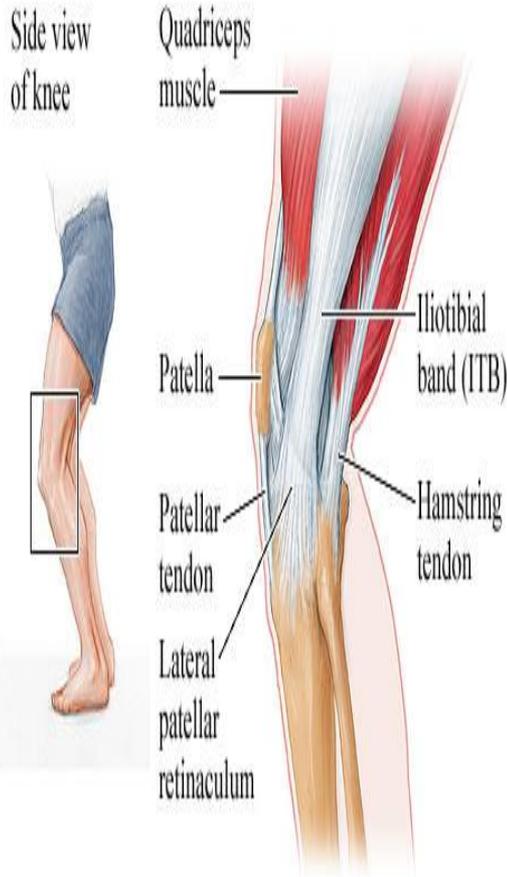


PATELLOFEMORAL TRACKING AND MCCONNELL TAPING

Minni Titicula

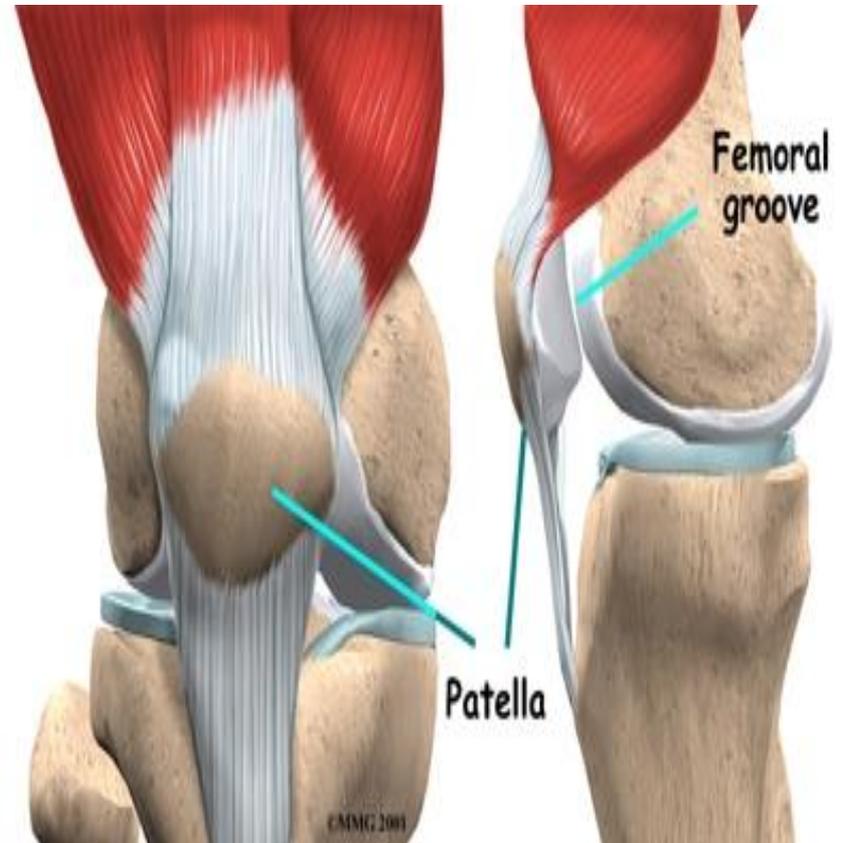
PF tracking disorder



- ❑ PF tracking disorder occurs when patella shifts out of the femoral groove during joint motion.
- ❑ most common in the US.
- ❑ affects women than men
- ❑ most frequent in adolescents and young athletes.
- ❑ PF tracking can be diagnosed by a physician, X-ray, MRI and by CT scan

Patellar tracking Disorder

- Shallow femoral groove due to deformity of the knee
- Weak VMO
- Imbalance in the contraction of the Quad muscles
- Trauma
- Laxity of the ligaments
- Excess weight
- Overuse
- Q-angle(Genu Valgum)



Quadriceps Angle

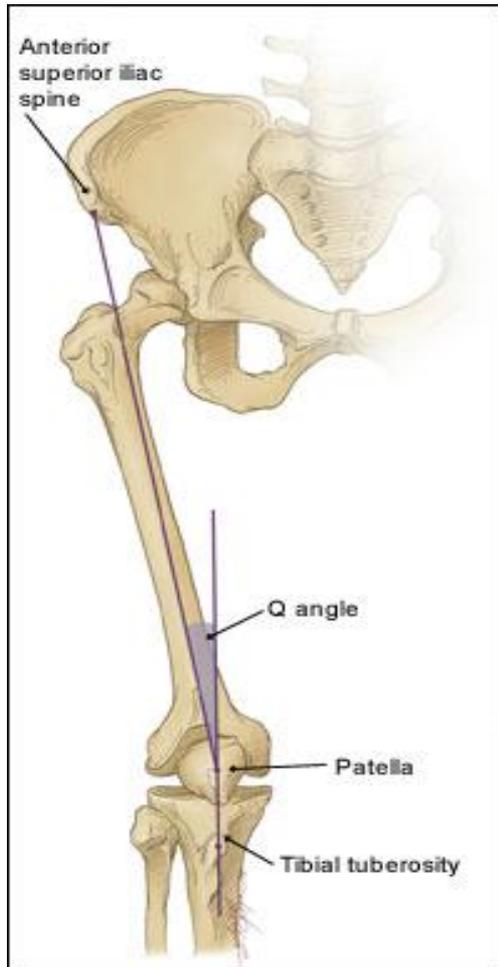


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- ❑ Q-angle is an angle between ASIS and Tibial Tuberosity.
- ❑ Normal 10-20 degrees
- ❑ A high Q-angle causes the quadriceps to pull on the patella and leads to patellar tracking which is a predisposing factor for pain.

Symptoms

- Pain exacerbates when walking, squatting, kneeling, running, or even sitting.
- Swelling of the knee
- A grinding or popping sensation
- “Knee buckling” occurs when knee cannot bear weight



Interventions

- Surgery
 - repeated patellar subluxation
 - damaged articular cartilage
 - knee joint deformity
- Pharmacology -NSAIDs and ice
- Physical Therapy- Knee brace
- - LEFS can be administered to the patient
 - Taping
 - Strengthening exercises for quads

If left untreated this disorder can lead to Chondromalacia or Osteoarthritis(OA)

Physical therapy



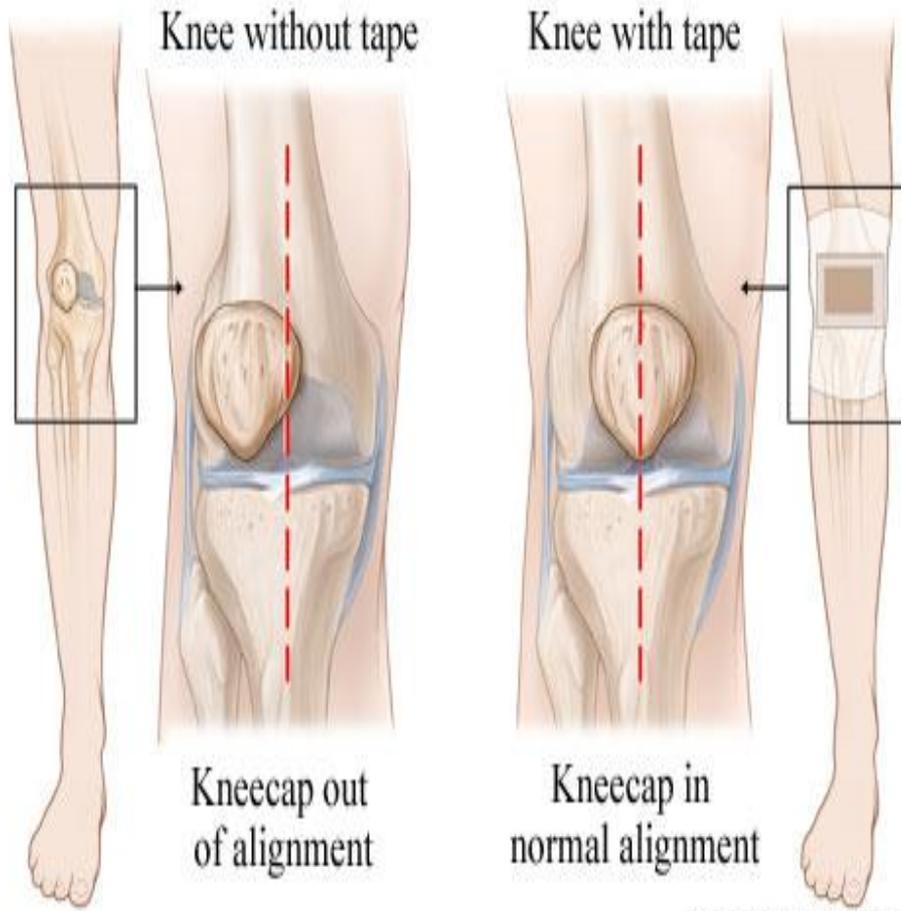
- As a conservative treatment our primary goals for rehabilitation will be to reduce pain, re-establish motion, strengthen, and stabilize the joint.

McConnell Taping

- McConnell tape was invented by Jenny McConnell, a PT from Australia, who used taping to help patients with patellar tracking and was effective in reducing the pain.
- McConnell Tape is a rigid, highly adhesive tape that is applied for upto 18 hours or less depending on patient's comfort.
- McConnell taping is applied after warm up and before strengthening exercises.



Patellar tracking



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- By centering the patella within the femoral groove, the force is distributed across a larger surface area and stress on the articular cartilage is decreased.
- The primary goal of taping is to position patella and reduce pain.

McConnell Taping

- ❑ It is most commonly used for patellofemoral syndrome, shoulder subluxation, lumbar, foot, and hip impingement.
- ❑ According to a randomized study it was found that McConnell taping plus physical therapy was no better than physical therapy alone. Still, when applied correctly on selected patients, taping reduced pain.
- ❑ <http://www.youtube.com/watch?v=sMJBHBiZjCs>

Benefits of taping



- ❑ Decreases pain during activity
- ❑ Aids in healing certain knee injuries
- ❑ Corrects patellar alignment
- ❑ Allows an earlier return to activity following injury
- ❑ Prevents dislocation of the patella
- ❑ Improves activation of the VMO muscle

Exercises

Quadriceps strengthening is most recommended because they play a significant role in patellar movement. Hip, hamstring, and IT band stretching are also important.

Strengthening -Isometric Quadriceps exercises

- Straight leg raises

- Wall squats with a ball

Flexibility –Quad Stretch

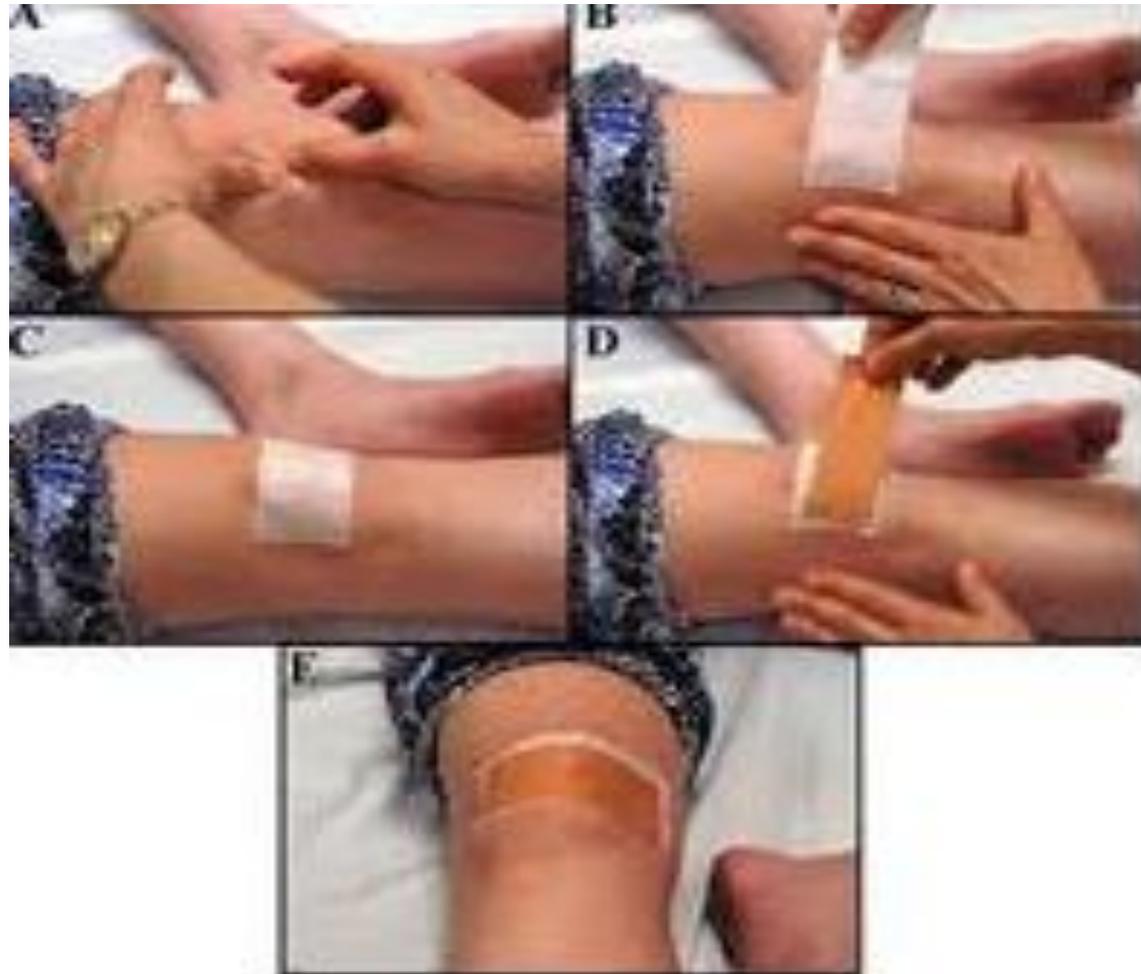
- Hamstring stretch

- Gastrocnemius/Solius stretch

Swimming and bike riding are also recommended.

Taping Technique

1. Clean the area with alcohol swab
2. Palpate the Patella
3. Apply cover roll
4. Apply McConnell tape



Test your knowledge

Tracking disorder of the Patella occurs due to

- a) Knee deformity
- b) Weak Quad muscles
- c) High Q-angle
- d) All of the above

Why do women tend to have this tracking disorder?

What is the main goal for taping?

- a) to position patella in the femoral groove
- b) to reduce pain
- c) to increase patellar tracking
- d) a and b

When do we apply McConnell tape on the patient?

- a) During activity
- b) after activity
- c) before activity

Ignoring the symptoms of a PF tracking disorder can have severe long-term effects such as _____

Reference

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Thank you

