Patellar Tendon Rehab Exercises

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 patellar tendinopathy?

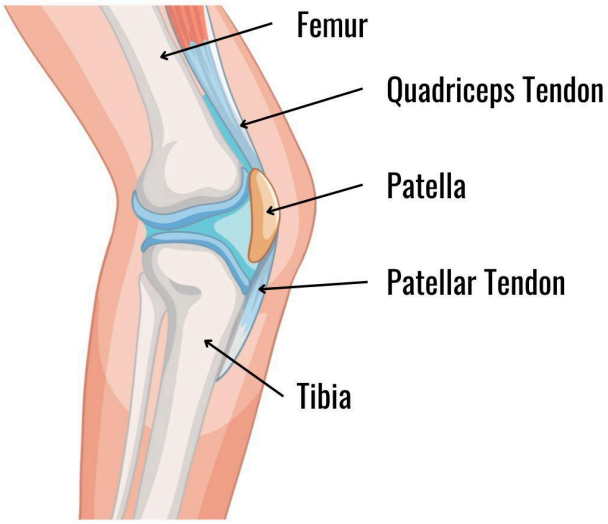
Patellar tendinopathy, also known as jumper's knee, is a condition characterized by pain and dysfunction in the patellar tendon, which connects the kneecap (patella) to the shinbone (tibia). It often results from repetitive stress and overuse, particularly in activities involving jumping, running, or abrupt changes in direction. The tendon becomes inflamed or degenerative, leading to pain just below the kneecap and difficulty with movements like squatting or climbing stairs.

How is it treated?

Treatment focuses on reducing pain and restoring tendon function through a combination of activity modification, physical therapy, and strengthening exercises, particularly eccentric loading exercises. Other options may include shockwave therapy, platelet-rich plasma (PRP) injections, or bracing in more severe cases. Pain relief strategies like ice, NSAIDs, and stretching can also help, but the main goal is gradual tendon rehabilitation.

How long is the recovery?

Recovery time depends on the severity of the condition and the adherence to treatment protocols. Mild cases may improve in a few weeks, while chronic tendinopathy can take several months to heal. Consistent physical therapy and avoiding activities that aggravate symptoms are critical for full recovery.



Patellar Tendon Rehabilitation Exercises

Consistent rehabilitation can accelerate recovery and prevent recurrence. Do the following rehabilitation program 2-3 times per week. Most people will need to follow this at least 2-3 months to allow the patellar tendon to remodel and strengthen. To maximize tendon strength, gradually increase the challenge as you progress. You can add weight every 1 to 2 weeks or increase the sets to 3. This principle of progressive overload is essential for continued improvement and tendon resilience.

Active Warm Up

- March in place - 10 to 15 repetitions per leg
- Leg swings forward and back - 10 to 15 repetitions per leg
- Glute kicks - 10 to 15 repetitions per leg

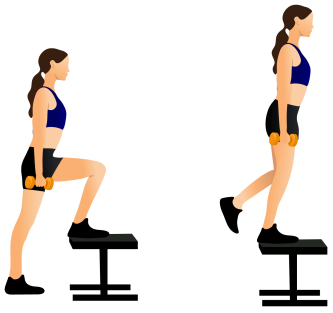
Dumbbell Squat

- Objective: strengthen the quadriceps, hamstrings, glutes, and calves
- Stand with feet shoulder width apart. Slowly bend your knees, keeping your back straight. Lower until your thighs are parallel to the floor. Consider starting at a half squat and slowly progress to a full squat as you recover. Add weights to increase difficulty.
- Perform 2 sets of 8 to 10 repetitions.

Dumbbell Split Squat

- Objective: strengthen the quadriceps, glutes, and hamstrings
- Begin in a staggered stance with one foot forward and the other back, holding a dumbbell in each hand. Slowly lower your back knee toward the ground, keeping your front knee aligned over your ankle. Drive through your front heel to return to standing.
- Perform 2 sets of 8 to 10 repetitions on each side.

Dumbbell Step Up

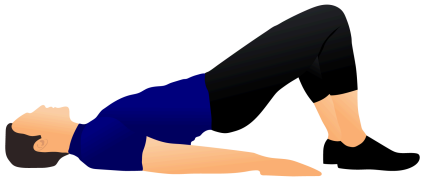


- Objective: strengthens the quadriceps, glutes, and hamstrings, improves balance and stability
- Start with a low platform, such as a sturdy bench or step. Hold a dumbbell in each hand, place one foot on the platform, and push through your heel to lift yourself up. Bring the other foot up to meet the first, then slowly lower yourself back down to the floor.
- Perform 2 sets of 8 to 10 repetitions on each side.

Dumbbell Calf Raise

- Objective: strengthen the calf muscles
- Hold a dumbbell in each hand and slowly rise onto your tiptoes, lifting your heels as high as is comfortable. Pause briefly at the top, then lower your heels back down in a controlled motion.
- Perform 2 sets of 8 to 10 repetitions.

Glute Hip Bridge



- Objective: strengthen gluteus maximus and hamstrings
- Lie on your back with your knees bent and feet flat on the floor, about hip-width apart. Engage your core and glutes, then lift your hips toward the ceiling. At the top, squeeze your glutes and hold for a second before slowly lowering back to the starting position.
- Perform 2 sets of 8 to 10 repetitions.

Standing Quadriceps Stretch

- Objective: reduce tension along the IT band
- 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.

Kneeling Hip Flexor Stretch

- Objective: improve flexibility of hip flexors
- Start in a lunge position with one knee on the floor and the other foot planted in front of you at a 90-degree angle. Gently push your hips forward until you feel a stretch in the front of your hip on the side with the knee down.
- Hold 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.