## articulations

| | |
|---|---|
| articu-lations | point of contact between bones |
| structure | determines the type of movement |
| needed for: | |
| strength | lock elements together |
| movement | permits range of movement |

## factors that contribute to range of motion (ROM)

- structure or shape
- strength and tension
- hormones (relaxin)
- disuse

## shoulder joint (glenohumoral)

- ball and socket
- powerful muscles from the rotator cuff
- greatest ROM in body

## elbow joint

| | |
|---|---|
| radius and humerus | radio humeral joint |
| ulna and humerus | ulnohumeral joint |

- responsible for flexion and extension
- stable because of interlock, joint capsule, ligaments
- hinge

## hip joint (acetabulofemoral joint)

- femur and acetabulum
- consist of cartilage, fat pad, synovial membrane
- ball-and-socket

## classifying joints

**structural**

- a. fibrous joints
- b. cartilaginous joints
- c. synovial joints

**functional**

- a. immoveable

## classifying joints (cont)

- b. slightly moveable
- c. freely moveable

## joint movements

| | |
|---|---|
| gliding movements | opposion surfaces slide back and forth and side to side |
| flexion | decrease in angle |
| extension | increase in angle |
| hyperexte-nsion | extension past anatomical position |
| abduction | away from midline |
| adduction | toward midline |
| circum-duction | movement of part in a circle |
| rotation | bone revoles around its own longitudinal axis |
| inversion | move foot medially |
| eversion | move foot laterally |
| pronation | palm down |
| supination | palm up |
| opposition | thumb across palm to touch finger tips |
| dorsil-flexion | foot upward |
| plantar flexion | foot downward |
| elevation | upward movement |
| depression | downward movement |
| protraction | anterior movement |
| retraction | protraction return to normal |

## immoveable joints

| | |
|---|---|
| suture | fibrous |
| synchondrosis | cartilaginous |

## slightly moveable joints

| | |
|---|---|
| syndesmosis | fibrous |
| symphysis | cartilaginous |

## freely moveable joints

- articular cartilage between bones; surrounded by joint capsule; inner surface lined with synovial membrane that secrete synovial fluid

| | |
|---|---|
| arterial branches | merge around a joint |
| nerve endings | respond to movement |

## knee joint (tibiofemoral joint)

- responsible for felxion, extension, and rotation
- femur/tibia and patella/femur

| | |
|---|---|
| supporting structures | menisci, fat pads, bursae, ligaments |

## aging

| | |
|---|---|
| osteroart-hritis | thinning cartilage and lowering synovial fluid from wear and tear |
| rheumatoid arthritis | inflammation, autoimmune |