

Patellofemoral Joint: *Superior Glide of the Patella*

Purpose: To increase knee extension.

Precautions: Do not compress the patella against the femoral condyles.
Do not force the knee into hyperextension while doing the mobilization.

Note: *Medial and lateral glides can also be performed.*

Hand Placement: Proximal hand grasps the superior margin of the patella; inferior hand grasps the apex of the patella.

Position: Knee is in extension.

Stabilize: Knee is stable in the extended position.

Mobilize: The inferior hand mobilizes patella superiorly while the superior hand guides the mobilization.

Helpful suggestions: Use a “soft hand” while doing the mobilization.

To perform the medial glide, use your index fingers to move the patella medially.

To perform the lateral glide, use your thumbs to move the patella laterally.



Proximal Tibiofibular Joint: *Posterior Glide of the Fibula*

Purpose: To increase mobility in posterior glide, and to decrease pain in the joint. To reduce ventral or anterior positional fault.

Precautions: Do not apply digital pressure at the neck of the fibula as the common peroneal nerve may be compromised.

Hand Placement:

Position: Patient/client supine with knee flexed. Stabilize their foot with your knee (as shown).

Stabilize: Proximal tibia with your hand on its medial aspect.

Mobilize: Proximal fibula in the dorsal direction with the palm of your hand.

Helpful suggestions: Keep head of the fibula in the centre of the palm and use your body weight by leaning forward during the mobilization. Ensure the foot is protected by foam block (or alternate) during the stabilization.



Proximal Tibiofibular Joint: *Anterior Glide of the Fibula*

Purpose: To increase mobility in anterior or ventral glide, and to decrease pain in the joint. To reduce posterior or dorsal positional fault.

Precautions: Do not apply digital pressure at the neck of the fibula as the common peroneal nerve may be compromised.

Hand Placement: Outside hand is placed with the palm cupping the head of the fibula while the other hand stabilizes the tibia.

Stabilize: Proximal and distal tibia with hand on the medial aspect of the tibia and the foot supported by your shoulder.

Mobilize: Proximal fibula in the anterior direction with the use of your fingers pulling the fibula anteriorly.

Helpful suggestions: Squeeze with your fingers on the fibula to perform the mobilization.



Chapter Six
Knee Joint Complex
Self Quiz

Match the mobilization technique with the most appropriate restoration of movement.

- | | |
|--------------------------------------|----------------------------------|
| 1. flexion | a. inferior glide of the patella |
| 2. extension | b. posterior glide of the tibia |
| 3. terminal extension | c. anterior glide of the tibia |
| 4. flexion *wrt patellofemoral joint | d. lateral spin |

5. What is the capsular pattern of restriction of the tibiofemoral joint?

6. What is the closed packed position of the tibiofemoral joint?

7. List the degrees of active range of motion for the knee joint complex.

flexion _____ extension _____

medial rotation _____ lateral rotation _____

8. What is the resting position for the tibiofemoral joint?

9. The tibiofemoral joint is what type of joint?

* wrt = with respect to

These cases are intended to invite discussion of differential diagnosis and management plans. Also to discuss the appropriate use of manual modalities with particular attention to corrective and non-corrective grades of mobilization.

The cases are loosely based on actual cases.

Case Studies for Knee Complex:

Case One:

A 17-year-old female was wrestling with her younger brother. During wrestling she twisted her right knee causing a rupture of the anterior cruciate, medial collateral ligament and a tear of the medial meniscus (Terrible Triad). Surgery was performed to stabilize the knee and the leg was cast for 6 weeks. She comes to you with reduced range of motion especially in flexion. There is no terminal extension and lack of lateral rotation of the tibia.

Case Two:

A 16-year-old male high school basketball player is experiencing right lateral knee pain usually in the 3rd quarter of play and continues to intensify in the 4th quarter.

During examination you note the patella is tilted and deviated laterally. There is no evidence of any marked swelling or tenderness of the bursae of the knee.

Case Three:

A 55-year old police officer is experiencing pain in both knees during activities like climbing stairs and squatting. He reports pain and stiffness in the morning in both knees. Radiographs showed diminished joint space however no osteophytic lipping. He is planning on retiring in ten years and is looking to finish his career without knee replacements.