

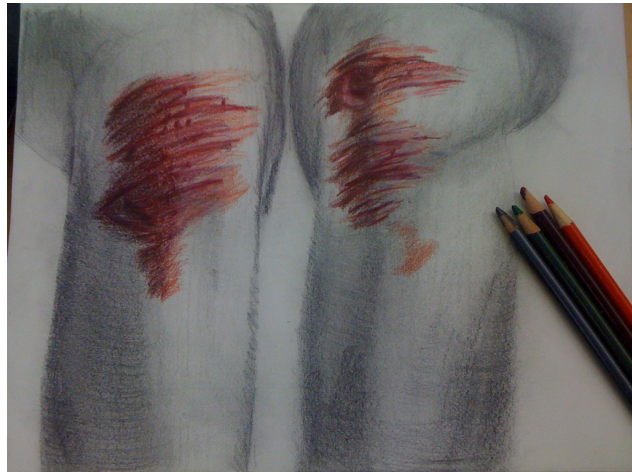
ANATOMY & PHYSIOLOGY APPLIED TO HATHA YOGA



**INTERMEDIATE HATHA YOGA TEACHER TRAINING
LETÍCIA PADMASRI , M.A., E-RYT 500, C-IAYT, YACEP**

1

THE KNEE



2

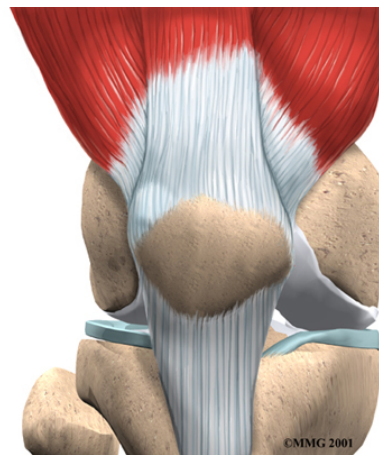
THE BONES



3

PATELLA

- Sesamoid bone
- Stabilizes knee in flexion
- Shields the knee



4



5

THE CAPSULE

- Sleeve like, thick
- Fluid filled

BACK OF KNEE

femur

capsule

lateral (fibular) collateral outside of capsule

arcuate ligament

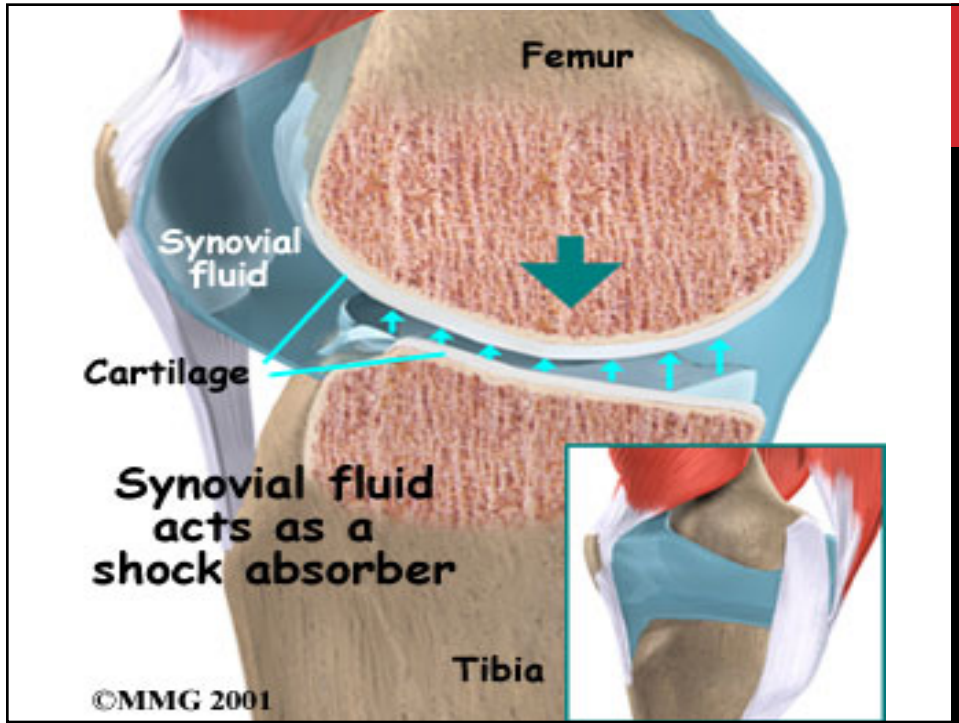
popliteo-fibular ligament

popliteus tendon entering capsule

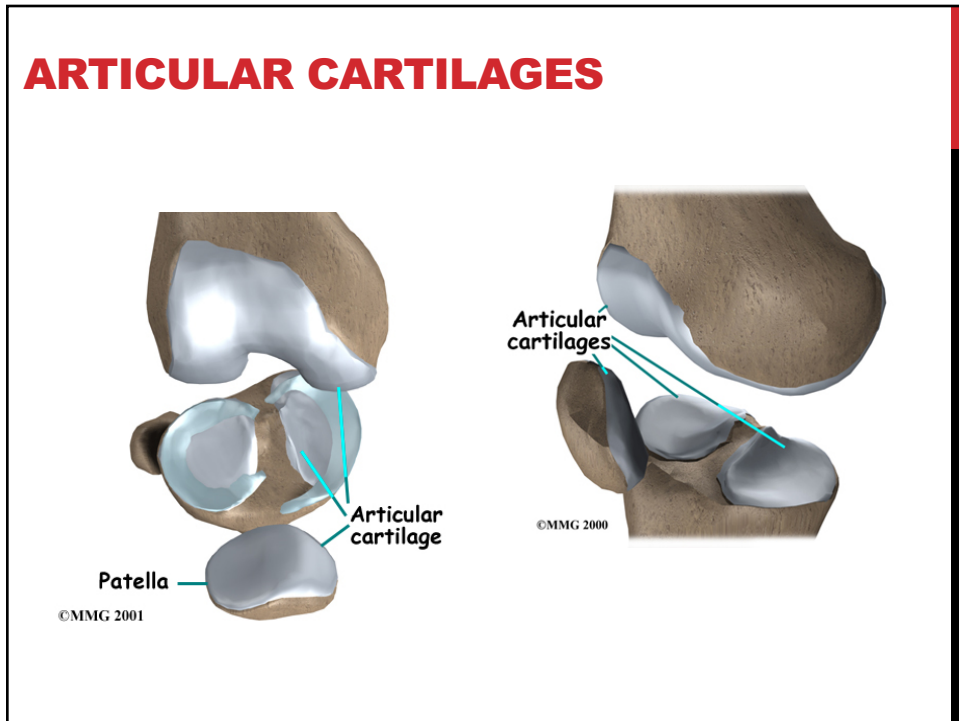
tibia

fibula

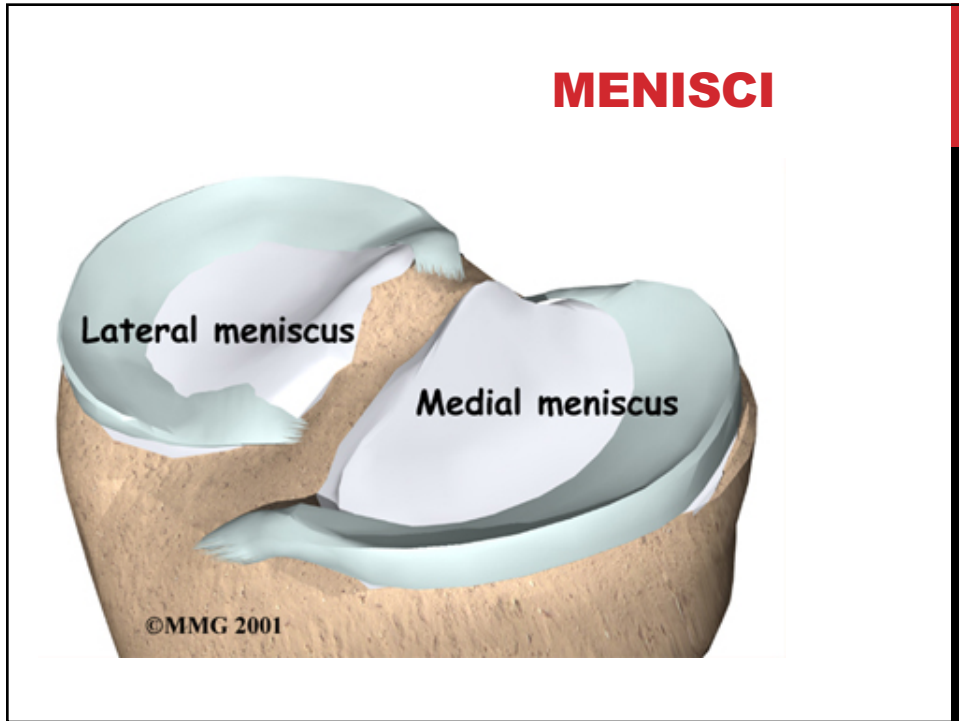
6



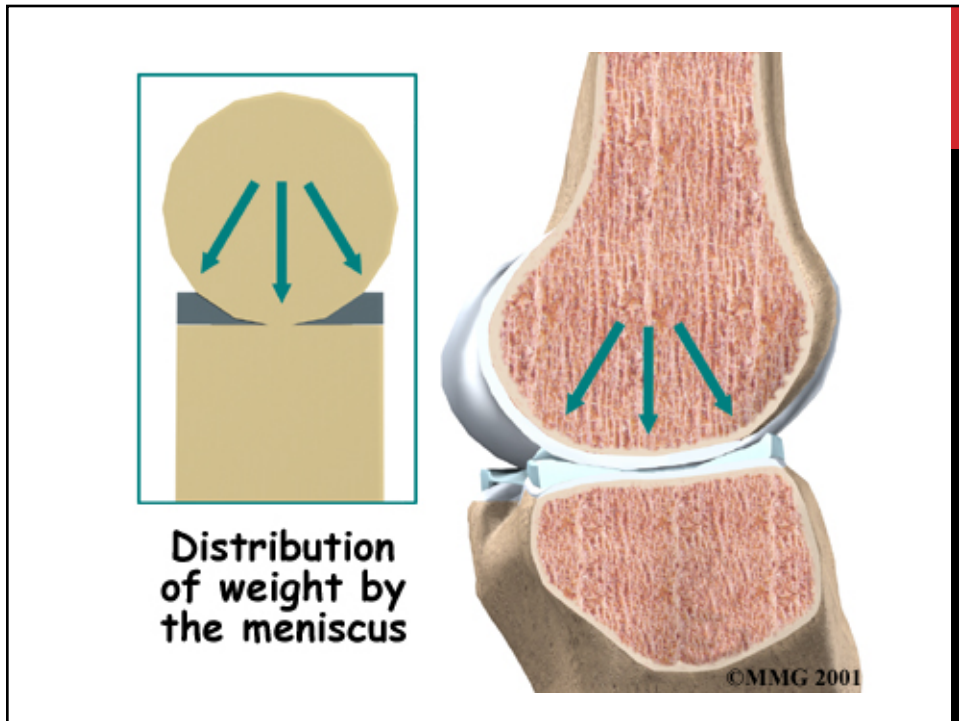
7



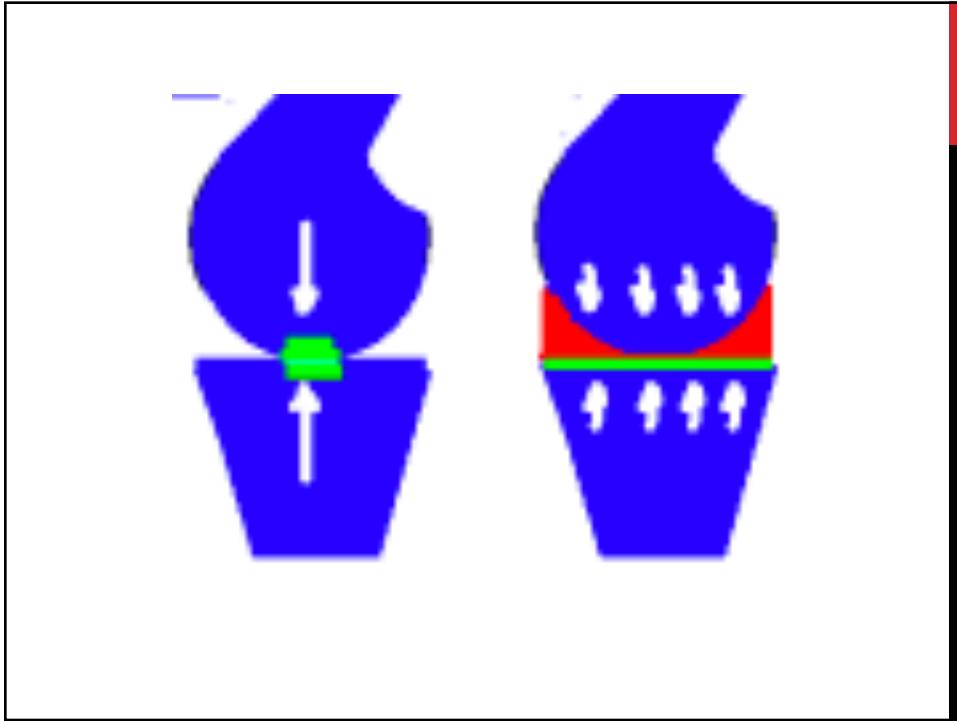
8



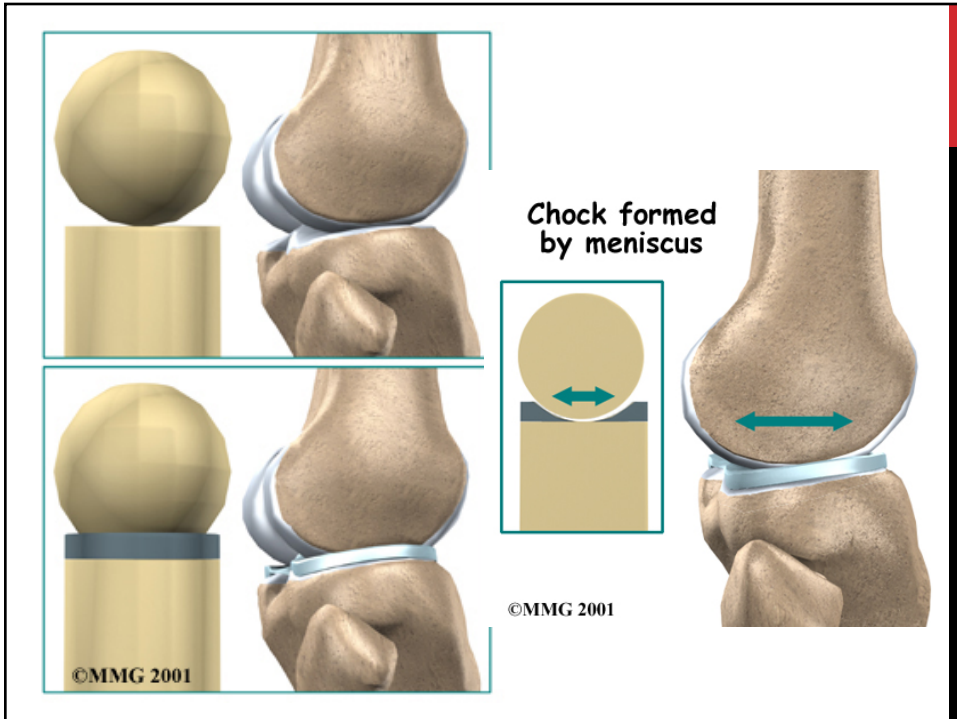
9



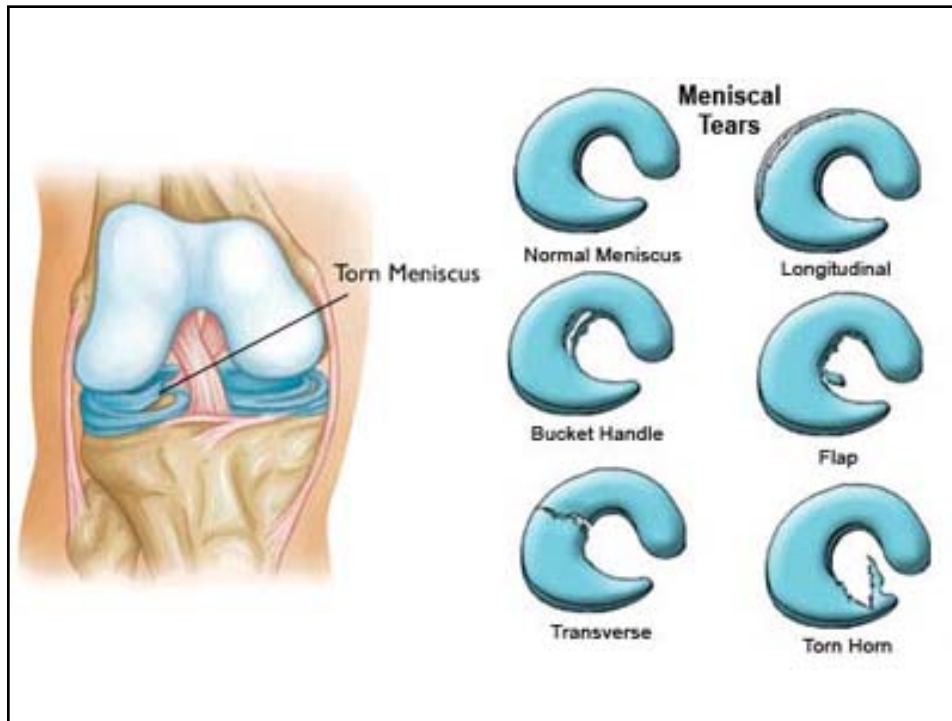
10



11



12

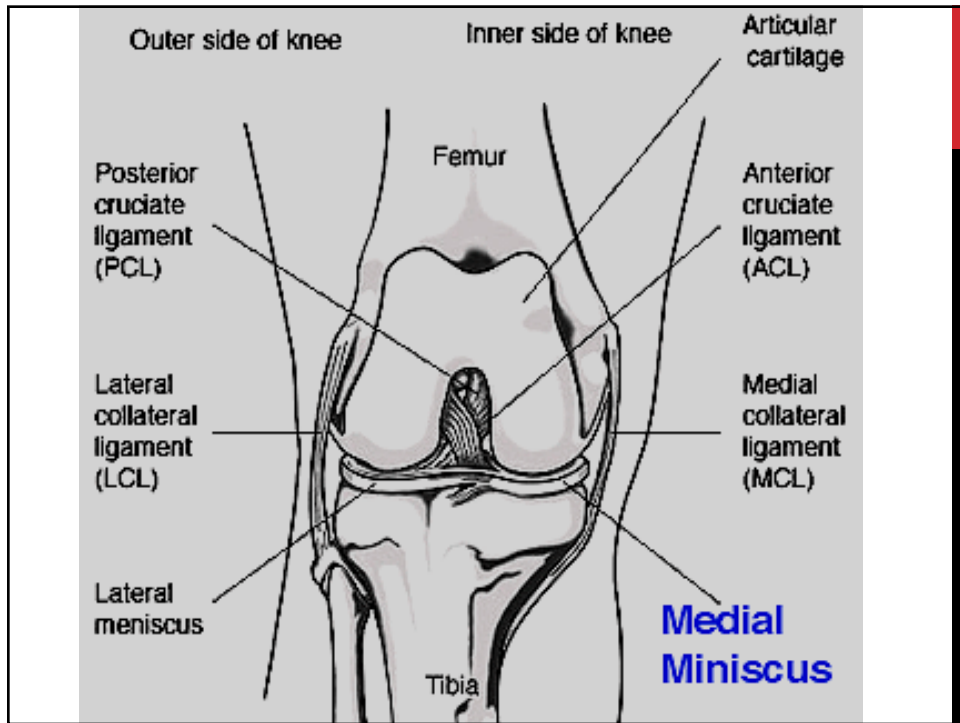


13

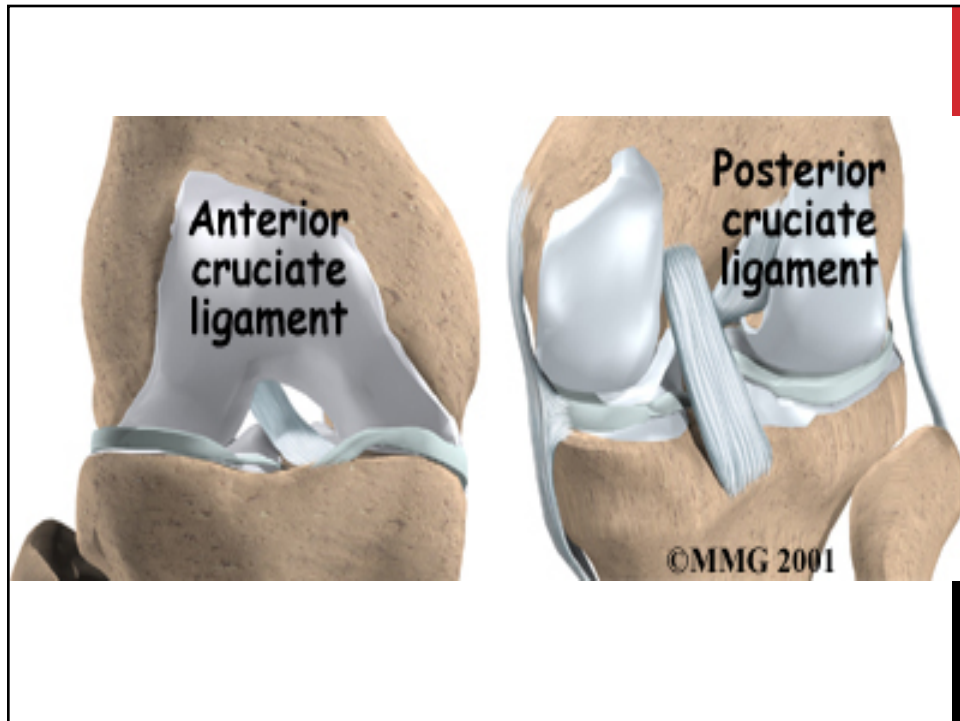
LIGAMENTS

- Lateral and medial collateral, prevent movement from side to side
- Cruciate, anterior and posterior. Prevent movement from back to front

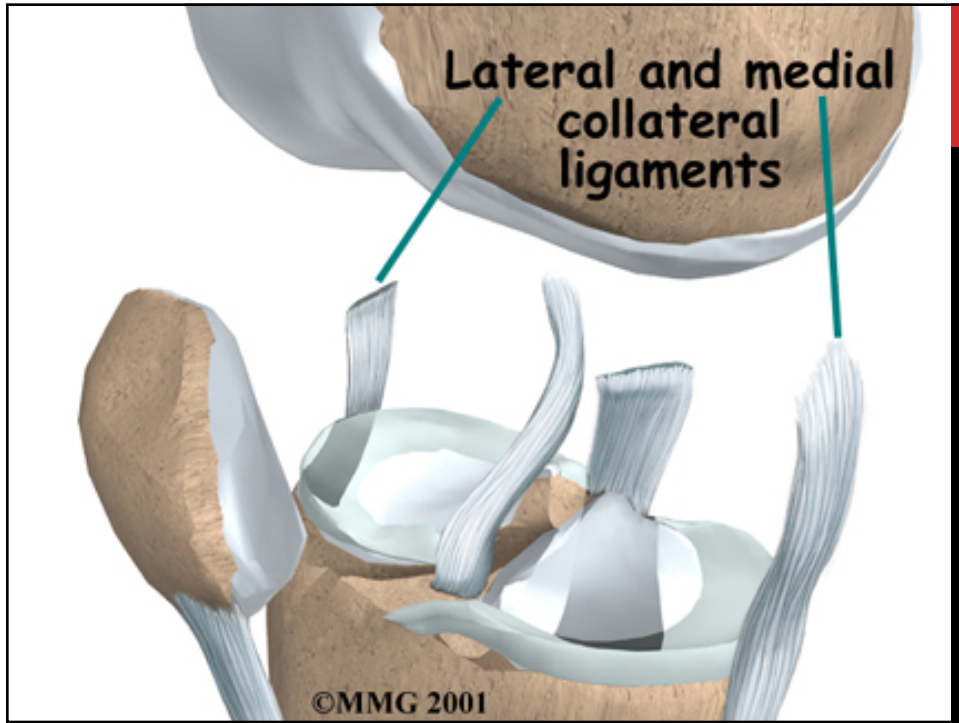
14



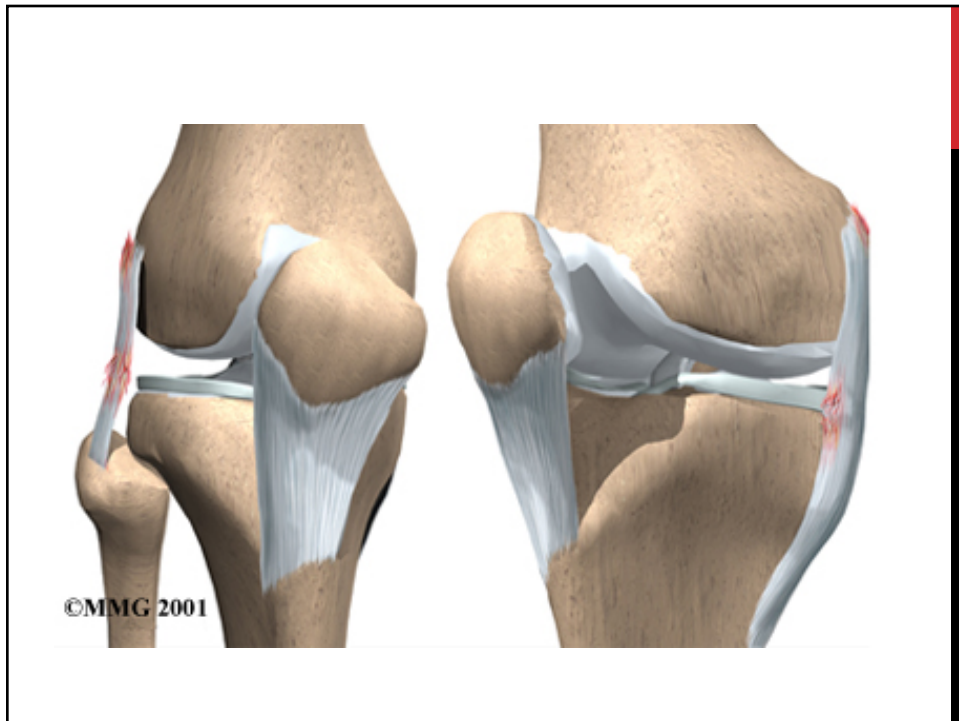
15



16



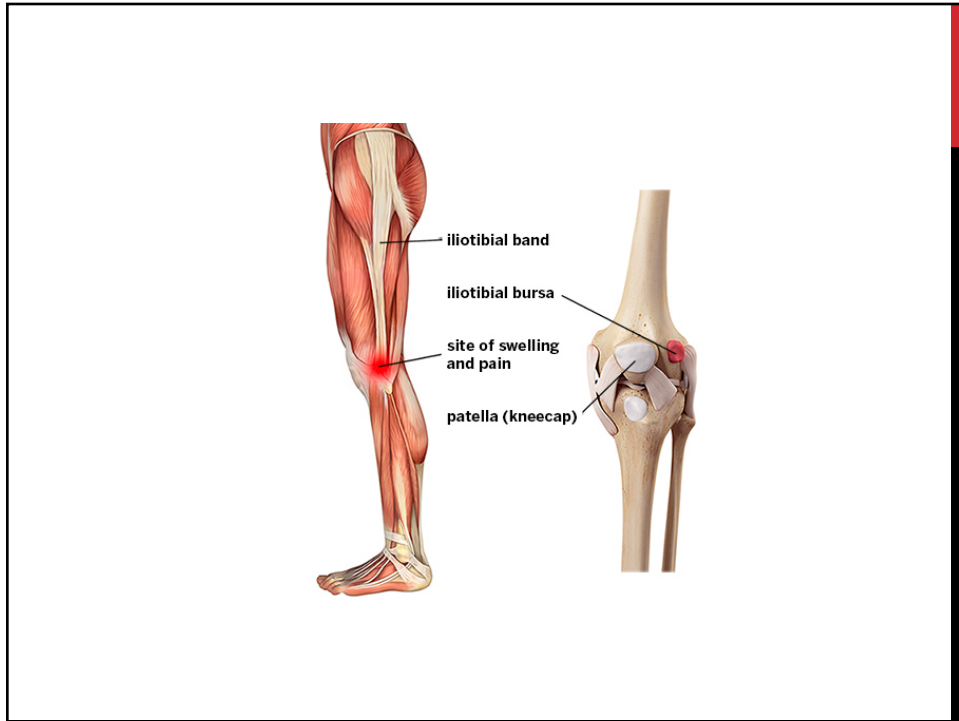
17



18



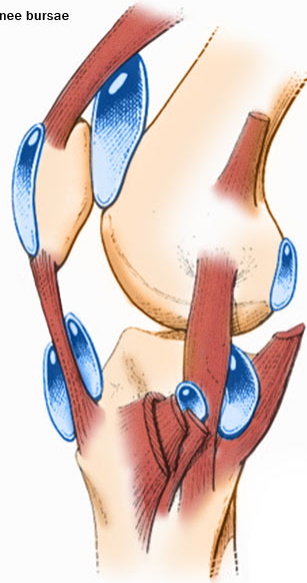
19



20

BURSA

Knee bursae



© Mayo Foundation for Medical Education and Research. All rights reserved.

21

REVIEW: Knees Movements



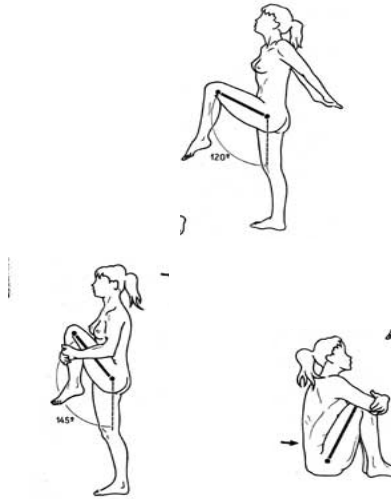
ADD: Muscles involved

22

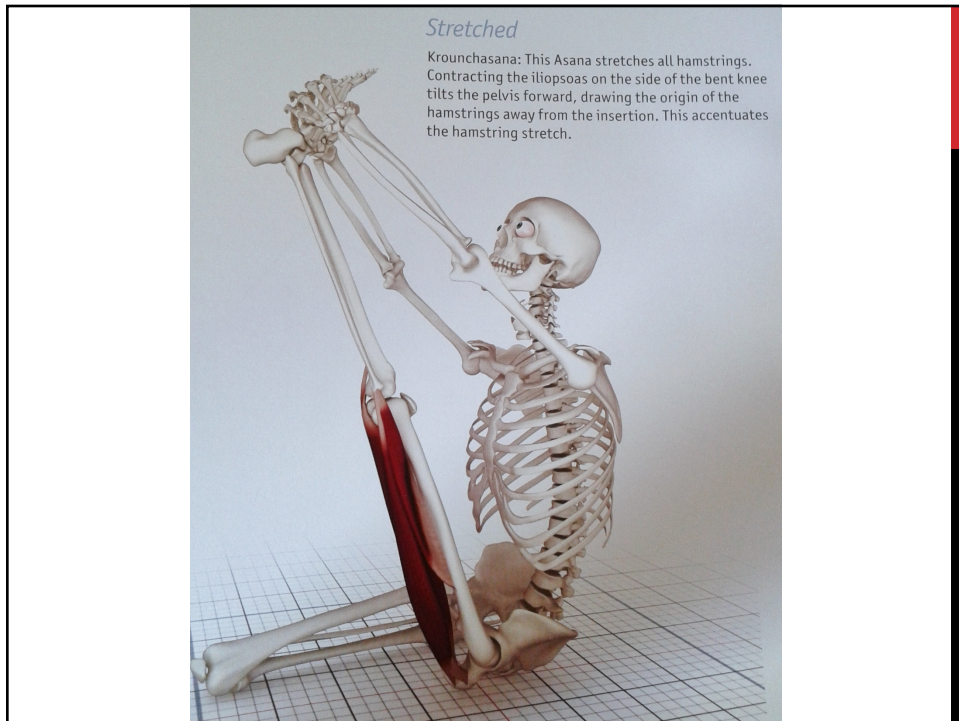
MUSCLES

Prime movers of flexion:

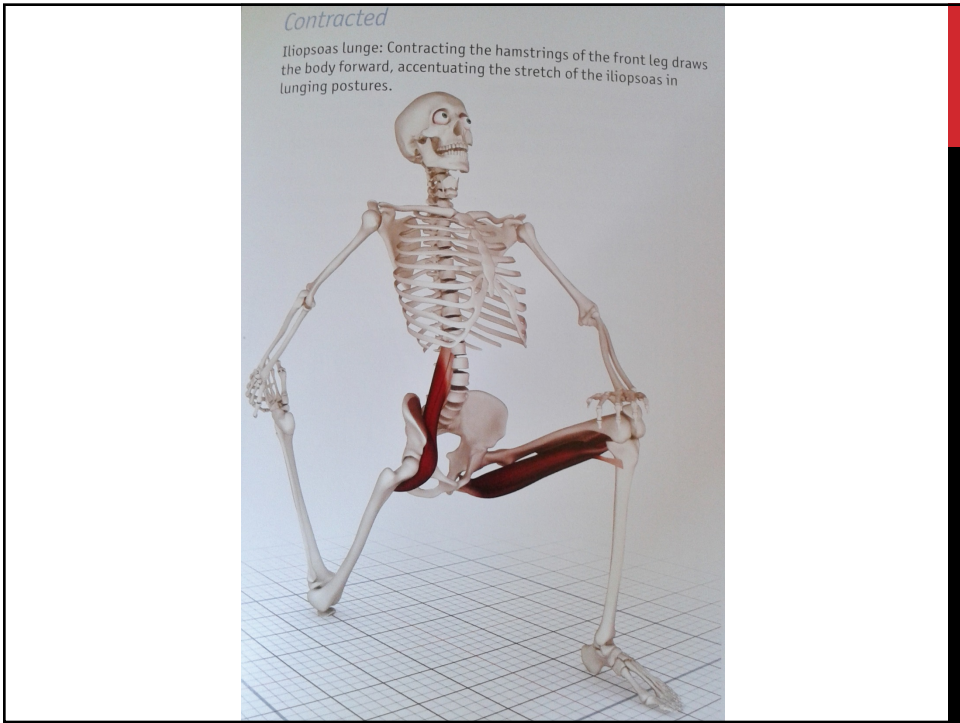
- Hamstrings:
Biceps femoris,
semitendinosus &
semimembranosus



23



24



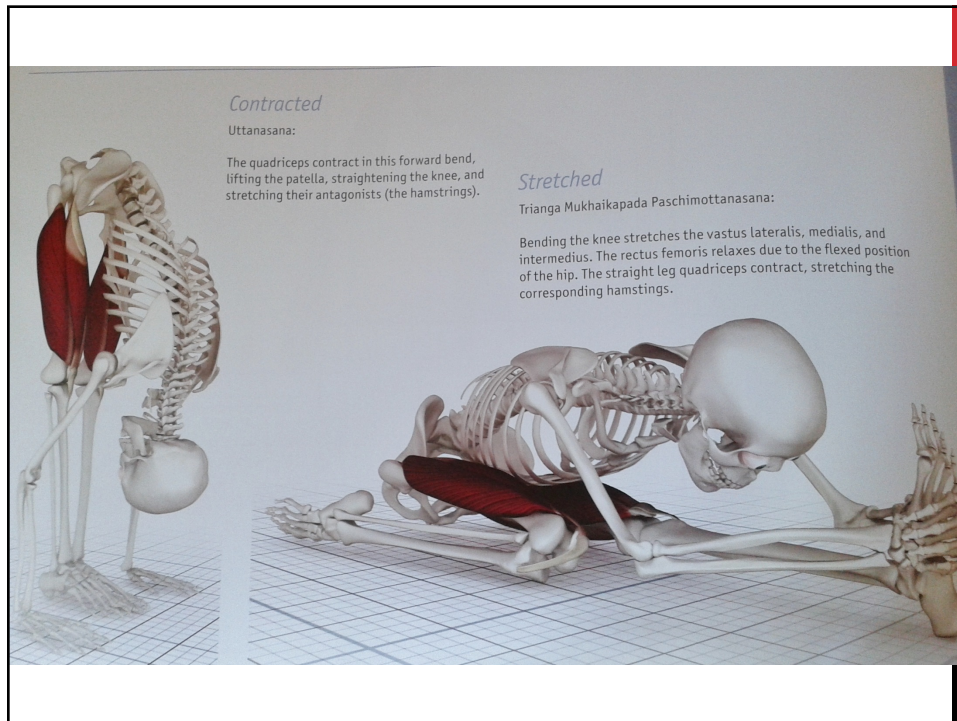
25

MUSCLES

Prime movers of extension:

- Quadriceps:
Rectus femoris, vastus medialis, vastus lateralis, and vastus intermedius

26



27

MUSCLES

Prime movers of external rotation:

- Biceps Femoris

Prime movers of internal rotation:

- Semitendinosus, Semimembranosus, gracilis, sartorius, & popliteus.

Rotation happens with the knee in flexion!

28

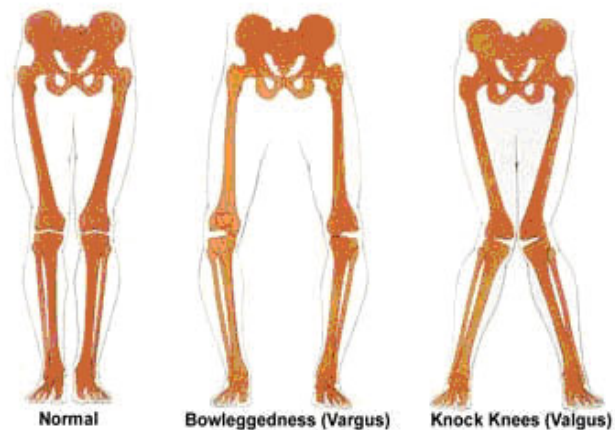
STABILITY

- Shape of the condyles and menisci in combination with passive supporting structures, the 4 major ligaments
- Posteromedial and posterolateral capsular components and the iliotibial tract.
- The muscles acting over the joint provide secondary dynamic stability.

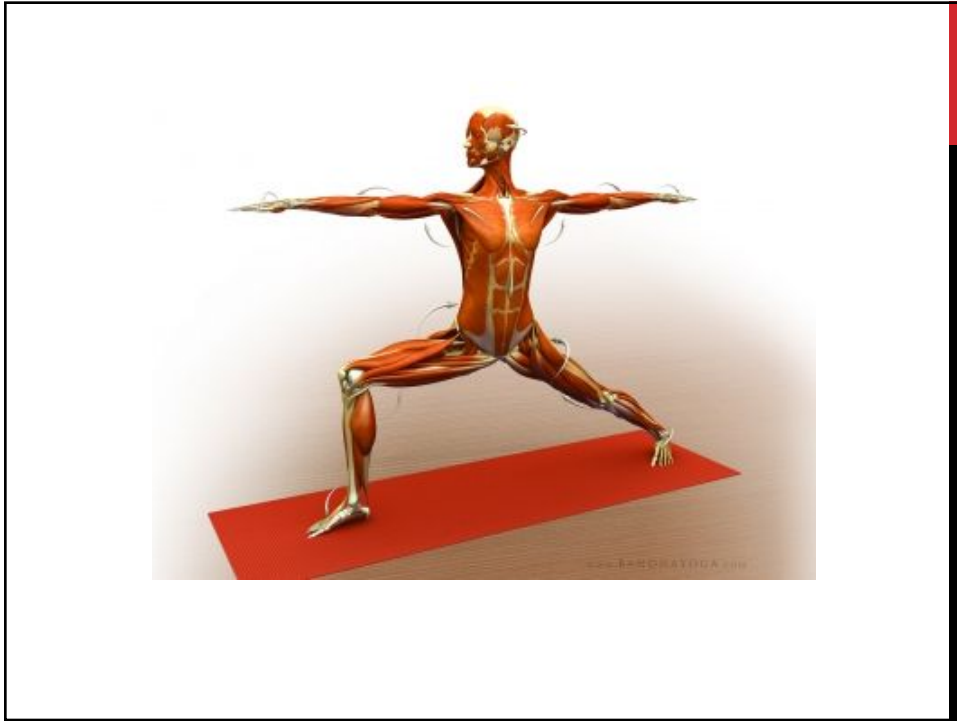
29

ALIGNMENT

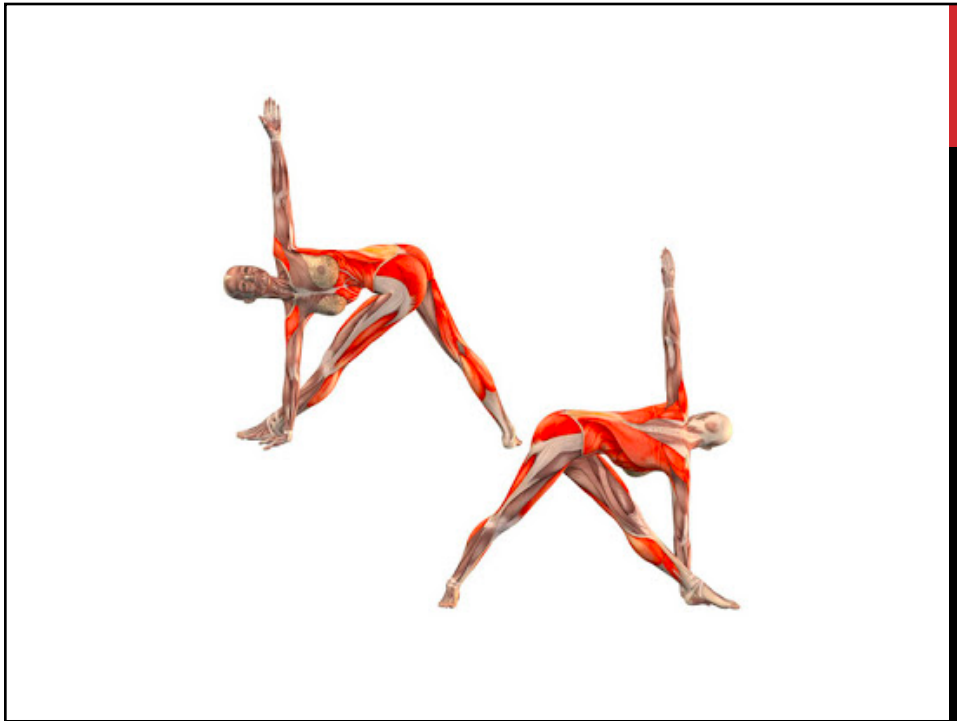
Bodies vary greatly!



30

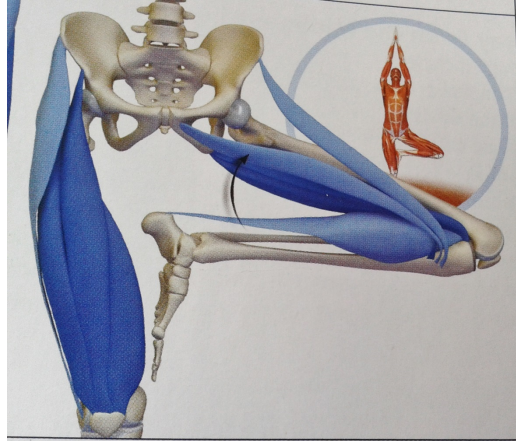


31

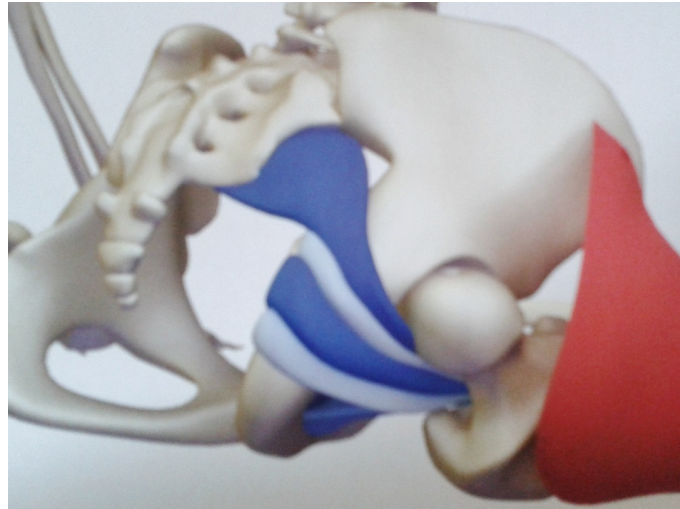


32

HIP & KNEE



33



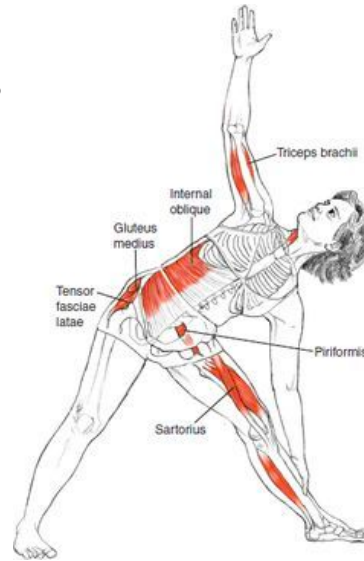
34

GUIDELINES FOR SAFE PRACTICE:

- Point your knees and toes in the same direction.

*exceptions

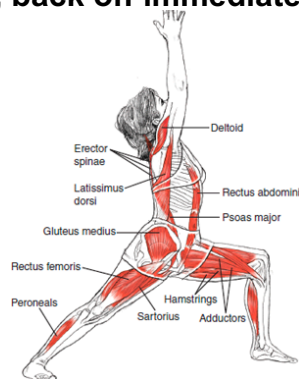
- Avoid hyperextending the knee. How?



35

GUIDELINES FOR SAFE PRACTICE:

- Keep your shin vertical when the hips are in line with or higher than the bent knee.
- Balance your hamstrings and quadriceps.
- When you practice asana, if you feel any discomfort in your knee joint, back off immediately.



36

LOKAH SAMASTAH SUKHINO BHAVANTU



LETÍCIA PADMASRI , M.A., E-RYT 500,C-IAYT, YACEP

WWW.PADMASRI.YOGA

***PLEASE DO NOT DISTRIBUTE OR REPRODUCE.
THANK YOU.
OM SHANTI***