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Self-Directed Home Exercise Program Patellofemoral Pain

Introduction: Patellofemoral pain refers to pain that originates around the kneecap. When you walk, rise from sitting, go up or down stairs, there are large loads that transmit through this region of the knee which is susceptible to irritation. While there are different causes of this condition, the pain can be improved with exercise to improve the dynamic (in-motion) forces going through the kneecap. By working on stretching and strengthening areas of your leg individually as shown in this program, you will experience relief over weeks.

Instructions: These exercises can be performed daily in 20-30 minute sessions. Prior to exercise, heat on the knee and ice after may help. These exercises should not be painful; any exercise that causes frank pain should be avoided.



Supine Hamstring Stretch: Lay on your back with one leg straight and the other bent toward your chest. Hold the back of the bent knee with both hands (left picture) and gradually straighten the knee until you feel a stretch in the back of your thigh and hold (right). Keep your back flat on the floor and try not to arch.





Standing Quad Stretch: Stand with the leg bent while holding a chair or table for support. Bend the knee up and hold your foot pulling it toward your body while pushing your hip forward until you feel a stretch in the front of your thigh and hold. Keep your back straight and focus on maintaining your balance during the stretch.









Standing Hip Flexor Stretch: Begin in standing position with one leg bent and resting on a chair behind your body. Gentle shift your weight forward at the hips and feel the stretch in the front of the hip of the bent leg. Make sure the chair is stable for safety and try not to arch your back during the stretch.





Gastroc Stretch: Begin standing upright and lean forward with your hands on the wall. Extend one leg backward, bending your front leg until you feel a stretch in your back leg and hold. Make sure you keep your back knee fully straight and your heels flat on the ground.





Modified Straight Leg Raise: Begin lying on your back with your good leg bent and painful one flat on the floor. Rotate your foot on the painful side all the way out (externally) and tighten your abdominal muscles. Lift your painful leg up until it is parallel with your other thigh and hold. Do not arch your back.









Prone Hip Extension: Begin lying on your stomach with both legs stretched straight behind you. With knee straight and trunk steady, slowly lift your painful leg upward as far as you can without arching your lower back, and hold. Lower back to starting position.

Sidelying Hip Adduction:

Begin lying on your side and stabilize your hips by placing your upper leg in front of you on the floor. With the lower leg knee straight, slowly lift the entire leg towards the floor and hold. Do not let your hips roll forward or backwards.







Sidelying Hip Abduction: Begin lying on your side and hips straight up and down. Straighten your knees. Lift your upper leg straight up toward the ceiling. Hold and lower to starting position. As an advanced modification, back up to the wall and slide your upper leg up the wall with knee straight.









Lateral Step Down: Begin standing on a platform or step with one foot hanging off the edge. Maintaining an upright position, bend at your knee and hip, slowly lowering your hanging leg to the ground. Return to starting position. Make sure not to let your trunk bend forward or your knee collapse inward as you lower your foot to the ground.





Wall Squat Hold: Begin in a standing upright position, legs shoulder width apart, with a ball (basketball, volleyball) between your knees. Lean back into a squat against the wall, pressing the ball between your knees. Do not let the ball drop to the ground and hold. Make sure your knees are not bent forward past your toes and try to keep your back flat against the wall.





(Advanced) Iliotibial Band Release: Lie on your side with a tennis ball or foam roller under the middle of the outside of your thigh. Keep your lower knee straight and stabilize with hands on the floor and upper leg against the ground as shown. Move your body up and down, rolling the ball or roller along the outside edge of your leg.

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(Advanced) Bridge Knee Extensions: Lie on your back with your knees bent and flex your stomach muscles, as if pressing your lower back muscles onto the floor. Squeeze your bottom muscles together. Slowly lift your pelvis off the floor to the bridge position. Hold the bridge position and return to starting position. Once you can do 30 repetitions, from bridge position straighten one knee without letting your pelvis move. Hold and then return to starting position.

(Advanced) Clams and Modified Clams: Lie on your side with knees bent. Engage your stomach muscles. With the heels together, lift the uppermost knee towards the ceiling. Lift your knee as high as you can, stopping when your pelvis rolls backwards. Slowly lower your knee to starting position. You should feel a burn in the "back pocket" area. Do 30 repetitions and switch sides. If you can easily do 30 repetitions, try keeping your feet off the floor while lifting your upper knee. Perform 30 repetitions and switch.



