ARTICULATIONS II: MOVEMENTS

11/10/81, rvsd 11/12/96, 6 Nov 00, 10 Nov 03, 4Nov09
Martini 6th: 268-282, 7th: 272-280, 8th: 272-288

MOVEMENTS: **Angular movements:** (p 274)

	flexion/extension	decrease angle/ increase angle
	abduction/adduction	away from midline/toward midline
Circular movements: (p 275)		
	circumduction	combination of all four above: hip, shoulder
	rotation	humerus or femur
	supination/pronation	forearm turns thumbs laterally/medially (forearm crosses)

Special movements: (p 276)

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

SYNOVIAL JOINT TYPES: (p 278)

nonaxial	**gliding**	movement in any direction: vertebra, intercarpal and -tarsal
uniaxial	**ginglymus**	(Gk:hinge) or hinge 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

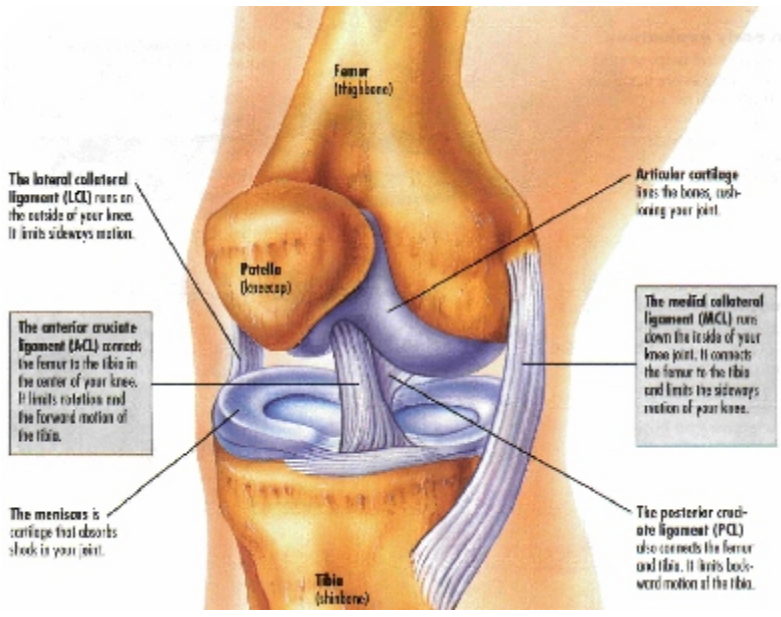
LIGAMENTS IN SELECTED JOINTS:

Shoulder: loosely constructed, protected by coracoid and acromion processes. Support: **labrum**, ext'n of art. cartil.
(p 281) **articular capsule** attached to rim of glenoid fossa, extends to anatomical neck
coracohumeral ligament: to greater tubercle
glenohumeral ligament:
tendon of long head of biceps brachii: Passes thru **intertubercular groove** , holds humerus in place

Hip: capsule strengthened
(P 284)

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 285) largest weight bearing surface of body.
classified as hinge, but has structure of condyloid...
menisci stabilize

strengthened:

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