



DynamicHealth



How to help your knee pain



Cambridgeshire Community Services NHS Trust: delivering excellence in musculo-skeletal services and pelvic health physiotherapy across Cambridgeshire and Peterborough

This guidance has been produced by the DynamicHealth physiotherapy service. It offers simple measures to help you manage your knee problem safely; often the right advice and exercises are all you need to improve the problem. This leaflet has been made available to your GP, who may ask you to try the advice and exercises prior to consulting a physiotherapist.

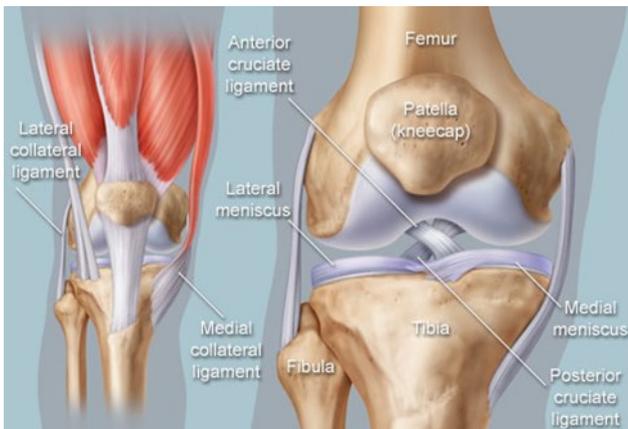
If your knee pain started after recent trauma, please seek medical advice before reading further.

About the knee

The knee is one of the largest joints in the body and what is called a hinge joint, which joins the thigh bone (femur) to the shin bones (tibia and fibula) and the kneecap (patella).

The ends of the bones are covered with a layer of cartilage that absorbs shock and allows the bones to glide easily against one another as they move.

Between the tibia and femur bone are two crescent-shaped pads of cartilage that reduce friction and disperse the weight of the body across the joint called the meniscus. The bones are held together by a joint capsule, four key ligaments and two key groups of muscles; your quadriceps and hamstrings.



Causes of knee pain

Knee pain is relatively common and not commonly related to anything serious. There are a number of reasons you may be experiencing knee pain; it may have appeared suddenly following a twist or a fall, or pain can develop gradually over time as the body changes with age. Initially knee pain can feel quite severe but will typically start to settle within a few days to a week or two.

The knee is one of the joints most commonly affected by Osteoarthritis and the most common reason for knee pain if you are over the age of 50. Whatever the cause, exercise and following our simple tips can help reduce the symptoms.

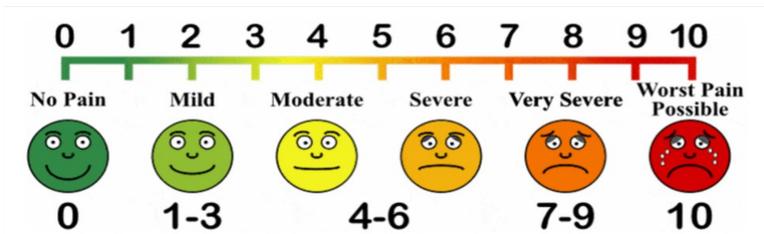
Knee exercises

How much should I do?

- **Exercise every other day** – allowing enough rest is important to let the soft tissues recover and develop.
- **Choose 3 or 4 exercises** from the set below that are challenging but manageable.
- **Perform 3–5 sets of 5 repetitions** of each exercise.
- **Rest for up to 1–2 minutes** between each set.
- **Once an exercise is easy, progress it** by increasing the number of repetitions (aim for 10) or for holding the positions for longer, or moving to a more challenging exercise.

How much pain is too much?

- **Before exercising, rate your pain** at that moment on a scale of 0–10, where 0 is no pain and 10 is the worst pain you can imagine.
- **A maximum pain level of 4/10 while exercising is fine**, as long as this eases within 45 minutes of the session and does not interfere with sleep or activities the next day.
- **If your pain increases beyond this, simplify the exercise** by reducing the range of movement or number of repetitions, or try an easier exercise.



Beginner exercises



Knee bends

Lie on your back, with your legs straight, wherever you are most comfortable. Slowly bend your knee by sliding your heel towards your buttocks and return to the starting position.



Knee extension

Lie on your back, with one leg bent and the other leg straight, wherever you are most comfortable. Place a towel rolled up under the straight knee. Pull your toes up towards your shin and straighten your knee, using the muscles at the front of your thigh, whilst keeping the back of your knee on the towel. Then relax back down.



Bridge

Lie on your back, wherever you are most comfortable, whether it be on your bed or on the floor. Bend your knees up, and place them hip width apart and your feet flat. Suck in your belly button and clench your buttocks, trying to perform and hold the pelvic tilt, which is shown and described in the very first exercise. Try to lift your hips up off the floor as high as you can whilst maintaining this pelvic position. Then lower back to the floor in a controlled manner.



Sit to stand

Choose a good steady chair such as a dining room chair for this exercise. Sit on the chair with your feet and knees hip width apart and feet flat on the floor. Aim to keep your knees and feet pointing forwards. Stand up purposefully pushing through your heels, straightening your knees and tucking your hips underneath you to stand up tall. Sit back down in a steady and controlled manner, leading with your hips as you simultaneously bend your knees and hips. Throughout the exercise try to keep looking forwards, it can be helpful to pick something to focus on.

Standing hip abduction

Stand up tall with your back against a wall and hold onto a support as you need to. Lift your leg sideways, keeping your leg against the wall and leading the movement with your heel. Then back to the start position. Keep your upper body straight throughout the exercise.



Seated knee extension

Sit up straight on a sturdy chair, with your feet flat on the floor. Bring your toes up towards your shin and straighten your knee, using the muscles at the front of your thigh in a controlled manner and then return back to the starting position.



Bent knee calf raises

Stand with your feet flat and hip width apart. Hold on to something for balance. Bend your knees to approx. 45 degrees. Then in a controlled manner lift your heels off the floor maintaining your knee position. Then return to the start position.



Advanced Exercises



Chair bridges

Lie on your back, with your lower legs rested on a sturdy chair. Suck in your belly button and clench your buttocks. Lift your hips up as high as you feel comfortable in a controlled manner and then slowly return to the start position.



Straight leg deadlift

Stand tall with your feet hip width apart. Hold a stick close to the top of your thighs and hands positioned just wider than shoulder width apart. With almost straight knees, tilt your upper body forwards and push your hips gently backwards until you feel a stretch in the back of your thighs. Straighten back to the starting position and repeat. Keep your shoulder blades squeezed together to help maintain a straight back and keep the stick close to your legs throughout.



Step ups

On your bottom step, place one foot flat on the step. Hold on for balance as required. Push up onto the step through this leg straightening your knee and hips. As you push up, raise the opposite knee/thigh up to hip height if you can. Then in a controlled manner step back down to the floor and repeat on the opposite leg.

Top tips

- Try and build your exercises into your everyday activities.
- You don't have to do all the exercises in one go.
- Don't feel you have to replicate the full movement of the exercise straight away. Use it as an initial guide.
- If one particular movement is painful, use this each week to evaluate your progress.
- It is normal for it to take 6-12 weeks before you see a good improvement in your pain, movement and strength.
- Don't stop moving your knee – muscles need movement to keep them healthy.
- If your sleep is poor, try supporting your knee on a pillow.
- General exercise can really help your recovery so try to keep going with other activities you enjoy to keep fit.
- Wear sensible, well-fitted shoes e.g. trainers.
- When resting, sit with your leg supported and ankle higher than your hip (especially if swollen).
- Try using an ice pack on your knee for 10-15mins (wrap in a damp towel to avoid ice burn) – DO NOT use ice on your knee if you have poor sensation over the area, an infected wound, Raynaud's syndrome or cryoglobulinemia.

Lifestyle and Wellbeing Support Services

<https://haycambspboro.co.uk/>

<https://healthyyou.org.uk/>

Speaking to the social prescriber at your GP practice can also be a very useful resource

Useful Information Sources

<https://cks.nice.org.uk/topics/knee-pain-assessment/>

<https://www.versusarthritis.org/about-arthritis/conditions/knee-pain/>

<https://www.versusarthritis.org/about-arthritis/conditions/osteoarthritis-of-the-knee/>

For further information about this service contact:

General Enquiries: 0300 555 0123

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Physiotherapy Dept, Brookfields Campus, 351 Mill Road, Cambridge, CB1 3DF

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