

Patellofemoral Pain Syndrome

(A.k.a. retropatellar/peripatellar pn. or chondromalacia)

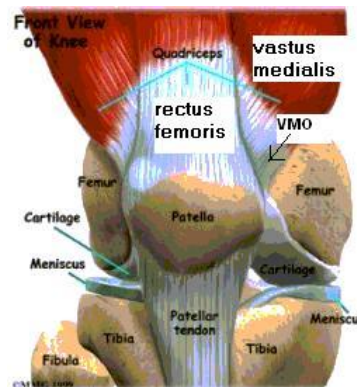
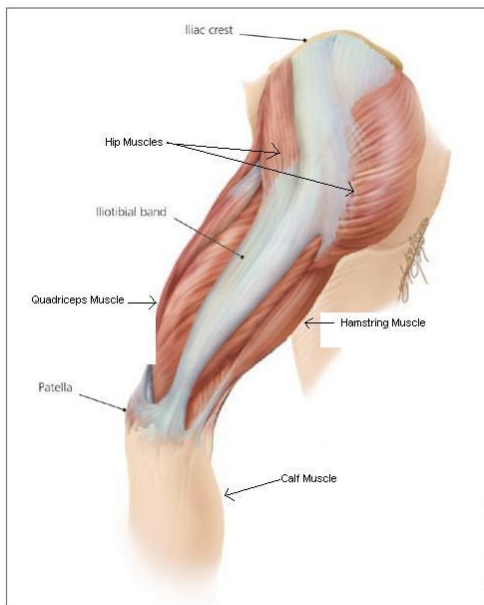
MEDICAL TERMS:

- patella = knee cap
- etiology = cause
- lateral = outside (farthest from center)
- medial = inside (closest to center)
- quadriceps = your thigh muscles (on the front side of thigh)
- hamstrings = your muscles on the back of your thigh
- IT band = iliotibial band, runs from your knee to your hip on the lateral side of thigh
- VMO = where the quad muscle comes in contact with the knee cap on the medial side
- McConnell tape = strong tape the helps to reposition knee caps & joints

WHAT CAUSES IT?:

The jury is out on to what exactly causes this, but some of the factors that are believed to be the main culprits are: overuse or repetitive weight-bearing activities, such as running, walking up & down steps or hills and uneven surfaces, arch variations – flat or high arches, wider hips & knock-knees (known as the Q angle), and weak quadriceps muscles.

ANATOMY:



SIGNS & SYMPTOMS:

- knee pain with activity or with prolonged sitting with your knees bent
- pain in the front of the knee

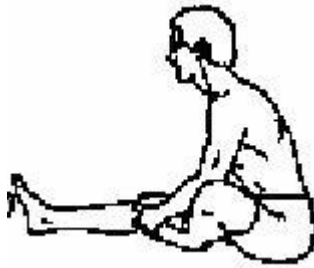
- pain while going up & down stairs or hills

TREATMENT:

- go & see your doctor first to rule out other problems
- rest your knee's as much as possible & decrease your activities to “non-pounding” activities (swimming, biking)
- ice after activity & when you have pain
- strengthen your quadriceps, with focus to the VMO
- stretch your hamstrings, IT band, calves, and hip muscles
- have your arches looked at to see if you need arch supports or better shoes
- taping the patella with McConnell tape

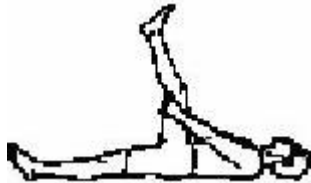
STRETCHING EXERCISES:

Seated Hamstring Stretch



With leg straight, tuck other foot near groin. Reach down until stretch is felt in back of thigh. Keep back straight. Hold for 30 seconds.

Lying Hamstring Stretch



Supporting thigh behind knee, slowly straighten knee until stretch is felt in back of thigh. Hold for 30 seconds.

Standing IT Band Stretch



Cross leg over the other, then lean to same side until stretch is felt on other hip. Hold for 20-30 seconds.

Seated Glute Stretch



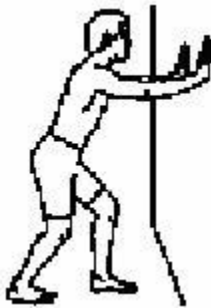
Cross leg over other thigh and place elbow over outside of knee. Gently stretch buttock muscles by pushing bent knee across body. Hold for 30 seconds.

Standing Calf (Gastrocnemius) Stretch – Back Knee Straight:



Stand with foot back, leg straight, forward leg bent. Keeping heel on floor, turned slightly out, lean into wall until stretch is felt in calf. Hold for 30 seconds.

Standing Calf (Soleus) Stretch – Back Knee Bent:



Stand with foot back, both knees bent. Keeping heel on floor, turned slightly out, lean into wall until stretch is felt in lower calf. Hold for 30 seconds.

STRENGTHENING EXERCISES:

Single Leg Balance:



Stand on one leg with you knee slightly bent. Slowly raise your other foot about 30 degrees, hold for 5 seconds and then slowly lower the foot and straighten both legs. Start with 10 repetitions and work up to 30. Don't let your pelvis tilt (be crooked), and don't let your knees turn inward during bending.

Terminal Knee Extension:



With knee over bolster, straighten knee by tightening muscles on top of thigh. Keep bottom of knee on bolster. Start with 10 repetitions and work up to 30.

Inside Leg Raises:



Cross top leg over the bottom leg by placing your foot on the floor just above the knee cap. Tighten the muscles in your lower leg & raise up using your inner thigh muscles. Hold for about 3 to 5 seconds and then slowly lower down. Start with 10 repetitions and work up to 30.

Squats with Ball Between Knees:



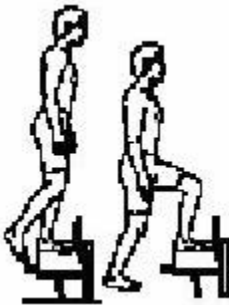
Stand with ball between knees. Squat with head up, reaching back with buttocks as if sitting down. Start with 10 repetitions and work up to 30.

Step Up's:



Stand with a step placed in front of you. Step onto step with right foot, and without pushing off with the ground foot. Finish with ground foot in touch balance on step.

Step Down's:



Stand on stair step or stool. Slowly bend right leg, lowering other foot to floor. Return by straightening front leg. Start with 10 repetitions, working up to 20.

Always consult your physician before beginning any exercise program. Remember this is just general information and may not apply to everyone. To find out if you have patellar pain syndrome and to get more information on how to care for it, make an appointment with your physician.