

# Patellofemoral Pain Syndrome & Chondromalacia Patella



Scan this QR Code to access a detailed video that enhances the information in this handout. It includes step by step guidance and visual demonstrations for each exercise.

## What is patellofemoral pain syndrome and chondromalacia patella?

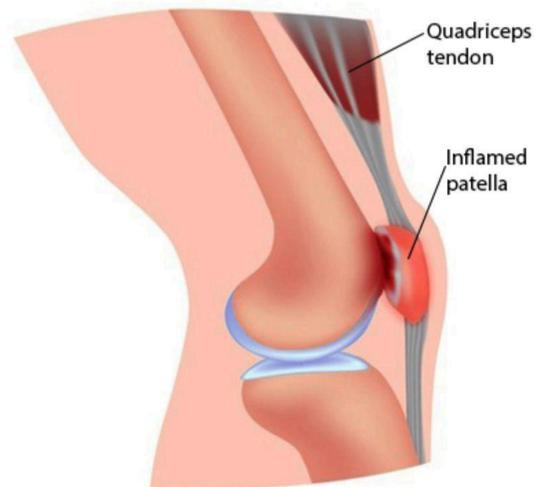
Patellofemoral pain syndrome involves discomfort around the kneecap, often due to repetitive stress or muscle imbalances. While this can lead to cartilage wear (chondromalacia), your knee is highly resilient. By addressing the underlying causes through targeted movement, you can reduce irritation and restore the joint's natural function. This guide is your first step toward a stronger, pain-free knee. By following these evidence-based steps, you are taking control of your recovery.

## How is it treated?

You can take an active role in your recovery by temporarily adjusting training intensity and using anti-inflammatories to manage initial discomfort. The most effective long-term solution is a personalized rehabilitation program. Focusing on strengthening and balancing the muscles around your hips and knees will better support the patella, improve alignment, and get you back to peak performance.

## How long is the recovery?

Progress often begins within just a few weeks of consistent treatment. While full recovery for chronic cases may take longer, every exercise session builds a stronger foundation. Stay patient and consistent—as your pain diminishes, you will gradually and safely return to the sports and activities you love.



# Patellofemoral Pain Syndrome & Chondromalacia Patella Rehabilitation Exercises

Consistent strengthening exercises can decrease pain and improve function. Perform the following program **2-3 times per week for 6-8 weeks**. After this initial phase, continue doing these exercises just 1-2 times per week to maintain your knee health.

## How to Perform Your Strengthening Exercises

**Go SLOW:** Perform every movement with control—take 3 seconds to lift the weight, hold for 1 second, and take 3 seconds to lower it. Moving slowly improves your muscle's ability to handle weight, leading to much better long-term strength and stability for your knee joint.

**The 8-10 Progression Rule:** Start with a weight you can lift for 3 sets of 8 reps (mild pain up to 4/10 is acceptable and safe). Each time you do this workout, try to add 1 repetition per set if your knee tolerates it. Once you successfully work up to 3 sets of 10 reps, increase your weight slightly and drop back down to 8 reps. By repeating this cycle, you will safely increase your weight every 1 to 2 weeks to keep building strength.

**How many sets?** If you are performing this program 2 times per week, complete 3 sets of each exercise. If you are performing this program 3 times per week, complete 2 sets of each exercise. Either option gives your muscles enough weekly volume to build strength — choose the schedule that fits your lifestyle.

## Active Warm Up

- March in place - Alternate lifting each knee towards your chest. 15 per leg.
- Leg swings - Swing one leg forward and backward. 10 to 15 per leg.
- Butt kicks - Stand tall and kick the heel towards the glutes. 10 to 15 per leg.

## Squats (with or without dumbbells)

- Objective: strengthen the quadriceps, hamstrings, glutes, and calves
- Stand shoulder width apart. Lower until your thighs are parallel to the floor. Start with a chair squat or a half squat if you have pain.
- Perform 2-3 sets of 8-10 repetitions.



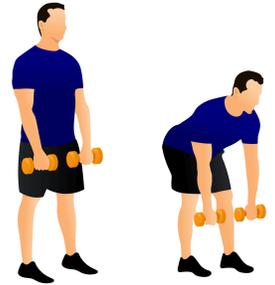
## Split Squat (with or without dumbbells)

- Objective: strengthen quadriceps, hamstrings, and glutes
- Begin in a staggered stance with one foot forward and the other stepped back. Keep your torso upright as you lower your hips straight down until your back knee hovers just above the floor. Push through your front heel to return to the starting position.
- Perform 2-3 sets of 8-10 repetitions on each side.



### Romanian Deadlift (with or without dumbbells)

- Objective: strengthen the hamstrings, glutes, and lower back
- Stand holding dumbbells, slightly bend your knees, and hinge at the hips. Keep the back straight. Lower until you feel a stretch in your hamstrings, then drive through the hips to stand back up.
- Perform 2-3 sets of 8-10 repetitions.



### Calf Raise (with or without dumbbells)

- Objective: strengthen the calves which help with knee flexion and stability
- Stand with feet shoulder-width apart, and raise your heels as high as possible, keeping the body upright and engaging the calves. Hold briefly at the top, then slowly lower the heels back to the ground.
- Perform 2-3 sets of 8-10 repetitions.



### Glute Hip Bridge (with or without weights on lap)

- Objective: strengthen gluteus maximus, hamstrings, pelvis, torso
- Lie on your back with knees bent. Lift your hips to form a straight line from shoulders to knees, squeeze your glutes, hold briefly, then lower back down.
- Perform 2-3 sets of 8-10 repetitions.



### Side Lying Leg Raise (with or without resistance band around thigh)

- Objective: strengthen hip abductors
- Lie on your side with your legs straight. Raise the upper leg while maintaining a straight line with your body. Lift it to about 45 degrees, hold it briefly at the top, then gently lower back down.
- Perform 2-3 sets of 8-10 repetitions on each side.



### How to Perform Your Stretching Exercises

Listen to your body. If your range of motion is limited, move only as far as comfortable. Do not force any position that causes sharp pain. A stretch should feel like a gentle pull, never sharp pain. If a position is uncomfortable, use a towel for reach or perform a smaller version of the movement—consistency is more important than depth.

### Standing Quadriceps Stretch

- Objective: increase mobility of the quadriceps muscle
- Stand on the unaffected leg. Bend the knee of your injured leg bringing your heel towards the glutes. Grasp the ankle with your hand. You should feel a stretch along your thigh muscle.
- Hold this for 30 seconds, repeat on the other side.



### Standing Calf Stretch

- Objective: alleviate tension in the calves to improve mobility
- Face a wall and step your unaffected foot forward, keeping your back leg straight. Lean forward towards the wall until you feel a stretch in the calf of your back leg.
- Hold this for 30 seconds, repeat on the other side.



### Standing IT Band Stretch

- Objective: improve flexibility along the outer thigh and hip
- Stand on the affected leg and cross your other leg in front of it. Gently allow the hip of the affected leg to drop outwards away from your body. Lean your upper body slightly towards the opposite side to increase the stretch. You should feel a stretch along the hip and side of the affected leg.
- Hold this for 30 seconds, repeat on the other side.



### Sitting Hamstring Stretch

- Objective: improve flexibility of the hamstrings
- Straighten out the affected leg and bend your other leg inwards. Hinge forward at the hips and reach towards the toes. Try to keep the leg as straight as possible.
- Hold this for 30 seconds, repeat on the other side.



### Lying Figure 4 Stretch

- Objective: stretch the piriformis and gluteal muscles
- While lying on your back, lift one foot and put the ankle over your other thigh, just above the knee, forming a figure 4 shape with your legs. Clasp your hands behind your thigh and gently pull it toward your chest. You should feel a stretch in your hip and in the glutes.
- Hold this for 30 seconds, repeat on the other side.

