

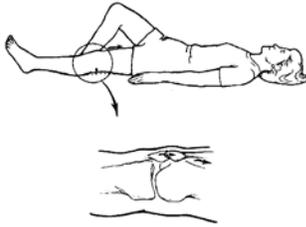


Patellofemoral Pain Rehabilitation Guidelines

General Rehab Guidelines	<ul style="list-style-type: none"> • Control Pain and Edema • Normal Range of Motion (ROM), proprioception, strength • Return to normal Activities of Daily Living (ADLs)/Sports
Phase I	<p>Goals: Full ROM</p> <ul style="list-style-type: none"> • Control Pain • Decrease Edema • Instruction in Home Exercise Program (HEP) <p>Suggested Exercises</p> <ul style="list-style-type: none"> • Quad Sets • Straight Leg Raises • Heel Slides • Hip exercises for flexion, extension, abduction, and adduction • Stretches: Quadriceps, Hamstrings, Glutes, Abductors, Adductors, Iliotibial Band (ITB), Piriformis • Modalities as needed
Phase II	<p>Goals: Increase Strength</p> <ul style="list-style-type: none"> • Increase Proprioception • Increase Flexibility • Decrease Pain • Maintain ROM <p>Suggested Exercises</p> <ul style="list-style-type: none"> • Closed Chain Strengthening: Leg Press, TKEs, Set-Ups, Wall Sits, Hamstring Curls • Abductor and Adductor machines • Proprioceptive exercises • Lower extremity stretches • Continue with cardiovascular • Continue with modalities as needed
Phase III	<p>Goals: Return to normal ADLs / sports without pain or limitation</p> <ul style="list-style-type: none"> • Maintain flexibility • Independent HEP <p>Suggested Exercises</p> <ul style="list-style-type: none"> • Continue to increase strength and flexibility • Sports specific exercises where indicated • Cardio progression where indicated • Independence demonstrated in HEP



PHASE I - PATELLOFEMORAL PAIN



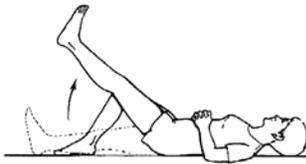
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1. Sit or lie on your back with ____ leg straight
2. Press the back of your knee downward
3. This will tighten the muscle on top of your thigh and move your kneecap as shown
4. Hold ____ seconds
5. ____ repetitions, ____ times per day



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1. Lie on your back with knee bent to 45 degrees with a roll under ____ knee
2. Raise heel off floor until knee is straight
3. Hold ____ seconds and slowly lower
4. ____ repetitions, ____ times per day



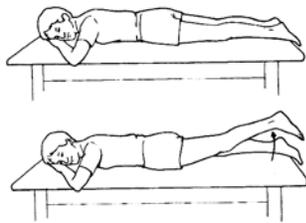
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1. Lie on back with ____ knee straight and the other knee bent as shown
2. Keep the leg completely straight, then raise it ____ inches
3. Hold ____ seconds and slowly lower
4. ____ repetitions, ____ times per day



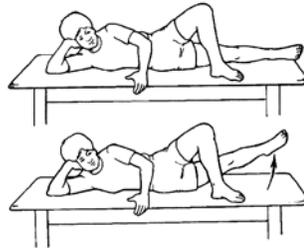
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1. Lie on side with ____ leg on top
2. Bend lower leg slightly
3. Raise top leg straight up, without letting it come forward
4. Hold ____ seconds, slowly relax
5. ____ repetitions, ____ times per day



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1. Lie on belly
2. Raise ____ leg off floor as shown
3. Hold ____ seconds, slowly relax
4. ____ repetitions, ____ times per day



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1. Lie on side as shown, with ____ leg on the bottom
2. Raise leg up toward ceiling
3. Hold ____ seconds, slowly relax
4. ____ repetitions, ____ times per day



1. Lie flat on back
2. Slide ____ heel toward your buttocks, bending the knee
3. Hold ____ seconds and slowly lower
4. ____ repetitions, ____ times per day



PHASE I - PATELLOFEMORAL PAIN



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1. Stand holding the _____ ankle as shown
2. Bend the knee upward so that you feel a stretch
3. As you bend the knee, make sure the thigh stays in line with your body as shown (don't let it point forward)
4. Hold _____ seconds
5. _____ repetitions, _____ times per day



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1. Sit with _____ leg straight on bench as shown
2. Lean forward, keeping the back straight, so that a stretch is felt
3. Hold _____ seconds
4. _____ repetitions, _____ times per day



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1. Prop _____ leg on bench as shown
2. Bend forward at the hip, keeping the knee and back straight so that stretch is felt
3. Hold _____ seconds
4. _____ repetitions, _____ times per day



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1. Stand with _____ side facing wall
2. Cross the _____ leg behind the other leg and toward the wall
3. Bend the forward knee slightly and lean your trunk toward the wall until you feel a stretch on the outside of the hip (see arrow)
4. Hold _____ seconds
5. _____ repetitions, _____ times per day

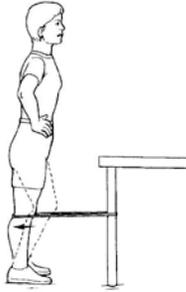


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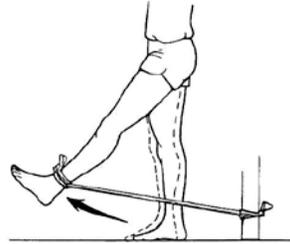
1. Stand propping _____ leg on solid object as shown
2. Lean your trunk forward keeping back straight so that you feel a stretch
3. Hold _____ seconds
4. _____ repetitions, _____ times per day



PHASE II - PATELLOFEMORAL PAIN



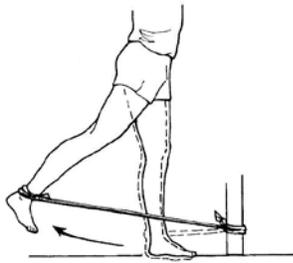
1. Arrange tubing around _____ leg as shown
2. Begin with knee bent partway (about 1/3), then slowly straighten knee
3. Slowly bend knee again
4. _____ repetitions, _____ times per day



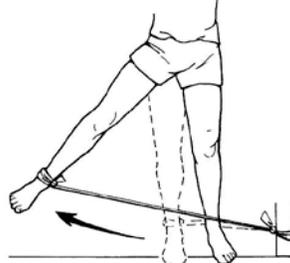
1. Anchor rubber tubing to solid object and _____ ankle
2. Pull leg forward as shown
3. Hold _____ seconds, slowly relax
4. _____ repetitions, _____ times per day

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1. Anchor rubber tubing to solid object and _____ ankle
2. Lift leg backward as shown
3. Hold _____ seconds, slowly relax
4. _____ repetitions, _____ times per day



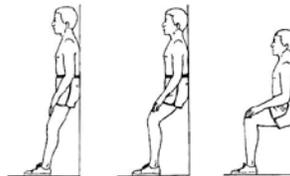
1. Anchor rubber tubing to solid object and _____ ankle as shown
2. Raise hip out to side, without letting it come forward
3. Hold _____ seconds, slowly relax
4. _____ repetitions, _____ times per day

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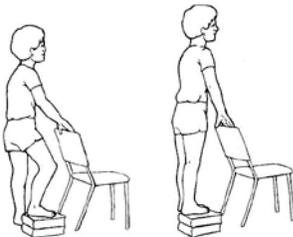
1. Anchor rubber tubing to solid object and _____ ankle as shown
2. Stand with toe pointed out to side
3. Now cross the leg in front of your other leg
4. Hold _____ seconds, slowly relax
5. _____ repetitions, _____ times per day



1. Stand with back against wall, feet shoulder width apart and 18 inches from wall
2. Slowly slide down wall until you are in a "chair position"
3. Hold _____ seconds
4. _____ repetitions, _____ times per day

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1. Place involved leg on edge of small step
2. Hold onto solid object for support
3. Step up with _____ foot
4. Slowly lower
5. _____ repetitions, _____ times per day



Adjust level of seat on exercise bike to a comfortable level.
_____ minutes on level _____



PHASE II - PATELLOFEMORAL PAIN



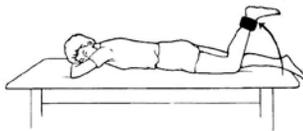
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1. Stand upright
2. Tighten buttocks and abdominal muscles to hold spine stable in neutral throughout the rest of the exercise
3. Lift one leg from the floor, without allowing the spine to move, or weight to shift excessively, balancing on _____ leg
4. Hold _____ seconds
5. _____ repetitions, _____ times per day



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1. Stand with feet 12 inches apart
2. Raise up slowly onto your toes as high as you can
3. Hold _____ seconds
4. _____ repetitions, _____ times per day



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1. Lie as shown
2. Place _____ lb weight on _____ ankle
3. Slowly bend knee
4. Hold _____ seconds and slowly lower
5. _____ repetitions, _____ times per day



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1. Prop _____ leg on bench as shown
2. Bend forward at the hip, keeping the knee and back straight so that stretch is felt
3. Hold _____ seconds
4. _____ repetitions, _____ times per day



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1. Stand propping _____ leg on solid object as shown
2. Lean your trunk forward so that you feel a stretch
3. Hold _____ seconds
4. _____ repetitions, _____ times per day



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1. Stand holding the _____ ankle as shown
2. Bend the knee upward so that you feel a stretch
3. As you bend the knee, make sure the thigh stays in line with your body as shown (don't let it point forward)
4. Hold _____ seconds
5. _____ repetitions, _____ times per day



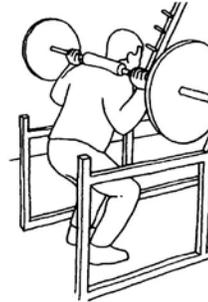
PHASE III - PATELLOFEMORAL PAIN



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Horizontal Leg Press

Adjust the machine for your height and leg length. Your feet should be shoulder width apart and turned out slightly. Bend your knees so that they pass to the sides of your chest. Pause in this lower position and then straighten your legs again.



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Squat

Place a barbell across your shoulders ensuring you are standing upright and looking forwards. Place a small (1/2") wooden wedge beneath your heels. Your knees should be shoulder width apart, and your feet turned out slightly. Keep your back flat and vertical. Bend your knees, ensuring that they pass directly over your foot, until your knees are at 90°. Stand up again.



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Step Up

Stand in front of a step up box, adjusted so that its top surface comes just below your knee level. Place one foot flat on the step up bench, and then step up fully onto the bench. Step down from the bench with your other leg. Reverse the stepping order after half of your total number of repetitions.



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Dumbbell Lunge

Grip a dumbbell in each hand, and stand with your feet shoulder width apart. Step forwards and down with your right leg, allowing your left knee to come towards the level of your right foot. Stand straight once again, reverse the feet, stepping forwards with your left leg.



PHASE III - PATELLOFEMORAL PAIN

Lying Leg Curl



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Lie on the leg curl machine with the pads adjusted for your leg length. Your knee caps should be positioned just over the edge of the leg curl bench. Bend your knees until the pads come towards your buttocks, pause in the upper position and then straighten your legs to lower the weight again.



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Sitting Hip Adduction

Sit in the machine adjusting the seat back and leg pads for leg length. Press your legs together, pause and then allow your legs to move apart again.



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Sitting Hip Abduction

Sit in the machine adjusting the seat back and leg pads for leg length. Press your legs outwards into the abducted position, pause and then allow your knees to come together again.



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Cable Kick Back

Stand in front of a low pulley machine with a sling around your ankle. Hold the supports of the machine, standing tall with both legs straight. Pull your inner leg backwards tightening your buttock muscles as you do so. Ensure no body sway occurs.



Adjust level of seat on exercise bike to a comfortable level.
_____ minutes on level _____



Holding on to stationary handles, place feet in correct position.
Select program _____
Select time: _____
Select level _____



Set treadmill according to instructions.
Set time: _____
Set speed: _____
Set incline: _____

Courtesy of Vanderbilt Sports Medicine