

KNEE EXERCISES

Simple exercises

Leg stretch Sit on the floor with your legs stretched out in front. Keeping your foot to the floor, slowly bend one knee until you feel it being comfortably stretched. Hold for 5 seconds.

Straighten your leg as far as you can and hold for 5 seconds. Repeat 10 times with each leg.

Leg cross Sit on the edge of a table or bed. Cross your ankles over. Push your front leg backwards and back leg forwards against each other until the thigh muscles become tense. Hold for 10 seconds, then relax. Switch legs and repeat. Do 4 sets with each leg.

Sit/stands Sit on a chair. Without using your hands for support, stand up and then sit back down. Make sure each movement is slow and controlled. Repeat for 1 minute. As you improve, try to increase the number of sit/stands you can do in 1 minute and try the exercise from lower chairs or the bottom two steps of a staircase.

Step ups Step onto the bottom step of stairs with the right foot. Bring up the left foot, then step down with the right foot, followed by the left foot. Repeat with each leg until you get short of breath. Hold on to the bannister if necessary. As you improve, try to increase the number of steps you can do in 1 minute

Knee squats Hold onto a chair or work surface for support. Squat down until your kneecap covers your big toe. Return to standing. Repeat at least 10 times. As you improve, try to squat a little further. Don't bend your knees beyond a right angle.

Summary • Knee pain can be caused by a number of different things. Whatever the cause, exercise and keeping to a healthy weight can reduce symptoms. • You can take painkillers to ease pain. Taking them before exercise can help you stay active without causing extra pain. • Try the exercises suggested here to help ease pain and prevent future symptoms.

How does the knee work? The knee joint is where the thigh and shin bones meet. The end of each bone is covered with cartilage, which allows the ends of the bones to move against each other almost without friction. The knee joint has two extra pieces of cartilage called menisci, which spread the load more evenly across the knee. The knee joint is held in place by four large ligaments. These are thick, strong bands which run within or just outside the joint capsule. Together with the capsule, the ligaments prevent the bones moving in the wrong directions or dislocating. The thigh muscles (quadriceps) also help to hold the knee joint in place.

What causes knee pain? There are many different causes of knee pain. A common cause is osteoarthritis, a condition that affects the body's joints. The surfaces within the joint are damaged so the joint doesn't move as smoothly as it should. Your doctor will be able to tell you what has caused your pain, but the information and exercises here will be relevant for most cases.

What can be done to help? Medication There are a number of different tablets and creams available. Painkillers such as paracetamol and ibuprofen may help and you should use them if you need to. It's important that you take them regularly and at the recommended dose to help you control the pain and allow you to continue exercising. Don't wait until your pain is severe before taking painkillers.

You shouldn't take ibuprofen or aspirin if you're pregnant or have asthma, indigestion or an ulcer until you've spoken to your doctor or pharmacist. Medication can have side effects so you should read the label carefully and check with your pharmacist if you have any queries. If over-the-counter medication doesn't work, your doctor may prescribe stronger painkillers or capsaicin cream, which you can rub directly onto the knee.

Physiotherapy If your knee pain is affecting your activity and is persisting, ask your GP about referral to a physiotherapist. Physiotherapy can help you to manage pain and improve your strength and flexibility. A physiotherapist can provide a variety of treatments, help you understand your problem and get you back to your normal activities.

Surgery Surgery may be recommended if your pain is very severe or you have mobility problems. Your doctor will discuss with you what the surgery may involve.

What can I do to help myself? • lose weight (if you're overweight) • exercise – low-impact activities such as swimming, cycling and using a cross-trainer are particularly good.

Thigh muscle (quadriceps) exercises

Straight-leg raise (sitting) Sit well back in the chair with good posture. Straighten and raise one leg. Hold for a slow count to 10, then slowly lower your leg. Repeat this at least 10 times with each leg. If you can do this easily, try it with light weights on your ankles and with your toes pointing towards you. Try doing this every time you sit down.

Straight-leg raise (lying) Bend one leg at the knee. Hold the other leg straight and lift the foot just off the bed. Hold for a slow count of 5, then lower. Repeat 5 times with each leg. Try doing it in the morning and at night while lying in bed.