

# Strengthening Exercises for Hip and Knee Pain

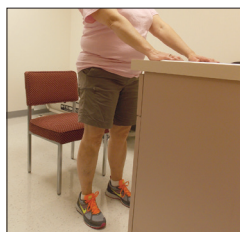
These exercises are designed to address the most common weaknesses and tissue tightness associated with knee osteoarthritis. Improving your strength and range of motion will likely improve your ability to stand, bend and walk more smoothly and with less pain. If you are considering surgery, improving your strength and range of motion ahead of time can improve the outcome of your surgery.

**Note:** These are general exercise recommendations and not all may be beneficial to your particular health issue. None of the exercises should make your symptoms worse. If an exercise is painful, it may not be appropriate for your condition. If you have questions regarding the exercises, consult your physical therapist.

## Sink squats:

Hold onto a sink or railing with a firm chair behind you. Bend back at your hips to sit. Touch the chair with your buttocks (if you're able) before returning to a standing position.

Repeat 10 times, 2 sets.



## Terminal knee extension:

Place the stretchable band around the back of your knee and the knotted end behind a closed door. Place the toe of your leg with the band next to the heel of your other foot. Begin with your toes on the floor and your heel off. Rock your foot back so that your heel touches the floor and straighten your leg. Do not move your hips backward.

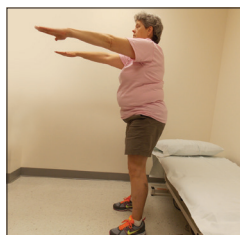
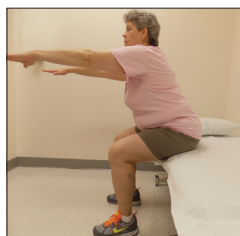
Repeat 10 times, 2 sets



## Squat (sit-to-stand):

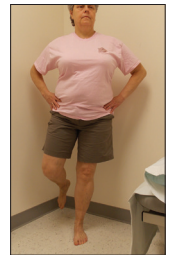
As you stand from a seated position, keep your back in a neutral position (relatively straight). Begin from a seated position. Bend forward from your hips as you begin to stand. To return to a seated position, first bend your hips back.

Repeat 10 times, 2 sets.



## Single leg stance:

Stand in a corner with no furniture. To ensure a safe environment, you may place a firm chair in front of you to hold in case you lose your balance. When standing on one leg, keep your hips level, your trunk upright and your knee soft. When you practice this task, stand on each leg approximately 2 minutes (this includes rest times as needed).



## Calf raises:

Touch a wall or counter to maintain your balance. Rise up on your toes.

Repeat 10 times, 2 sets.



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## Standing hip abduction

Standing at your kitchen counter or in front of a sturdy chair for balance. Slowly kick your leg out to the side.

Repeat 10 times, 2 sets.



## Standing hip flexion

Standing at your kitchen counter or in front of a sturdy chair for balance. March your knee up as high as possible, bending your knee.

Repeat 10 times, 2 sets.



## Standing hip extension

Standing at your kitchen counter or in front of a sturdy chair for balance. Keeping your knee straight, slowly kick your leg back. Do not arch your back.

Repeat 10 times, 2 sets.



## Wall slides

Lean on a wall, feet approximately 12 inches from the wall, shoulder distance apart and about 6-8 inches away from wall. Bend both knees, keeping your back against the wall. Lower yourself slowly to about 45 degrees (1/3 of the way down). Return to standing slowly.

Repeat 10 times, 2 sets.



## Step ups

Stand with the leg on a step. Shift your weight over the knee and step up slowly. Step back down leaving your healing leg on the step.

Repeat 10 times, 2 sets.



## Calf stretch:

Point both feet directly towards the wall with one foot behind the other. Lean forward with your hips until you feel a stretch in the back of your lower leg. Hold 30 seconds.

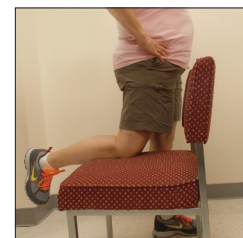
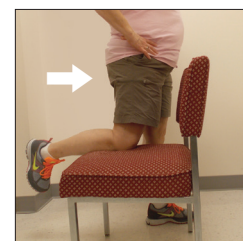
Repeat 2-3 times.



## Quadriceps stretch:

Place one knee on the seat of a chair and hold on to the back of the chair. Tighten your buttocks to move your hips forward until you feel a stretch on the front of the thigh. Hold 30 seconds.

Repeat 2-3 times.



If you have questions about these exercises, please contact Rehabilitation Medicine at [physical.therapy@hitchcock.org](mailto:physical.therapy@hitchcock.org) or call 603.650.3600.