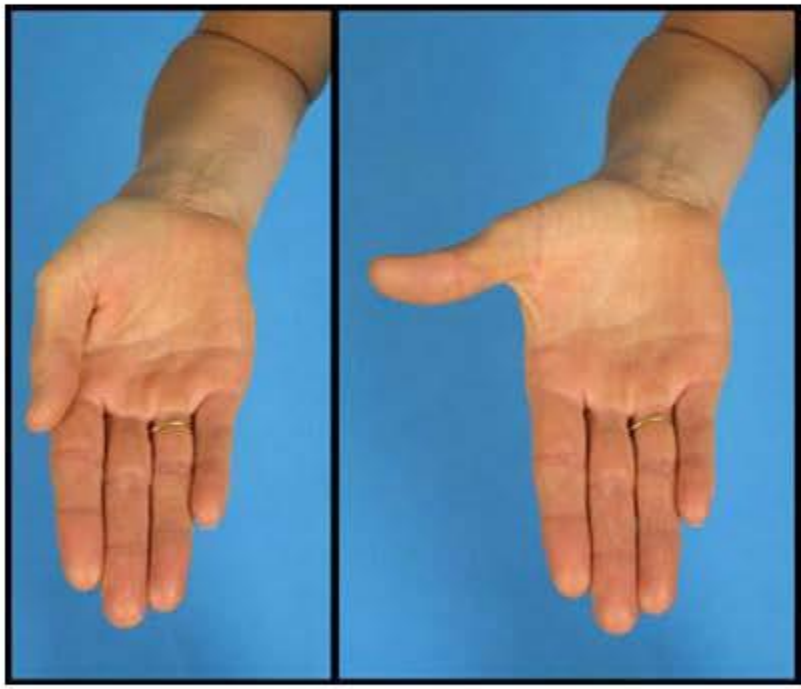
Adduction



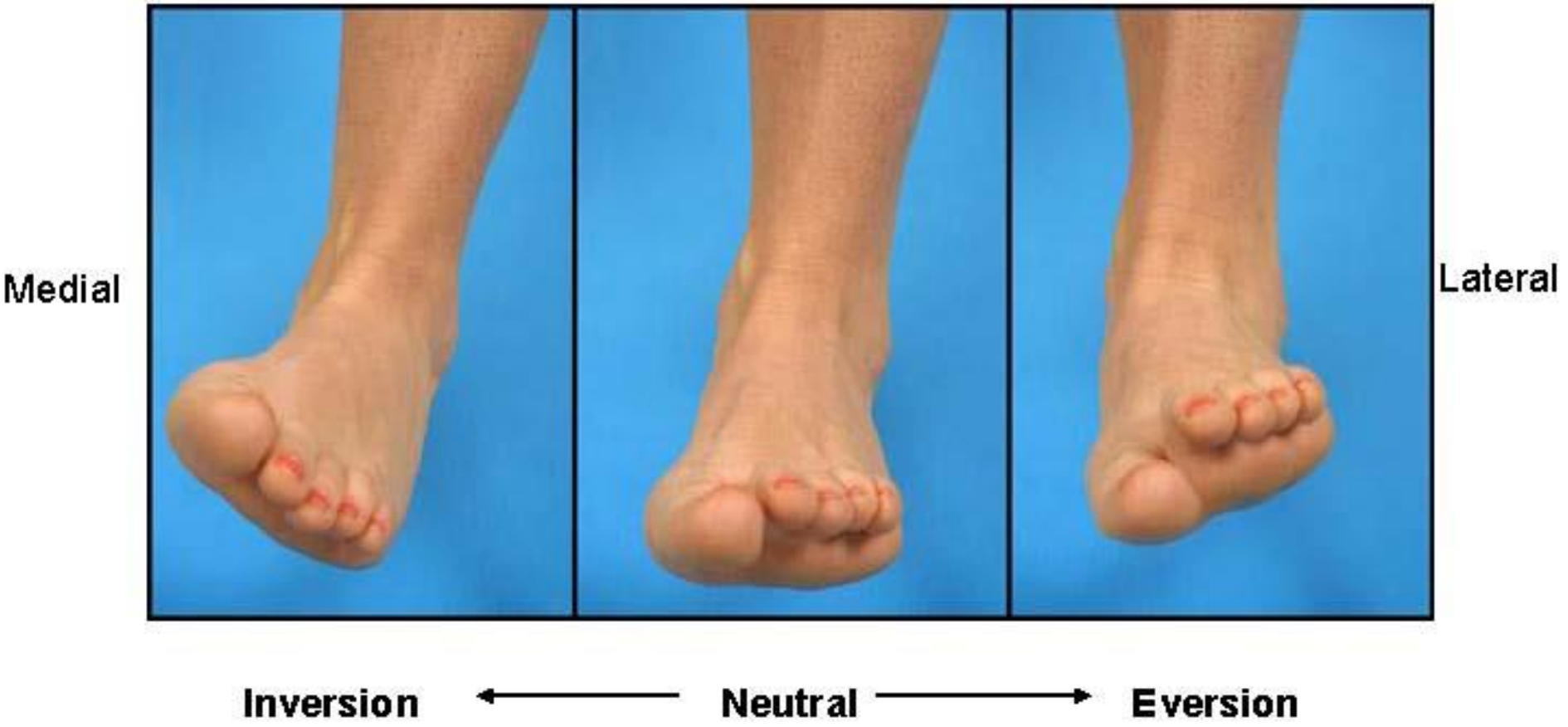
Abduction

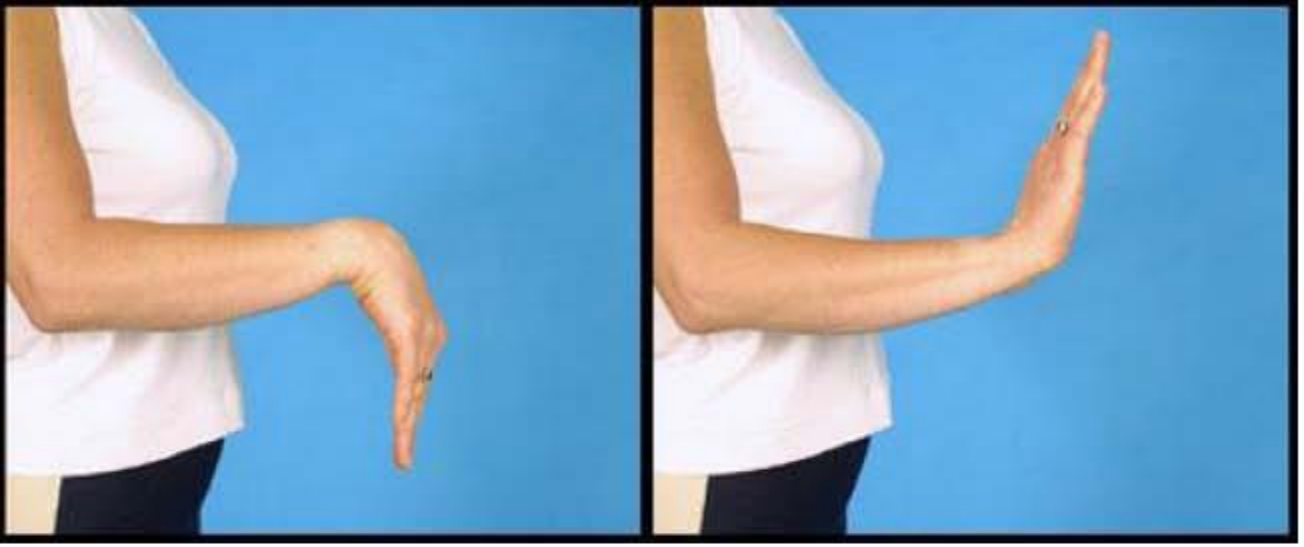


Neutral (adduction) Flexion



Neutral Extension


Medial
Lateral
Inversion
Neutral
Eversion



Wrist

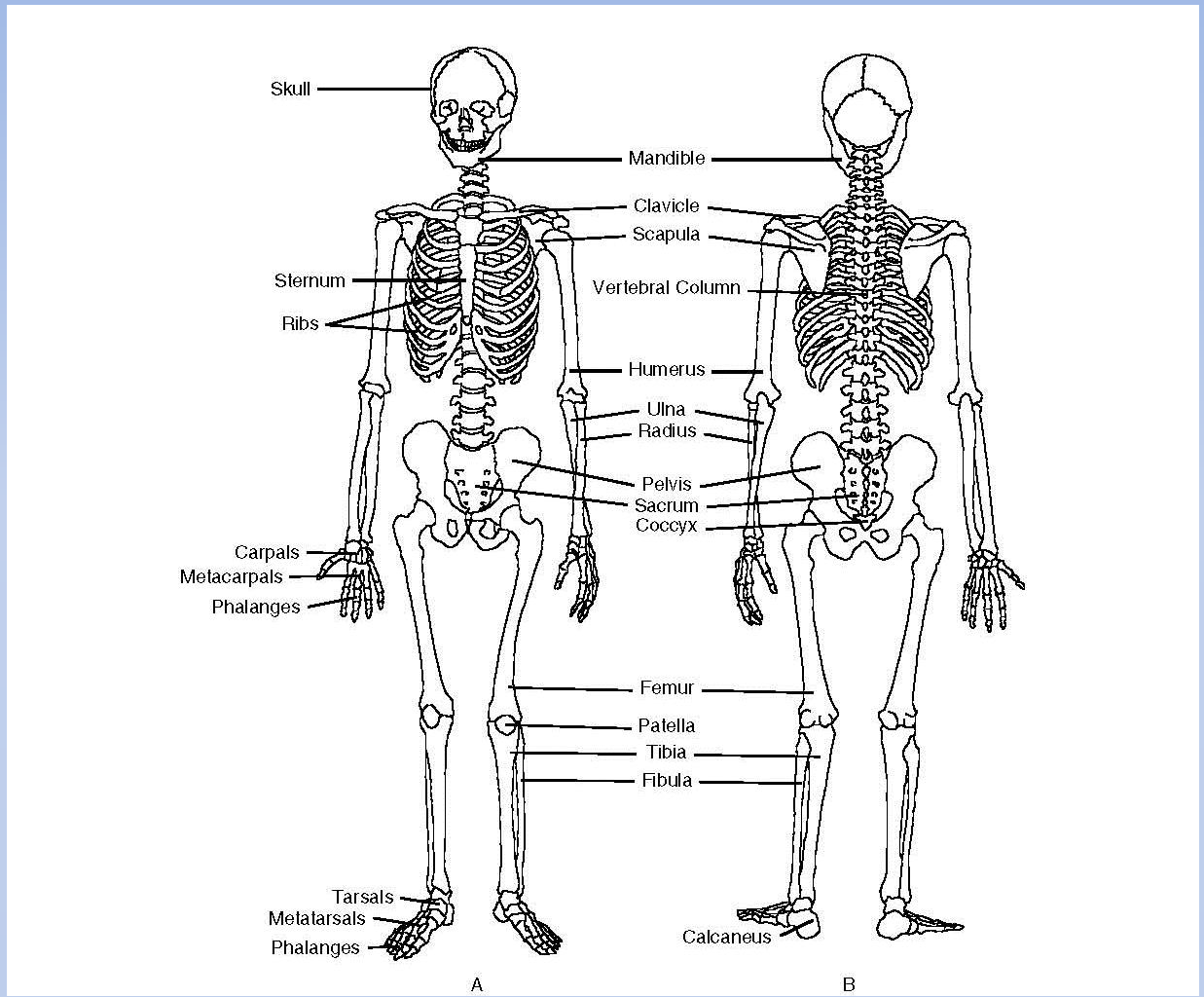
Flexion **Extension**

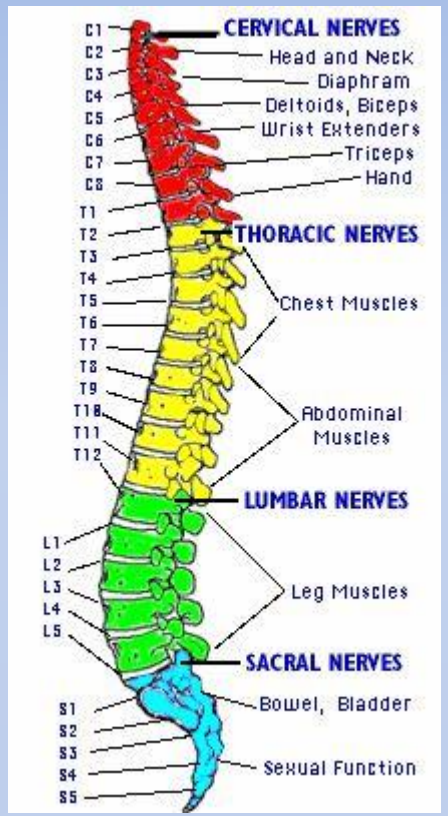
Dorsiflexion

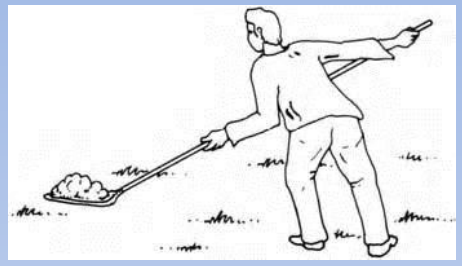


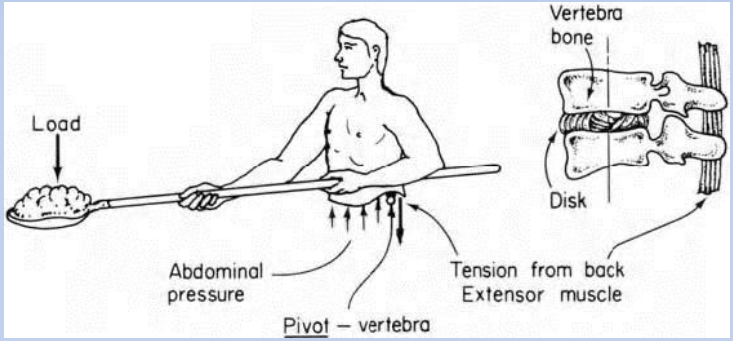
Neutral

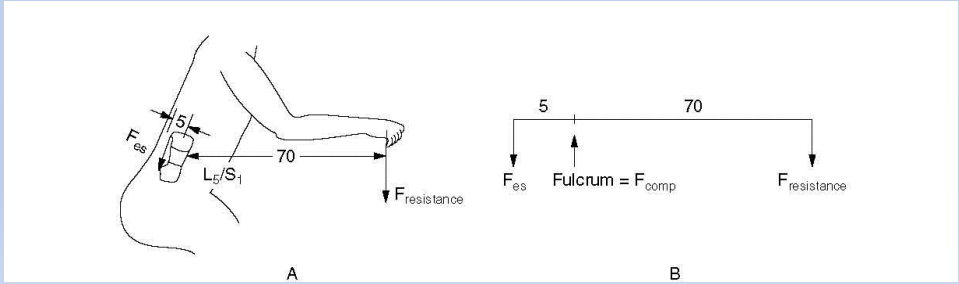
Plantar flexion


Skull
Mandible
Clavicle
Scapula
Sternum
Vertebral Column
Ribs
Humerus
Ulna
Radius
Pelvis
Sacrum
Coccyx
Carpals
Metacarpals
Phalanges
Femur
Patella
Tibia
Fibula
Tarsals
Metatarsals
Phalanges
Calcaneus
A
B


C1
C2
C3
C4
C5
C6
C7
C8
T1
T2
T3
T4
T5
T6
T7
T8
T9
T10
T11
T12
L1
L2
L3
L4
L5
S1
S2
S3
S4
S5
CERVICAL NERVES
Head and Neck
Diaphram
Deltoids, Biceps
Wrist Extenders
Triceps
Hand
THORACIC NERVES
Chest Muscles
Abdominal Muscles
LUMBAR NERVES
Leg Muscles
SACRAL NERVES
Bowel, Bladder
Sexual Function




Load
Vertebra bone
Disk
Abdominal pressure
Tension from back Extensor muscle
Pivot – vertebra


5
70
F_{es}
L_5/S_1
$F_{resistance}$
A
5
70
F_{es}
Fulcrum = F_{comp}
$F_{resistance}$
B