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## Exercises for Knee Pain Caused By Arthritis

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### Aerobic Exercise Recommendations

Experiencing knee pain from arthritis? Strengthening muscles around the joint help to decrease impact at the joint, and exercise helps maintain the knee's range of motion.

### Exercise Recommendations

Individuals with knee arthritis are recommended to do 30 minutes of moderate exercise, 5 days per week to obtain maximal health benefits. You can even break it down into three 10-minute blocks per day. Recommended aerobic exercise modes include:

- Walking
- Cycling
- Swimming/ Water Aerobics

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### Exercise: Straight leg raise

#### Description:

- Lie on your back with one leg bent and one leg straight.
- Keeping your lower back flat on the ground and keeping your abdominal muscles engaged by pressing your low back against the floor, raise your straight leg about 45 degrees of the floor with your foot flexed.
- Hold for 3 seconds and then slowly lower.



Repeat 10 times before switching sides.

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### Exercise: Mini Squats

#### Description:

- Stand with feet hip-width apart, toes slightly pointed outwards, holding on to a chair for balance.
- Bend your knees slightly to sit back into your heels, as though sitting in a chair. Make sure that your knees are not falling inwards beyond your big toe and that your knees do not go in front of your toes. Keep your feet flat on the ground.
- Drive back up to standing position through your heels. Perform 2 sets of 12-15 repetitions.



**Exercise: Standing Back Leg Slide****Description:**

- Stand up straight, holding onto a chair for balance
- Slide one foot back behind you by tightening your buttock, and keeping your toes on the floor. Slide foot back to start. Repeat 12-15 times before switching sides.

**Exercise: Clamshell****Description:**

- Start on your left side, knees bent at about a 45 degree angle with legs stacked on top of one another.
- Keeping your feet together, rotate your right knee towards the sky without rotating your pelvis. Keep your lower leg on the floor.
- Pause at the top of the motion before slowly returning to the start. Repeat 12-15 times before switching sides.

**Exercise: Heel Raises****Description:**

- Stand with feet hip-width apart, holding on to something for balance.
- Rise up onto your toes, lifting your heels as high as possible. Keep your upper-body tall.
- Hold for 2 seconds before lowering. Repeat 12-15 times.

**Exercise: Balance Exercises****Description:**

- Stand near a wall in case you lose your balance. Lift one knee to stand on one leg. Keep your hips level with one another. Hold for 30-60 seconds before switching sides.
- To make this exercise harder, try doing it with your eyes closed and have a friend or family member spot you.



**Exercise:** Standing hamstring stretch

**Description:**

- Place your right foot up on a stool or chair, placed beside an object/wall that you can hold on to for balance.
- Keeping your back straight, bend forwards from the hips towards your right foot, keeping your right leg straight.
- Hold for 30-60 seconds before switching sides.



**Exercise:** Hip flexor/Calf muscle stretch

**Description:**

- Stand up straight, holding a chair or wall for support.
- Step back with your left foot, bending slightly into your right knee and keeping your feet flat on the floor.
- Keep your upper body straight over your hips. Keep your buttocks tight to increase the stretch in the front of your left thigh.
- Hold for 30 seconds before switching sides.



**Exercise:** Modified Quadriceps Stretch

**Description:**

- Hold on to a wall for balance. Place a chair behind you.
- Place your right shin on the chair, keeping your knees close together and standing up straight. Hold for 30 seconds before switching sides.
- If you could use more of a stretch and it does not cause any knee pain, you can hold your right ankle with your right hand while standing straight up to increase the stretch.

