

Patellofemoral Pain Syndrome

Patellofemoral pain can result from irritation of the cartilage of the patella which is caused by abnormal contact between the patella and the femur.

The patella, or knee cap, normally glides smoothly in a groove at the end of the femur. Occasionally, an abnormal positioning of the patella leads to inflammation and pain. This problem can be caused by muscle strength imbalance, inflexibility, bony structural differences, improper walking pattern, overuse, or trauma.

If you have patellofemoral pain syndrome, chances are you have the following fairly common symptoms:

- generalized knee pain
- pain in going up or down stairs or inclines
- pain in moving from sitting or squatting to standing
- aggravation with activities that require repeated bending of the knee

The following recommendations can assist you in improving your muscle strength, building flexibility, or correcting the positioning of your patella.

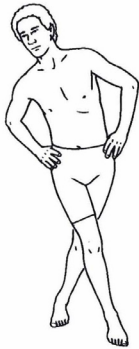
While these stretches and exercises are provided to assist you with your recovery from patellofemoral pain syndrome, *only a health care provider is qualified to provide you with a medical evaluation and diagnosis.* To make an appointment with a Gannett provider, call 255-5155.

Stretches

The three stretches described below should be done *before* and *after* the two recommended exercises.

Stretch 1: hip, thigh, knee (iliotibial band)

Do two stretches, twice a day. Hold each stretch gently for 20-30 seconds while breathing normally. Relax for 10-15 seconds between stretches.



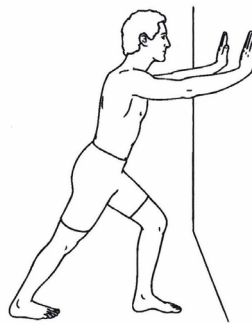
To do:

Cross the left or right leg over the other, then lean to the opposite side until you feel a stretch over the outside of your hip. Hold.

Switch legs.

Stretch 2: calf (gastrocnemius and soleus)

Do two stretches, twice a day. Hold each stretch gently for 20-30 seconds while breathing normally. Relax for 10-15 seconds between stretches.



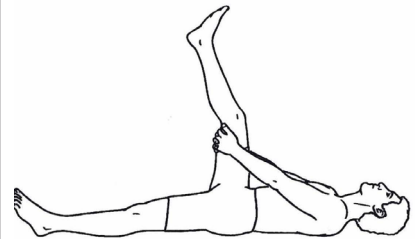
To do:

Keeping your back leg straight, with heel on the floor and turned slightly outward, lean into the wall until you feel a stretch in your calf. Hold.

Switch legs.

Stretch 3: back of thigh (hamstring)

Do two stretches, twice a day. Hold each stretch gently for 20-30 seconds while breathing normally. Relax for 10-15 seconds between stretches.

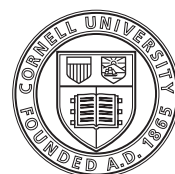


To do:

Lying on your back and supporting your thigh behind the knee, slowly straighten your leg until you feel a stretch in the back of your thigh. Hold.

Switch legs.

(over)

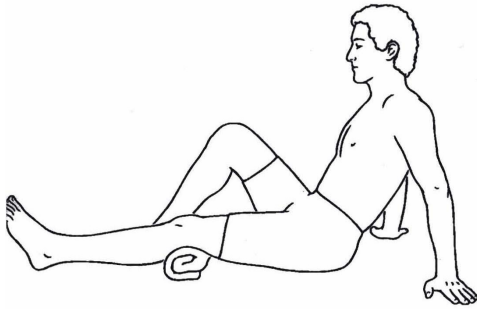


Exercises

Move on to these exercises after completing the above stretches. Then, repeat stretches.

Exercise 1: quad sets

Do 3 sets of 10 repetitions three times a day, pain-free. If you experience any pain or discomfort, do 1 set of 5 repetitions three times a day, working up to 3 sets of 10 repetitions three times a day.



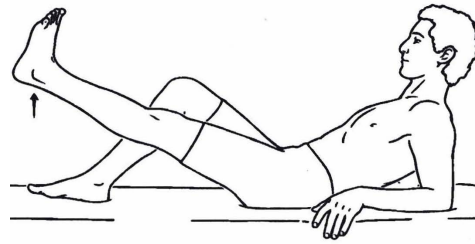
To do:

Sit or lie on a flat surface with one leg straight. You may place a rolled towel beneath your knee for added comfort. Tighten the muscles on top of your thigh by pushing your knee down into the towel/floor, holding for 6 seconds, then relaxing for four seconds.

After 10 repetitions, switch legs.

Exercise 2: straight leg raises

Do 3 sets of 10 repetitions three times a day, pain-free. If you experience pain, do 1 set of 5 repetitions, working up to 3 sets of 10 repetitions three times a day.



To do:

Rest on your forearms and tighten the muscle on the front of your thigh; then, lift your leg 8-10 inches from the surface, keeping your knee locked and toes pointed toward you. Hold.

After 10 repetitions, switch legs.

What TO do

- **Use ice.** Apply ice for 15-20 minutes, 2-3 times a day. For convenience, use an ice pack or ice cubes in a plastic bag. Be sure to cover the ice pack or bag with a thin towel to avoid freezing/burning your skin.
- **Take ibuprofen or aspirin.** Take 2 ibuprofen or aspirin tablets 4 times a day, after meals and at bedtime with milk or crackers. You should take ibuprofen or aspirin for 5-7 days. If you have problems with either of these medications, ask your health care provider about other options.
- **Continue normal daily activities.** Continue those activities which do not increase your pain. For example, you can continue biking, if it doesn't hurt. Just make sure that the seat is raised as high as necessary.
- **Do the prescribed exercises** The exercises described on the inside of this brochure are designed to bring relief to your pain and strengthen supporting muscles. Do them according to instructions or as your health provider advises.
- **Follow these instructions** until you are re-evaluated by a Gannett clinician or seen in Physical Therapy. If you have any questions or concerns, call Gannett for consultation: 255-5155.

What NOT TO do

- **Climbing** (up or down) stairs and/or steep inclines
- **Sitting** for prolonged periods with your knees bent beyond 90 degrees
- **Kneeling and squatting** for prolonged periods
- **Exercises or activities that increase pain** (e.g., jogging or aerobics)

03/07

Fall and Spring Semester Hours:

Monday-Friday	8:30 am-5:00 pm
Saturday	10:00 am-4:00pm
Sunday	building closed

Check the web for hours during breaks, winter and summer sessions: www.gannett.cornell.edu

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