ARTICULATIONS II: MOVEMENTS

Revised 11 October 2016

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 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

baxial: 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
elbow: labrum attached to rim of glenoid fossa, extends to anatomical neck

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

Hip: capsule strengthened
(p 279) anteriorly by iliofemoral and pubocapsular ligaments
posteriorly by ischiocapsular 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