



Patellofemoral Syndrome

Home Exercise Program

Treatment

Initial treatment includes the following easy to remember acronym, LUSKIN:



Once you are able to walk without pain or a limp, you may begin the following exercises:

- 1. Standing Calf Stretch** - Facing a wall, put your hands against the wall at about eye level. Keep the uninjured leg forward and your injured leg back about 18 inches behind your uninjured leg. Keep your injured leg straight and your heel on the floor and keep your toes pointed towards the wall. Next, do a slight lunge by bending the knee of the forward leg. Lean into the wall until you feel a stretch in your calf muscle. Hold this position for 30-60 seconds, and repeat 3 times.



- 2. Half Kneeling Ankle Mobility** - Begin in a half-kneeling position with your forward foot a few inches away from the base of a wall. Shift your weight forward, pushing your knee toward the wall as far as you can. Hold, then relax and repeat. Make sure to maintain your balance and move only through a pain free range of motion.





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3. **Hamstring Stretch** - Lie on your back and bring affected leg towards your chest. Grab the back of your thigh and try to extend your leg. Hold this position for 30 to 60 seconds, feeling a stretch in the back of your thigh. Repeat 3 times. You may also try this with a towel around your foot if it is more comfortable.



4. **Quadriceps Stretch** - Stand sideways to a wall, about an arm's length away from the wall, with your injured leg towards the outside. Facing straight ahead, keep the hand nearest the wall against the wall for support. With your other hand, grasp the ankle of your injured leg and pull your heel up toward your buttocks. Do not arch or twist your back. Hold this position for 30 seconds. Repeat 3 times.



This may also be done while laying on the opposite side and grasping the ankle of the affected leg. Do not arch or twist your back. Hold this position for 30 seconds. Repeat 3 times.



5. **Quadriceps Sets** - Sit on the floor with your injured leg straight in front of you. Press the back of your knee down while tightening the muscles on the top of your thigh. Hold this position for 5 seconds. Complete 3 sets of 10.





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6. **Straight Leg Raise** - Sit on the floor with the injured leg straight and the other leg bent, foot flat on the floor. Pull the toes of your injured leg toward you as far as you can, while pressing the back of your knee down and tightening the muscles on the top of your thigh. Raise your leg six to eight inches off the floor and hold for 5 seconds. Slowly lower it back to the floor. Complete 3 sets of 10.



7. **Abduction** - Lie on your uninjured side and place leaning on the elbow of your uninjured side and using the arm of the injured side in front of you to stabilize your body. Slowly with the injured leg up, hold for 5 seconds then lower slowly. Be sure to keep your hips steady and don't roll forwards or backwards. Complete 3 sets of 10.



8. **Adduction** - Lie on your injured side with your top leg bent and flat foot placed in front of the injured leg, which is kept straight. Raise your injured leg as far as you can comfortably and hold it there for 5 seconds. Keep your hips still while you are lifting your leg. Hold this position for 5 seconds, and then slowly lower your leg. Complete 3 sets of 10.



9. **Clamshells** - Lie on your side with your knees slightly bent, keeping your legs and ankles together. Open and close your knees like a clam by lifting your top knee up until it is parallel with your hip. Keep your feet together throughout the exercise, move slowly and controlled as if someone is pushing against your knee while you are pressing it up. Complete 3 sets of 10.

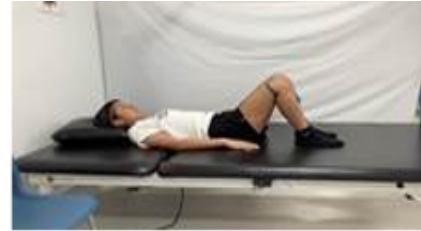




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10. Bridge with Abduction and Resistance (Aka Banded Bridges) - Start by lying supine (on your back) with your knees bent to 90 degrees and your feet flat on the floor. Place the tied resistance band just above your knees. Bring your feet and knees apart to hip/ Shoulder width. You should feel the band trying to you bring your knees back together. Keeping tension on the band, press into your heels and lift your hips off the table as high as you can into a bridge position. Hold at the top for 3-5 seconds and slowly lower to the starting position. Do not allow the space between your knees to decrease throughout the movement. Repeat for 3 sets of 10 repetitions.



Prevention

1. **Stay in shape**
2. **Stretch** - Before doing any strenuous activity, do a 5 minute warm up and do stretching exercises. Remembering to stretch your knee will help keep the structures around the knee flexible and less likely to be irritated by activity
3. **Increase training gradually** - Dramatic increases in activity over a short period of time can result in overuse injuries
4. **Use proper running gear** - Make sure that your shoes fit properly and provide good support
5. **Strengthening of thigh, hip, and trunk muscles** - Helps to “off-load” stress on the patellofemoral joint using the above mentioned exercises

When can I return to my sport or activity?

The goal of rehabilitation is to return you to your sport or activity as soon as is safely possible. If you return too soon, you may worsen your injury, which could lead longer healing times. Everyone recovers at a different rate. Returning to your sport or activity will be determined by how soon your knee recovers, not by how many days or weeks it has been since pain began. In general, the longer you have symptoms before you start treatment, the longer it will take to get better.



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You may safely return to your sport or activity when, starting from the top of the list and progressing to the end, each of the following is true:

- You have full range of motion in the injured knee, compared to the uninjured knee
- You have full strength of the injured knee and hip compared to the uninjured knee and hip and are able to complete the above exercises without pain
- You can jog straight ahead without pain or limping
- You can sprint straight ahead without pain or limping
- You can jump on both legs without pain, and you can jump on the injured leg without pain

Return to your sport at about 50% effort, and increase by about 10% each week. If you begin with pain, you may need to rest for a few days before returning to activities.