

# Knee Osteoarthritis

A GUIDE FOR PEOPLE WITH KNEE OSTEOARTHRITIS

**Effective Date:** September 15, 2008

## What happens in knee osteoarthritis?

Osteoarthritis (OA) is a disease of the cartilage. When a knee joint gets OA it feels stiff, sore and weak. Knee cartilage can have a healthy response to exercise. Forces in the knee joint influence the risk of osteoarthritis. Too much force can damage the cartilage and increase the risk of getting OA. This can happen if a joint is injured, or if a person is overweight. People with chronic knee pain are more likely to develop OA if their knee muscles are weak and the joint is stiff. Exercise is important to keep the muscles strong, the joint flexible and the cartilage nourished.

Common features of knee OA are:

- weakness when getting up from a chair;
- pain when going up or down stairs; and
- stiffness when trying to bend or straighten the knee.

## What can I do about knee osteoarthritis?

Learn as much as you can about OA. Start by reading *A Guide for People Living with Osteoarthritis* including the list of places to get more information.

- Maintain a healthy weight. If you are heavy, each pound of weight you lose can result in 4 pounds less force in your knee at each step.
- Keep your thigh muscles strong and your knee flexible so it bends and straightens all the way. Good balance is important too.
- Wear good shoes that absorb shock and have firm support around heels. Consider orthotics in shoes and a knee brace if pain continues.
- Avoid sitting on low chairs. You can protect a knee by using a raised toilet seat and a cane. Consider avoiding stairs.
- Maintain aerobic fitness by walking, bicycling or swimming.

## Try the exercises on the back of this page. Start gently. Increase slowly.

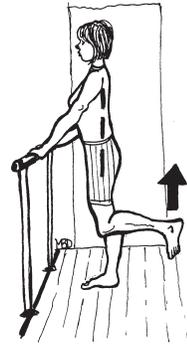
- If exercise causes more joint pain for over 2 hours, do less next time.
- If these exercises do not help or if they increase your pain, ask your doctor to recommend a physiotherapist (PT). A PT assessment will identify where you are tight, which muscles are weak, how your body compensates and what causes pain. A personal exercise program can then be created for you.

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**To strengthen, hold about 3 seconds and repeat 10 – 15 times. (3-4 times/week)**

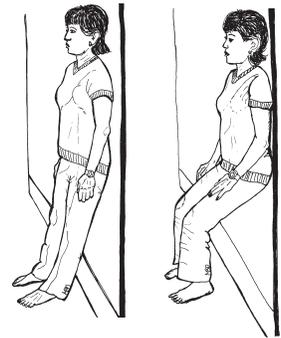
**1. Strengthen knee flexors - standing**

Stand on one leg while holding onto a firm object for support. Keep your body upright and abdomen tucked in. Bend the opposite knee, pulling your foot toward your buttock as far as possible. If this is easy you can put a small weight on your ankle or wear a heavy shoe.



**2. Strengthen thigh muscles**

Stand with your back against a wall. Feet are shoulder width apart and about 6 inches from the wall. Keep your abdominals tight and slide down the wall until your knees are about 30 – 45 degrees. Only go as far as you can feeling safe and without pain. A rolled towel between your knees helps alignment. Some people may need additional support – such as a nearby countertop to assist in returning to standing.

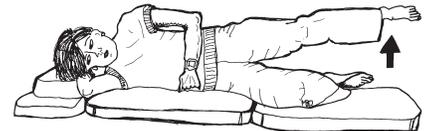


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**Hold stretches for 20 seconds. Repeat 2 –3 times. (daily)**

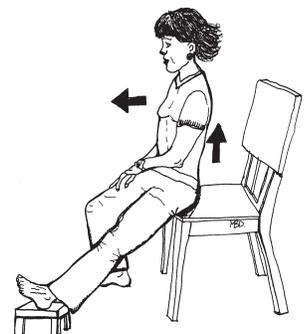
**3. Stretch knee & gently tighten thigh**

Lie on your back with your legs straight. Pull your toes up towards you and push the back of your knee down into the bed or floor. When the back of your knee is pushed into the bed or floor your heel should be able to rise a bit.



**4. Stretch Hamstring muscles**

Sit on the edge of a chair, with one leg out straight and your foot on a low stool or thick book. Pull toes up and keep the low back straight. Slowly bend forward from your hips without twisting your pelvis. You should feel the stretch at the back of your leg and knee.



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For advice about planning an exercise program, see *The Arthritis Helpbook* by Lorig and Fries, available at libraries, bookstores and The Arthritis Society.