

Patellofemoral Pain Syndrome

the most common alignment problem in the patellofemoral joint. Remember the simple test you did earlier? If your pain worsened with pushing the kneecap to the outside, strengthening the VMO is especially likely to help you. As your VMO gets stronger, you can add some weight by hanging a shopping bag with some rocks or sand in it over your foot. 3 sets of 20 repetitions 3 times a week is a reasonable goal.

- **External Hip Rotator Strengthening** Find something about as wide as your shoulders to squeeze between your knees, like a rolled up Yoga mat or a small exercise ball. Stand with the mat or ball between your knees, and squeeze it as hard as you can. Now bend your knees a little (no more than half way to sitting down.) Work up to holding this position for a minute or two. If you don't have a ball or mat to squeeze, try "fire hydrants"- get on your hands and knees, raise your knee out to the side. Work up to 3 sets of 20 repetitions.
- **Fix Your Alignment** This is hard to do on your own, but having the correct footwear, or other small equipment adjustments, can be very helpful. A knowledgeable shoe salesperson can be a great asset. Similarly, for cyclists, a bike mechanic with special expertise in fitting is helpful. Coaches or trainers may be able to help athletes with taping or bracing, as well as adjust techniques to unload the patellofemoral joint.

WANT MORE INFORMATION? CHECK OUT THE WEB SITES & VIDEO LISTED BELOW...

- www.summitmedicalgroup.com/library/sports_health/patellofemoral_pain_syndrome_exercises/
- <http://familydoctor.org/familydoctor/en/diseases-conditions/patellofemoral-pain-syndrome/treatment.html>
- www.mikereinold.com/2011/05/simple-exercises-can-reduce-the-incidence-of-patellofemoral-pain-by-75.html (*this site features images of these simple exercises*)
- www.youtube.com/watch?v=GoisyYE6-wM

This report was compiled by Ammonoosuc Community Health Services, Inc. (ACHS) clinical staff for informational purposes, and does not replace any advice one might receive from a qualified health care provider.



Founded in 1975, Ammonoosuc Community Health Services is a nonprofit community health center offering a network of quality, affordable primary health services. Our programs promote and support the well-being of individuals and families by emphasizing preventive care and encouraging active participation in one's own health. ACHS serves 26 towns in northern Grafton and southern Coos counties and has sites located in Littleton, Franconia, Whitefield, Warren and Woodsville. We provide comprehensive services, regardless of one's ability to pay, to nearly 10,000 patients.

Information for a Healthy Life



Patellofemoral Pain Syndrome

*A common form of knee pain -
Learn how to identify the
problem and lessen the pain.*



**Ammonoosuc
Community Health Services, Inc.**

Patellofemoral Pain Syndrome

"I just started jogging and now my knees hurt."

"I sat through a movie, and couldn't straighten my knees when it was over."

"My new job has me on my feet 8 hours a day, my knees are killing me!"

WHAT IS PATELLOFEMORAL PAIN SYNDROME?

Patellofemoral pain syndrome, also known as PTFS, anterior knee pain, chondromalacia patellae and runners knee, is pain that comes from the joint between the kneecap (patella) and thigh bone (femur). This joint can be subject to more stress than any other joint in the body.



Symptoms can include pain in the front of the knee, pain under the knee cap, and stiffening after sitting a long time. The stress that causes the problem can come from many things: a sudden change or increase in activity, the alignment of the knee cap and balance of muscle acting on it, a change in your weight, or the way certain activities are performed.

HOW DO I KNOW IF I HAVE PTFS?

If you have some of the above symptoms, you can perform a simple test: sit on the edge of a chair and hold your leg out straight - does that hurt? Now bend the knee and extend it again, but this time, push down on your knee cap. Did that hurt more? If so, you probably have patellofemoral pain.

Repeat the test twice, once pushing your knee cap toward the inside, and once toward the outside - notice any effect on your pain. This gives you a hint as to whether or not the alignment of the kneecap is a part of your problem.

HOW DO I RELIEVE THE SYMPTOMS OF PTFS?

The simple answer is to figure out what you're doing that is overloading the joint, and stop doing it. This doesn't necessarily mean quitting your job or your favorite sport, but you do need to change something to alter the stress on the patellofemoral joint, or the problem will not go away.

A visit to your primary care provider, orthopedist, or physical therapist may be very helpful. Starting with a physical therapist might be a good idea. The therapist can make an assessment of the angles in your knee joint and the balance of muscles acting on it, and can prescribe an exercise program tailored to your specific knee issues.

IN THE MEANTIME - SOME SUGGESTIONS

- **Relative Rest** If your problem is the result of increased activity, cutting that activity in half is a good place to start. If symptoms improve, adding back about 7% per week is a reasonable rule of thumb.

- **Avoid Loaded Full Flexion** A full squat (deep knee bend) puts the greatest stress on the patellofemoral joint. Do whatever you can to avoid this position.
- **Anti-inflammatories or Acetaminophen & Ice** These can relieve pain in the short term. Ice has the advantage of not hurting your liver, kidneys, or stomach. A bag of snow or cold gel with an ACE wrap also provides some compression if your knee is swollen.
- **Weight Loss** If you are overweight, losing even a couple of pounds can make a difference.

SPECIFIC EXERCISES

Exercises are most likely to be effective if they are prescribed specifically for you, based on a skilled exam. If that's not an option, here are a few exercises that you may find helpful:

- **VMO Strengthening** Seated in a chair, straighten your affected knee. Now let it bend, but not all the way. Stop at about 30°, then straighten it again. After you've done this 20 times or so, you should feel some fatigue ("burn") in part of the big thigh muscle just above the knee, toward the inside (vastus medialis obliquus or VMO). Strengthening this muscle will help your kneecap track toward the inside of its groove, correcting