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Self-Directed Home Exercise Program Knee Osteoarthritis

Introduction: It might seem intuitive that exercising in the setting of an arthritic knee can worsen the damage, leading to deteriorating symptoms and more pain. However, evidence suggests the opposite; a combination of walking for 10-35 minutes 2-3 times per week (or more, pending fitness level) and performing exercises like the ones listed below can improve symptoms and tolerance of arthritis. Among the benefits of regular knee exercises are reduced pain and stiffness, improved balance and endurance, and better overall health. This program can be continued for 4 to 6 weeks or may be incorporated into a longer-term home exercise regimen. This program has been adopted by the American Academy of Orthopedic Surgeons' Patient Education series.

Instructions: You can perform these exercises 2-3 times per week in 20 minute sessions as a standalone workout or before or after going on a walk. You should proceed through the program in sequence, progressing to the next set if the prior set was not painful. Prior to exercise, heat on the knee at the location of pain and ice after may help.



Heel Cord Stretch:

Stand facing a wall with the unaffected leg forward with a slight bend in the knee. Your affected leg is straight behind you with the heel flat. Keep your back knee straight and your heels flat on the ground. Hold 30 seconds.

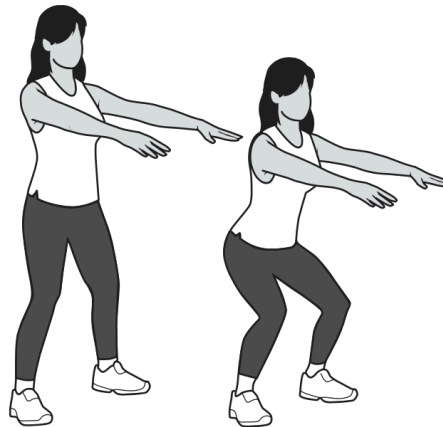


Quad Stretch: Hold a chair or wall for balance and bend your knee to bring your heel up toward your buttock. Grasp your ankle and pull your heel closer to your body. Hold for 30 seconds and repeat with opposite leg.



Supine Hamstring Stretch: Lie on the floor with both legs bent. Lift one leg off the floor and bring the knee toward your chest. Clasp your hands behind your thigh below your knee. Straighten your leg and pull it gently toward your head until you feel a stretch. Hold this position for 30 seconds. Repeat with other leg.

Half Squats: Stand with your feet shoulder width apart. Your hands can rest on the front of your thighs or out in front of you. If needed, hold onto a chair or wall for balance. Keep your chest lifted and slowly lower your hips about 12 inches, as if you are sitting down into a chair. Plant your weight on your heels and hold for 5 seconds. Push through your heels and bring your body back up to standing. If this is becoming easy, hold 5 and then 10 pound weights in your hands for additional resistance.



Hamstring Curls: Holding onto a chair or wall for balance, bend your affected knee and raise your heel toward the ceiling as far as possible without pain. Hold this position for 5 seconds and then relax. If this is easy, try adding a 5 or 10 pound weight.



Calf Raises: Stand with your weight evenly distributed between both feet. Hold onto a chair or wall for balance. Lift your unaffected foot off the floor so that all of your weight is on your affected foot. Raise the heel of your affected foot as high as you can, then lower.

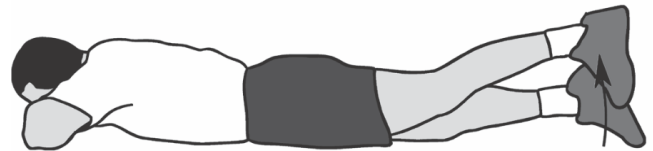


Leg Extensions: Sit up straight on a chair or bench. Tighten your thigh muscles and slowly straighten and raise your affected leg as high as possible. Squeeze your muscles and hold for 5 seconds. Relax and bring your foot back to the floor. Repeat. You can add resistance as needed with 5 or 10 pound ankle weights.



Straight Leg Raises: Lie on the floor with your elbows directly under your shoulders to support your upper body. Keep your affected leg straight and bend your other leg so that your foot is on the floor. Tighten the thigh muscle of your affected leg and slowly raise it 6 to 12 inches off the floor. Hold position for 5 seconds and relax. Repeat.

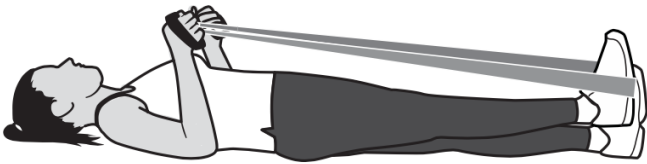
Prone Straight Leg Raises: Lie on the floor on your stomach with your legs straight. Rest your head on your arms. Tighten your gluteus and hamstrings muscles of the affected leg and raise the leg toward the ceiling as high as you can. Hold for 5 seconds. Lower your leg and relax. Repeat.



Hip Abduction: Lie on your side with your injured leg on top and the bottom leg bent to provide support. Straighten your top leg and slowly raise it to 45 degrees, keeping your knee straight but not locked. Hold for 5 seconds. Slowly lower and relax. Repeat.



Hip Adduction: Lie down on the floor on your side of your injured leg with both legs straight. Cross your uninjured leg in front and rest your foot on the floor. Raise the injured leg 6 to 8 inches off the floor. Hold for 5 seconds. Relax and repeat.



Leg Presses: This exercise is performed with an exercise band with comfortable resistance. Place the band at the arch of your foot. Lie on the floor with your elbows bent. Tighten the thigh muscle of your affected leg and bring your knee toward your chest. Flex your foot when the knee is bent. Slowly straighten your leg directly in front of you, pushing against the band. Hold for 2 seconds and relax.

