

Exercises for Knee Osteoarthritis

Self-care at home

This handout explains knee osteoarthritis, and gives exercises to help improve movement and lessen pain in your knee.

What is knee osteoarthritis?

Every joint in the body contains a smooth tissue called *cartilage*. Cartilage creates a pad on the ends of bones and helps bones glide smoothly against each other. *Knee osteoarthritis* occurs when cartilage in the knee joint wears away.

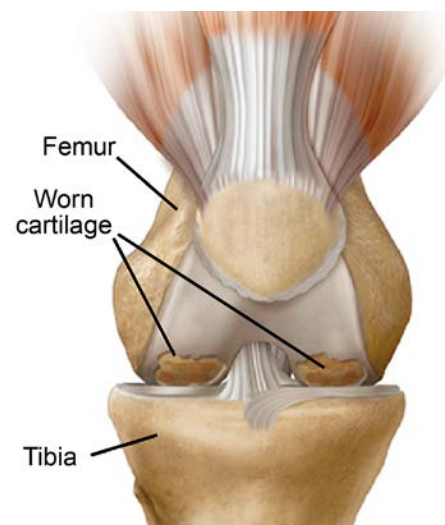
Symptoms include:

- Pain that gets worse when you are active, but gets a little better when you rest
- Stiffness, often in the morning or when you have been sitting for a while
- Lack of mobility, making it hard to get in and out of chairs or cars, use the stairs, or walk
- A creaking, crackly sound when you move your knee
- Swelling and warmth in your knee

What causes it?

Causes can include:

- Normal wear and tear over time
- Overuse of the knee during sports or work activities
- Being overweight, which increases stress on the knee
- Misalignment of the knee joint
- Knee injury



In knee osteoarthritis, the cartilage in the knee joint wears away.

How can exercise help?

Exercise can help in 2 ways:

- **Strength exercises** help the muscles around the knee get stronger. This makes the joint more stable and lessens pain.
- **Stretching exercises** help keep the joint mobile and flexible.

What do I need to do?

Work with your provider to create a **home exercise program** that includes doing the exercises in this handout. While doing your exercises, please note that:

- These exercises should **not** cause pain. If you have sharp pain when you do an exercise, stop doing it. Wait until the next day and try again.
- If you have more soreness or swelling a few hours after your exercises or the next morning, it may mean that you overdid it. If this happens, you can:
 - Do the exercise fewer times a day.
 - Do fewer repetitions (reps) of the exercise. For instance, if it says do the exercise 20 times, do 10 reps instead and see how you feel.

Exercises

Stationary Bike Riding

Ask your provider how long you should do this exercise. A good starting point is 5 minutes. Then add 2 minutes each day until you reach 30 minutes.

- Sit on the bike seat and check to see if it is in the right position for you. When the pedal is at its farthest point away, your knee should be slightly bent. If you need to adjust the seat, look below the seat for a lever or knob.
- Place the balls of your feet on each pedal. If bike has pedal straps, secure the straps over the tops of your feet.
- You may need to press a “Start” or “Quick Start” button to start the session. Start pedaling your legs in a circular motion. Press your feet forward and down on the pedals.
- Be sure to sit upright, with your back straight. Keep your movements fluid and in control.



Quad Sets

Do this exercise up to 4 times a day.

- Sit on the floor or a table, with one leg straight in front of you.
- Rest your knee on a towel roll.
- Gently tighten your thigh muscle. This pushes the back of your knee down into towel roll.
- If you can, lift your heel a little off table as you do this (see photo at right, below). If you cannot lift your heel off the table, do your best **not** to put pressure on your heel.
- Tighten your thigh muscle for 5 seconds. Then relax.
- Repeat 3 sets of 10 reps. If you get tired before doing all the reps, stop.



Straight Leg Lifts

Do this exercise 1 time a day.

- Lie on your back on a table or the floor. Bend one knee. Place a rolled towel under the straight knee.
- Gently tighten your thigh muscle on the straight leg to keep knee straight.
- Lift the straight leg off the ground to a comfortable height. Then slowly lower your leg back down.
- Repeat 3 sets of 10 to 30 reps. If you get tired before doing all the reps, stop.
- Be sure to keep your knee straight during the full motion.



Heel Slides

Do this exercise up to 4 times a day.

- Lie on your back on the floor or a table, with 1 leg straight. Bend the other knee to help stabilize your body.
- Loop a strap around your foot on the straight leg, as shown in the photos below. Hold 1 end of the strap in each hand.
- Pull on the strap, moving your heel to your hip.
- Slide your heel back to starting position.
- Repeat 3 sets of 20 reps. If you get tired before doing all the reps, stop.



Bridges

Do this exercise up to 1 time a day.

- Lie on your back on a table or the floor.
- Bend your legs, keeping your feet flat on the surface. Your feet and knees should be hip-width apart.
- Draw your belly button down to your spine. At the same time, squeeze your *gluteal* (buttock) muscles.
- Push through your heels to lift your hips off the surface, making a straight line from your shoulders to your knees. Do not push so high that your lower back arches.
- Slowly lower your hips back down to table.
- Repeat 3 sets of 15 reps. If you get tired before doing all the reps, stop.



Side Leg Lifts

(Side-lying hip abduction)

Do this exercise up to 1 time a day.

- Lie on your side on a table or the floor. Keep your bottom leg bent and your top leg straight (see photo below).
- Lift your top leg up toward the ceiling, then slowly lower it back down.
- Be sure to keep your top knee straight. Do not let your hips roll forward or backward during the exercise.
- Repeat 3 sets of 10 to 30 reps. If you get tired before doing all of the reps, stop.



Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

UW Medicine Sports Medicine Clinic: 206.598.3920

Clinic hours:

Monday-Thursday: 6:30 a.m. to 7 p.m.

Friday: 6:30 a.m. to 5 p.m.

Saturday: 8 a.m. to 12 noon

Sunday: Closed