

ARTICULATIONS II: MOVEMENTS

Revised 11 October 2016

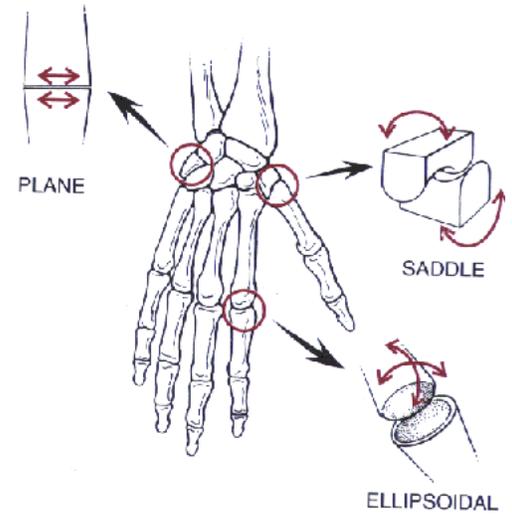
Martini 6th: 268-282, 7th: 272-280, 8th: 272-288, 9th: 258-274, 10th: 269- 274

- MOVEMENTS:**
- Angular movements:** (p 260)
 - flexion/extension decrease angle/ increase angle
 - abduction/adduction away from midline/toward midline
 - Circular movements:** (p 261)
 - circumduction combination of all four above:
 - hip, shoulder
 - humerus or femur
 - rotation forearm turns thumbs
 - supination/pronation

laterally/medially (forearm crosses)

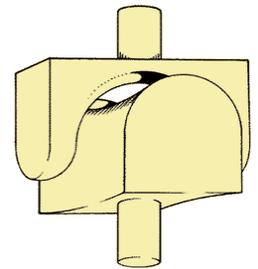
Special movements: (p 273)

- Elevation/Depression mouth, shoulder
- Inversion/Eversion foot turns medially/laterally
- Protraction/retraction jaw forward/pulled back



SYNOVIAL JOINT TYPES: (p 271)

- nonaxial gliding** movement in any direction: vertebra, intercarpal and -tarsal
- uniaxial ginglymus** ["Gk:hinge"] or hinge
 - ex: elbow
- trochoid:** ["wheel or pivot"] rotation around longitudinal axis.
 - ex: first cervical, around odontoid process of second cervical
 - proximal radius and ulna: radial notch, annular ligament
- biaxial: condyloid:** single surface: movement in two planes, like egg cupped in hand:
 - ex: occipital condyles and 1st cerv vert., radius & carpals.
- saddle:** two movements: one concave in one direction, other convex
 - ex: only true saddle is in first carpometacarpal joint of thumb
- multiaxial: ball and socket:** only in hip and shoulder can:
 - flex/extend
 - adduct/abduct
 - rotate
 - circumduct



plane of movement: perpendicular to axis, horizontal line through joint = fulcrum

LIGAMENTS IN SELECTED JOINTS:

- Shoulder:** loosely constructed, protected by coracoid and acromion processes. Support: **labrum** ["lip"], ext'n of art. cartil. (p 277)
- articular capsule** attached to rim of glenoid fossa, extends to anatomical neck
 - coracohumeral ligament: to greater tubercle of humerus
 - glenohumeral ligament:
 - tendon of long head of biceps brachii: Passes thru **intertubercular groove** , holds humerus in place

- Hip:** capsule strengthened (P 279)
- anteriorly by iliofemoral and pubocapsular ligaments
 - posteriorly by ischiofemoral ligament
 - acetabular labrum: fibrocartilaginous rim at top
 - ligamentum teres: ties femur via fovea capitis
- to lower labrum

- Knee:** (p 281) largest weight bearing surface of body. classified as hinge, but has structure of condyloid... menisci ["moon little"] stabilize

- strengthened:**
- anteriorly patellar ligament
 - posteriorly oblique and arcuate popliteal (ham: posterior knee surface)
 - sides: collateral ligaments:
 - medial and lateral
 - inside: Anterior cruciate ["cross"] ligament
 - limits ant. movement of tibia
 - Post cruciate ligaments
 - limits post. movement of tibia

