**CHECKLIST FOR PHYSICAL EXAMINATION OF THE KNEE**

*This handout is for use as a "rough" guide and study aid. Your instructor may perform certain maneuvers differently than depicted here. I acknowledge that this may be frustrating, but please try to be understanding of this inter-examination variability.*

A. Inspection (leg should be exposed to mid thigh)
1) Standing - alignment, foot structure, hip/pelvis
2) Gait - observe (e.g. is there a limp?)
3) Supine patient - effusion/swelling, erythema, quadriceps musculature (e.g. atrophy?)

- **Genu Varum**
- **Genu Valgum**
- **Genu Recurvatum**

"Bowlegged"  "Knock Kneed"  

Foot Structure

- **Pes Planus** "flat foot"

Pelvic Obliquity

Medial Joint Line

45 cm

41 cm

(updated 01/05/98)
B. Palpation

1) Student should indicate that these were checked
   a) Warmth
   b) Crepitus (What is it? What might it represent?)
   c) Effusion

Test for effusion - Fluid wave

Test for effusion - Ballotable patella
2) Tenderness (Landmarks) - Medial/lateral joint lines, MCL, LCL, patellar facets, quadriceps insertion, patellar tendon, tibial tubercle, iliotibial band, pes anserine

(Patient is supine with the knee flexed to a comfortable position = 20° - 90°)

Anatomy of the knee joint (right)
(antomedial aspect)
Points of orientation for palpation of the knee

(Always start with the distal pole of patella.)

then . . .
The patellar tendon is palpated toward its insertion at the tibial tubercle.

"Pes Anserine"
Insertion of the sartorius, gracilis, and semitendinosus tendons.
The lateral collateral ligament

(Don't do this in acutely injured knee.)

(KEYPOINT - find fibular head.)

Palpation of the medial collateral ligament
C. Range of Motion

1) Hip (student only has to demonstrate passive) Flexion, Internal Rotation, External Rotation (compare to other side)

(Remember: hip pathology can refer pain to the knee)
2) Knee Flexion, Extension (Active, Passive — know the difference)

3) Hamstring Flexibility

Assessment for hamstring tightness
(compare to other side)
D. Manual Muscle Testing/Neurovascular Exam

1) Knee Extension (MMT of Quadriceps)  
2) Distal Neurovascular - pulses, gross sensation, capillary refill (verbalize that these were checked)

E. Special Tests

1) Patellar Examination  
   a) "Q-Angle" (Verbalize landmarks) (FYI)  
   b) Patellar tethering/compression/grind*  
   c) Apprehension*  
   d) Patellar glide, tilt*

*Be able to demonstrate

(b) The patello femoral grind (tether, compression) test, to evaluate for patello-femoral pain

Knee flexed » 20°-30°
(c) Apprehension sign

Apprehension sign:
Patient anxiety due to awareness of unpleasantness associated with patellar dislocation/instability.

(d) patellar glide, tilt
2. Ligamentous Testing

a) Anterior cruciate ligament - Lachman
b) Posterior cruciate ligament - posterior drawer
  c) Medial collateral ligament - Valgus stress at 30°
  d) Lateral collateral ligament - Varus stress at 30°

\{ compare both knees \}

(a) Lachman test for anterior cruciate instability is at 20° of flexion.

(b) Posterior Drawer for posterior cruciate instability at 80° to 90° of flexion.
(c) Valgus Stress testing: Medial Structures (MCL)  
(b) Varus Stress testing: Lateral Structures (LCL)  

(Choose a technique that you feel most comfortable with.)
3. Meniscal Examination

   a) Joint line tenderness (demonstrate palpation of the joint lines)
   b) McMurray's - be able to demonstrate
      (What is the sensitivity and specificity of this maneuver?)

   McMurray's Test

   Lateral joint line
   Internal rotation of tibia

   External rotation of tibia
   Medial joint line

   **Flex the knee fully, with the fingers in joint line.**

   The lower leg (tib-fib) should be externally rotated when testing for medial meniscus tear, and internally rotated when testing for lateral meniscus tear. A distinct "pop" or "clunk" felt in the joint line is suggestive of a meniscus tear.

   *If you don't get full flexion at the knee and you don't get your fingers in joint line you can't do a good McMurray's Test.*