

MEDICAL TERMINOLOGY

Musculoskeletal System

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"musculoskeletal system" includes two major and different subsystems which are the muscular system and the skeletal system

The skeletal system consists of 206 bones and 360 joints.


The muscular system consists of 620 muscles.

Connective tissue : tendons and ligaments

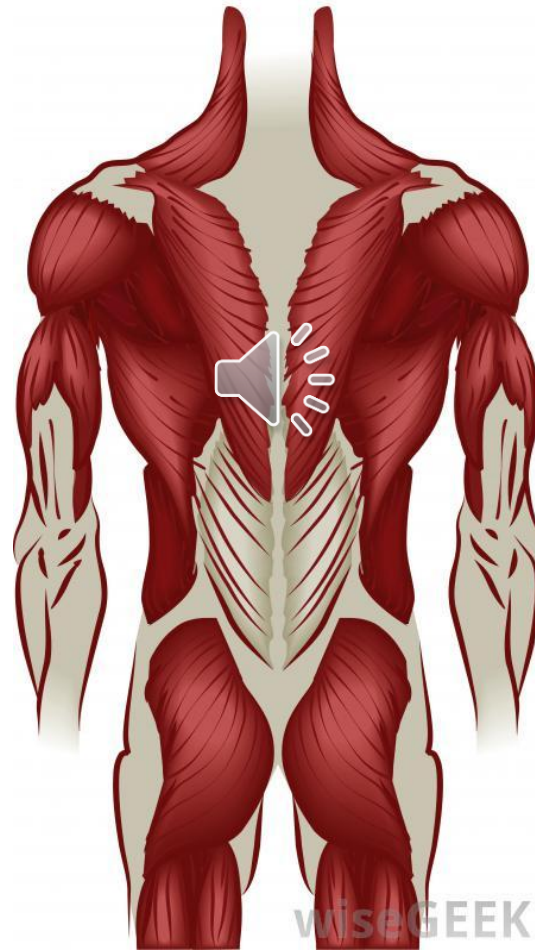
The skeleton

supports the body,
protects internal organs,
serves as a point of attachment for skeletal
muscles for body movement,
produces blood cells,
and stores minerals.

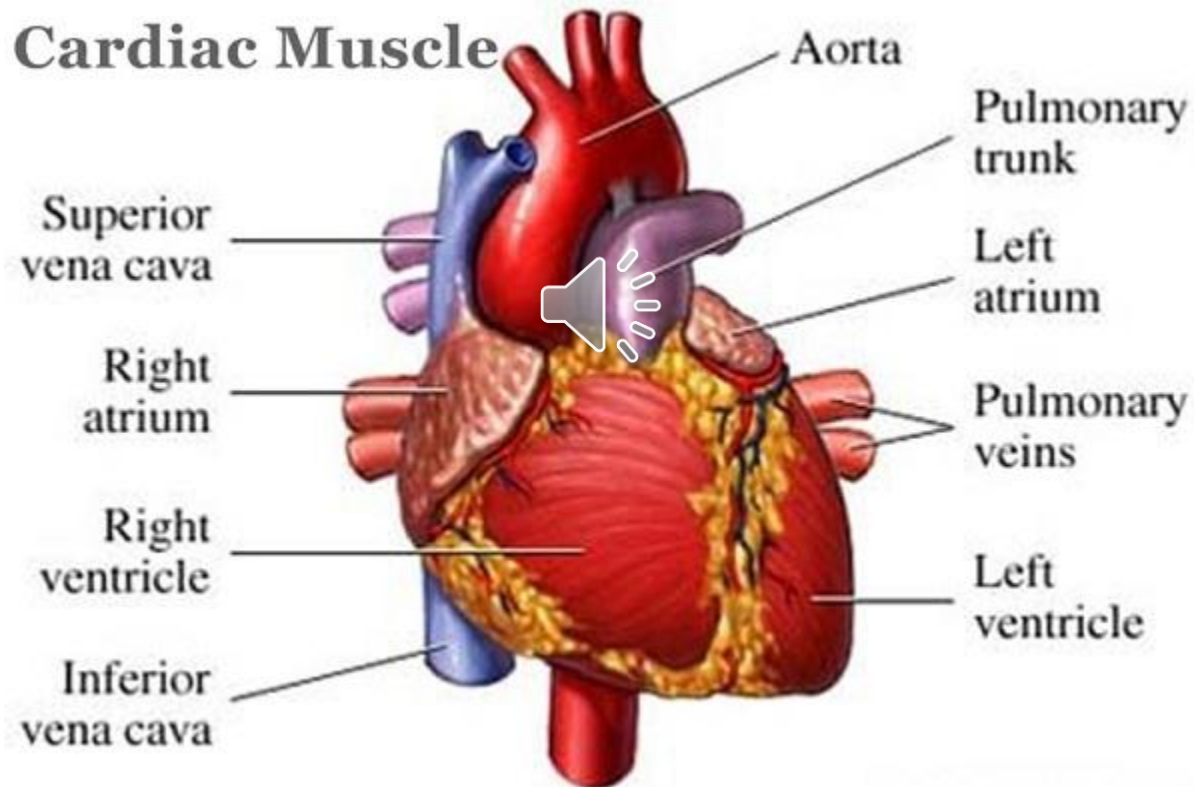


- **Skeletal muscle tissue:** Striated muscle that enables voluntary bodily movement
- **Smooth muscle tissue:** Muscle that is not striated and not under voluntary control 
- **Cardiac muscle tissue:** Striated, involuntary muscle that is found only in the heart. This tissue enables cardiac functioning.

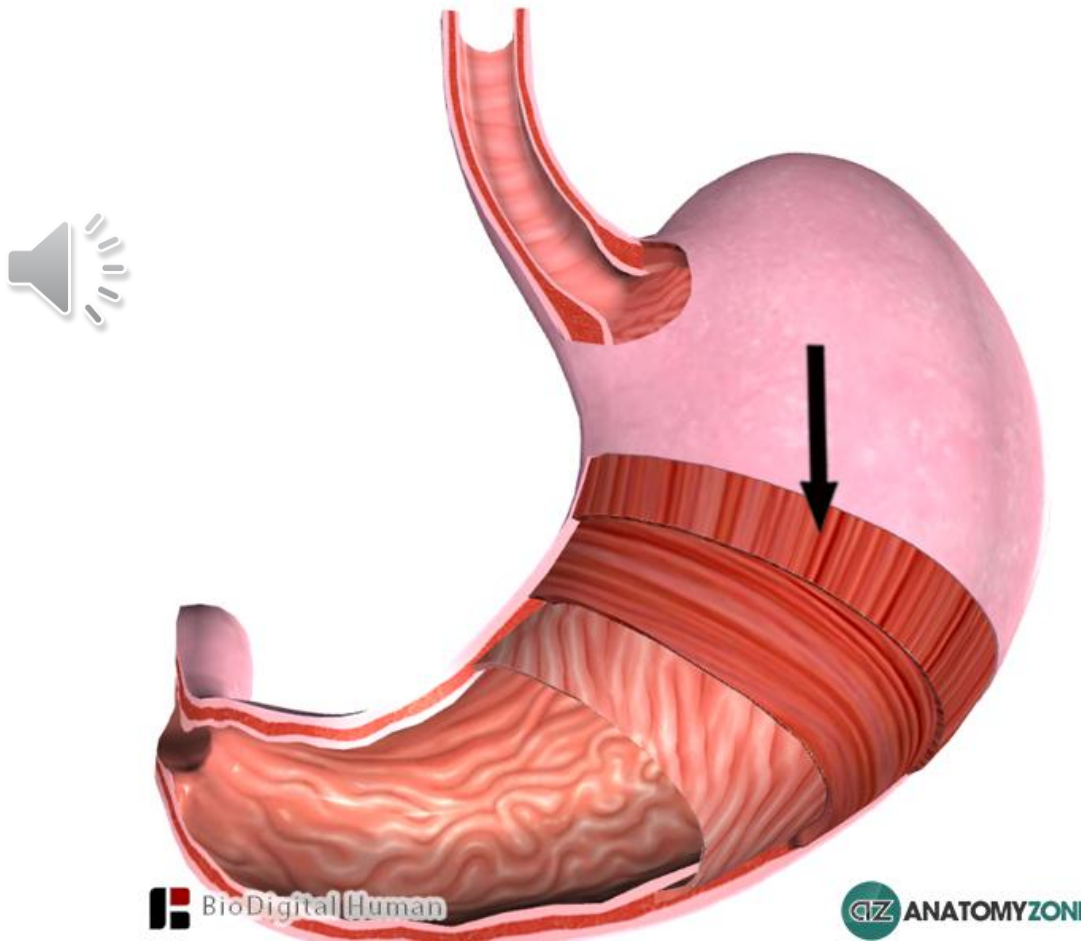
Skeletal muscles



Cardiac muscle tissue



Smooth muscle tissue



WORD PARTS

Osteo..... Bone

Arthro..... Joint

Myo Muscle

Chondro Cartilage 

Costo Rib

Cranio Skull

Myelo..... bone marrow, spinal cord

Pectoro..... Chest

Type of cells :

Osteoblast : bone forming cell


Osteocyte : mature bone cell

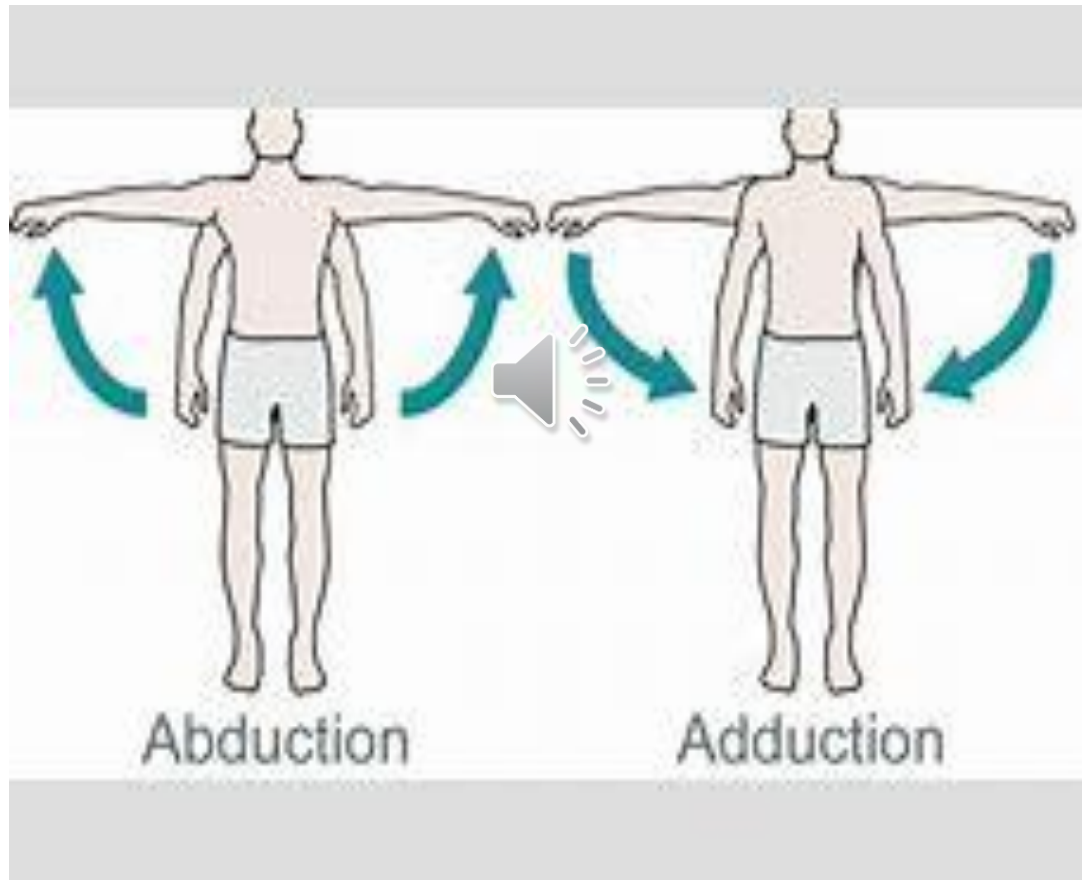
Osteoclast : bone destructing cell

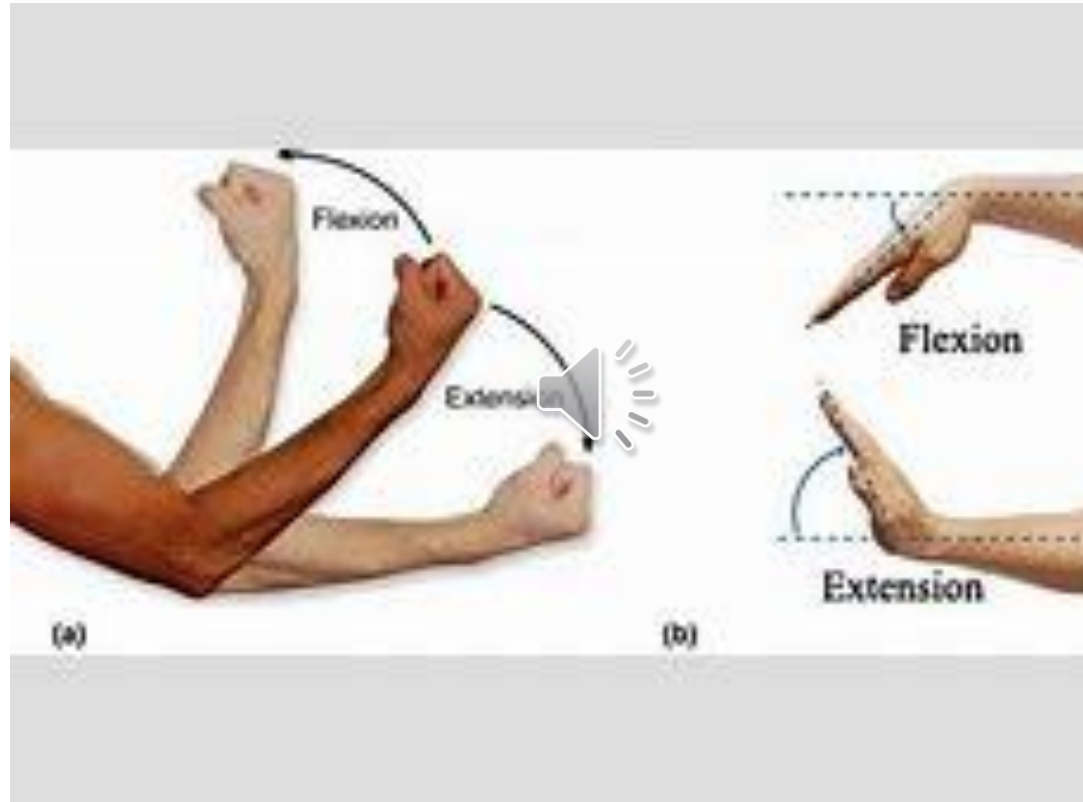
Myoblast , myocyte

Chondroblast , chondrocyte , chondroclast

The movement of muscles and joints

- Abduction: Movement away from the middle of the body
- Adduction: Movement towards the middle of the body 
- Flexion: Movement that decreases, or lessens, the angle between two muscles or joints
- Extension: Movement that increases the angle between two muscles or joints




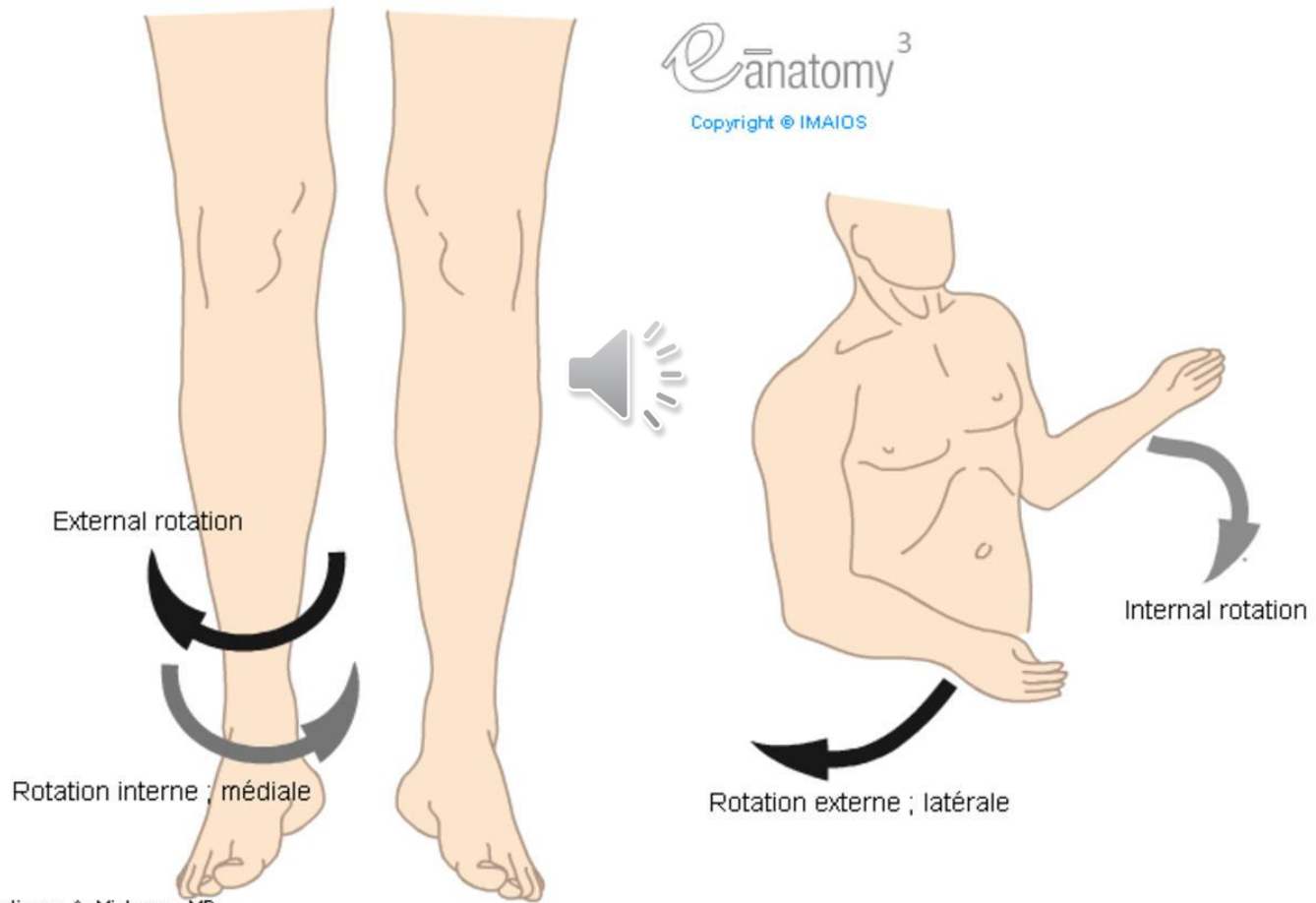


- **Hyperflexion:** The flexion of a joint that is beyond what it normally should do



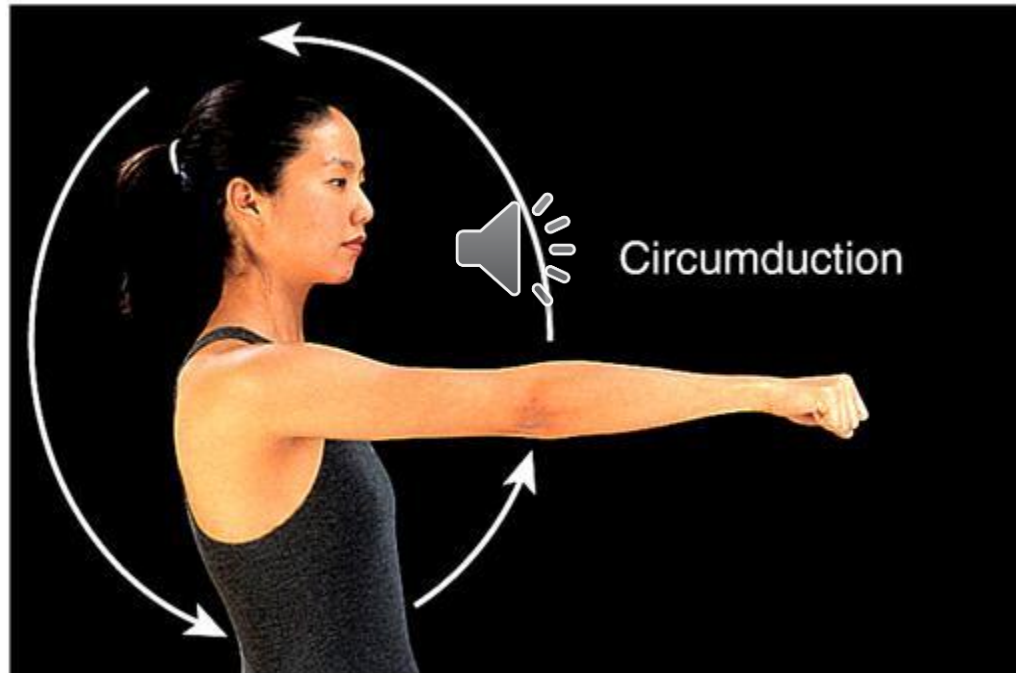
- **Hyperextension:** The extension of a joint that is beyond what it normally should do

- External rotation: The muscular and joint movement that entails both circular movement and also movement away from the center of the body
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- Internal rotation: The muscular and joint movement that entails both circular movement and also movement towards the center of the body

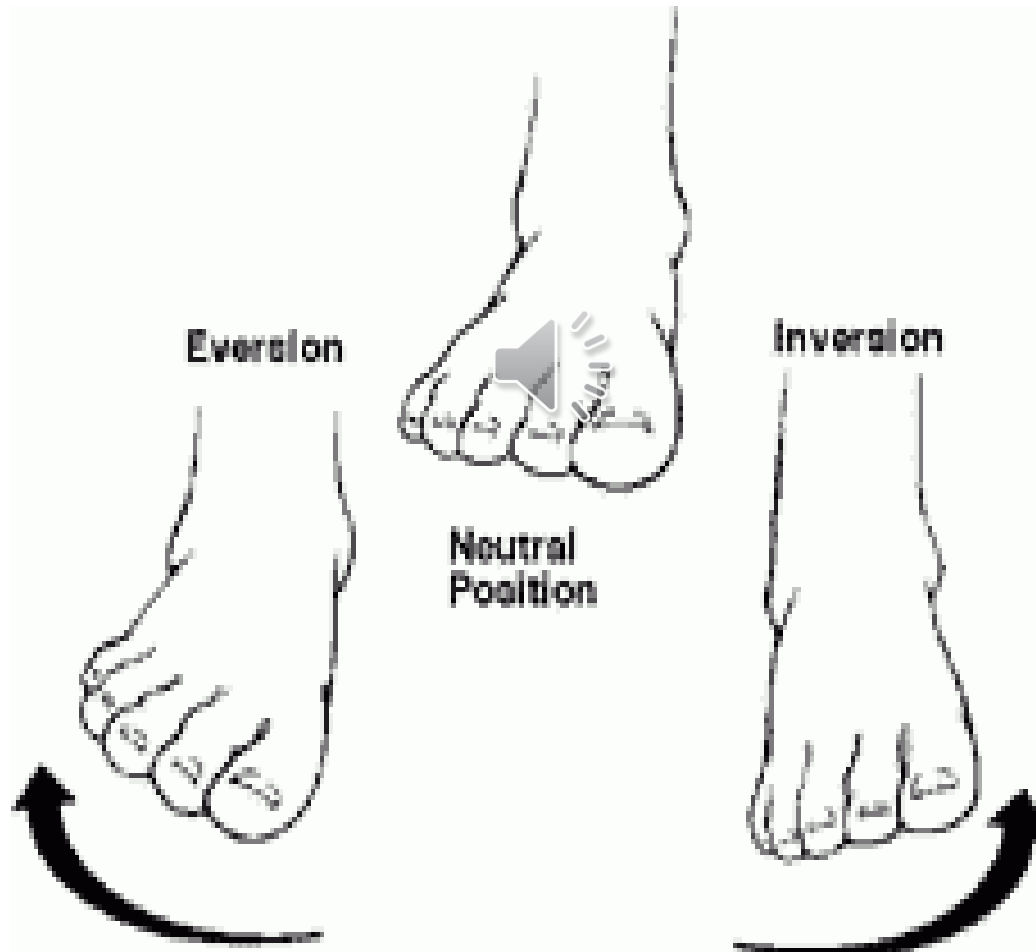



Illustrations : A. Micheau - MD

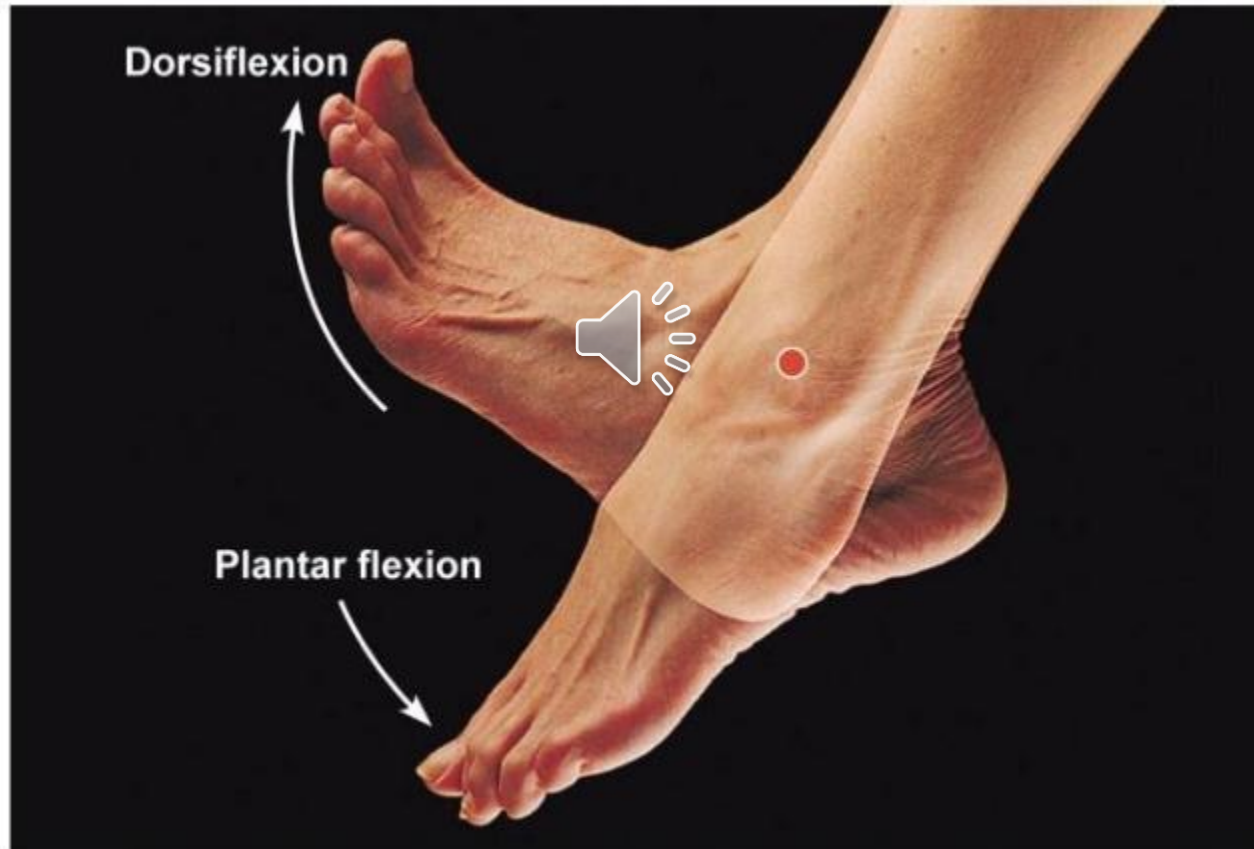
- Circumduction: The muscular and joint movement that entails complete 360 movement



- Inversion: The turning of a joint inward
- Eversion: The turning of a joint outward



- Plantar flexion: Movement of the foot (plantar) downward 
- Dorsiflexion: Movement of the foot (plantar) upward

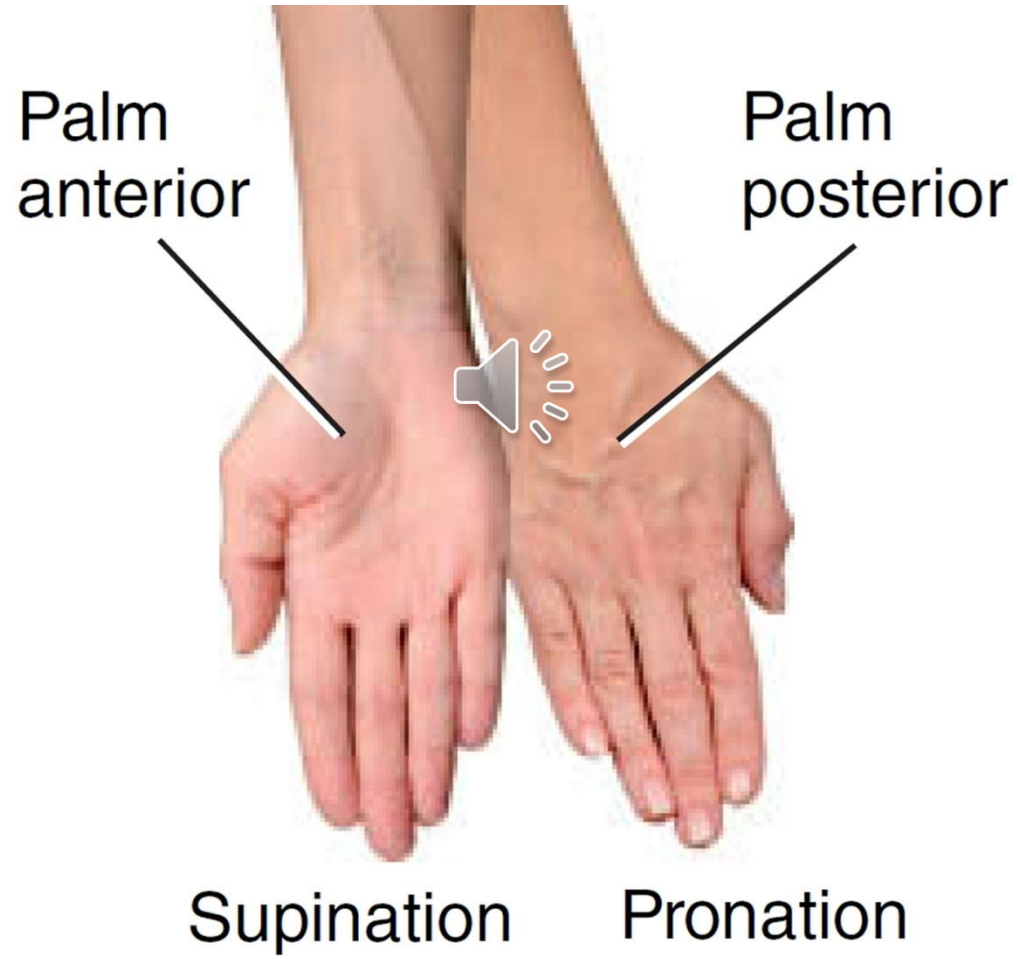


Pronation to turn downward or backward
as with the hand or foot



Supination turning the palm or foot
upward

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**THANK YOU
FOR YOUR
ATTENTION**

