

## Patellofemoral Pain Syndrome

**What is patellofemoral pain syndrome?** PFS, also known as “runner’s knee” is a common cause of knee pain particularly among adolescents and young adults.

**Description:** The patella (knee cap) lies in a groove on the front of the femur (thigh bone). When we walk or run, the patella glides up and down in this groove. With PFS, the patella usually does not track properly in this groove. This causes the cartilage on the groove to rub abnormally against each other, producing knee pain.

### Symptoms:

1. Pain near the knee cap and below it
2. Possible grinding sensation with knee motion
3. Pain with prolonged sitting, squatting, or stairs
4. Direct pressure on patella may reproduce pain

### Causes:

1. Overuse/overload; repeated bending of the knee or other weight bearing activities may increase the pressure between the patella and femur, irritating the undersurface of the patella. This may result in degenerative changes in the articular cartilage.
2. Sports such as running or bicycling may increase the risk of PFS.
3. Muscles imbalances:
  - a. If there is tightness in the outer quadriceps and weakness in the inner quadriceps, this can pull on the patella, causing it to track poorly in the groove.
4. Alignment problems:
  - a. Factors such as an increase angle between the femur and tibia (an increased Q angle), flat feet or knock-knees can cause PFS.



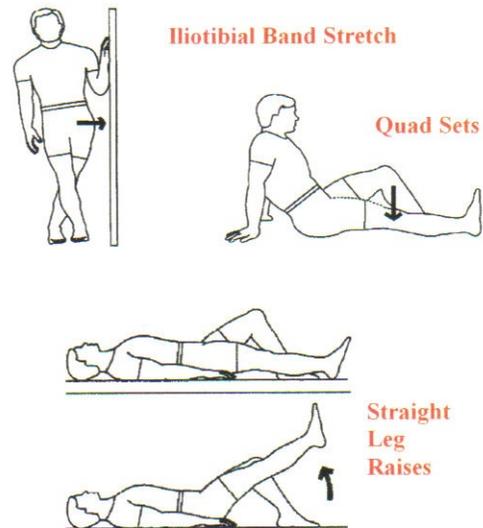
\*Q\* Angle  
(Patella  
Malalignment)

## Treatment

1. Avoid any activity that aggravates the pain
2. With severe pain, apply ice for 20 minutes to painful site.
3. A stretching program for the quadriceps, hamstrings and iliotibial band is important.
4. Physical therapy: A physical therapist can show you the proper exercises to stretch and strengthen the surrounding muscles

## Exercises

(These are sample exercises your physical therapist may suggest)



Alpha Physical Therapy, Inc.  
1681 Cranston Street, Suite A  
Cranston, RI 02920  
(401) 223-0230