Knee pain

arthritis-uk.org



Arthritis UK

We are Arthritis UK

We're the 10 million adults, young people and children living with arthritis. We're the carers, researchers and healthcare professionals. The families and the friends. All united by one powerful vision: a future free from arthritis. So that one day, no one will have to live with the physical, emotional and practical challenges that arthritis brings.

There are many different types of arthritis. And we understand that every day is different. What's more, what works for one person may not help another. That's why our trusted information blends the latest research and expert advice with a range of lived experiences. In this way, we aim to give you everything you need to know about your condition, the treatments available and the many options you can try, so that you can make better-informed choices to suit your needs.

We're always happy to hear from you whether it's with feedback on our information, to share your story, or just to find out more about the work of Arthritis UK. **Contact us at healthinfo@arthritis-uk.org**

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What should I know about knee pain?

Knee pain is very common and can affect anyone. It can happen for lots of different reasons, and sometimes we don't know why it happens.

There are many possible causes, which can range from a simple muscle strain or tendonitis, to a sports or other injury, or a type of arthritis.

Knee pain becomes more common as we get older. And you're also at more risk of getting knee pain if you are overweight.

But many types of knee pain can be managed at home and may start to improve within a few days.

The best things you can do are to stay as active as you can and try to continue with your normal routine.

Most knee problems will be helped by some simple exercises to stretch and strengthen the leg muscles.

How does the knee work?

The knee is the largest joint in your body and one of the most used in everyday activities. It acts like a hinge, allowing you to bend your leg, but also allows a small amount of twisting movement.

The knee joint is where the thigh bone (femur) meets the shin bone (tibia). At the front of the knee joint is another bone, the kneecap (patella). Tendons connect your muscles to your bones and help you move your knee as you need to.

The bones are connected to each other by ligaments, which help to keep the joint stable. There are ligaments:

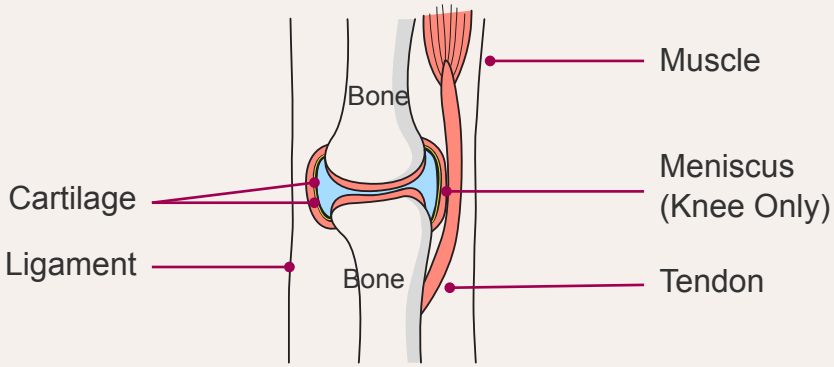
- at either side of the knee, the collateral ligaments, that stabilise the knee and prevent it moving too far sideways
- within the joint, the cruciate ligaments, which cross each other in an X shape and stabilise the knee to prevent too much movement backwards and forwards.

The ends of the thigh and shin bones and the back of the kneecap are covered in a smooth, slippery substance called cartilage, which helps the bones glide smoothly against each other as you bend and straighten your leg.

In addition, the knee has 2 wedge-shaped pieces of cartilage between the thigh and shin bones – 1 at either side of the knee. These are called menisci and they act a bit like shock absorbers to cushion and stabilise the joint.

The joint is surrounded by a capsule. The lining of the capsule, called the synovium, produces a fluid that helps lubricate and nourish your knee joint.

Figure 1. A normal joint





What causes knee pain?

Knee pain can be caused by injuries, such as sprains and strains, inflammation in the tendons, and conditions such as arthritis.

Some of the more common knee problems are explained below.

Sprains and strains

Sprains, which affect the ligaments, and strains, which affect the muscles, are quite common knee injuries. They may happen while playing sports, but can also occur in everyday life if you fall, twist your knee awkwardly or use it more than usual.

Tendonitis

Tendonitis can cause pain and swelling in the tendon between your kneecap and shin. This may happen following an injury or after repetitive use such as running or jumping.



Visit the NHS website for more information on tendonitis at: **nhs.uk/conditions/tendonitis**

Bursitis

A bursa is a fluid-filled pouch that helps cushion the joint and prevent irritation of the tendons. A bursa can sometimes become inflamed, which usually causes a dull ache.

You may have swelling, tenderness or warmth around your knee, and it may hurt when you press the affected area. Your skin may also look red, but this can be harder to see on brown or black skin.

Torn ligaments, tendons or menisci

Injuries that result in tearing of the ligaments, tendons or menisci will usually cause the joint to become unstable. You may hear a popping sound when the injury occurs.

Your knee may give way when you try to stand, you may be unable to straighten your leg, or it may get stuck or lock when you straighten your knee. You should seek prompt medical attention if any of these things happen.

Osgood–Schlatter's disease

Osgood–Schlatter's disease is a common cause of knee pain in children and young people. It causes the bony lump below your kneecap to become painful and swollen.

It usually happens during growth spurts and is more common in people who do a lot of physical activity like sports or athletics.

Patellofemoral pain syndrome

Patellofemoral pain syndrome is a common knee problem that mainly affects children and young adults. It usually causes pain behind or around your kneecap.

You may have pain when using stairs, running, squatting, cycling, or sitting with flexed knees.

Joint hypermobility

Hypermobility just means you can move some or all your joints more than most people can. Having hypermobile joints can be linked to several specific conditions, but it doesn't always cause problems, especially when you're younger.

However, hypermobility can sometimes make sprains, or even dislocations, more likely as your ligaments may be looser or more stretchy than other people's. It's therefore important to keep your muscles strong to help control this extra movement.



Should I see a doctor?

Most knee pain will improve with simple treatments you can try for yourself, but there are times when you should get medical advice.

You should arrange to see a doctor or a first contact physiotherapist if:

- you're in severe pain
- your knee is swollen
- it doesn't get better after a few weeks
- you can't move your knee or put any weight on it
- your knee locks, clicks painfully or gives way.

Painless clicking or grinding noises, called crepitus, are quite common and do not mean there's anything wrong with your knee.



What can I do to help myself?

Balancing rest and exercise

During the first 24 to 48 hours after your knee problem has started, you could:

- Rest your knee, but avoid long periods where you don't move at all.
- Gently bend and straighten your knee as far as you comfortably can. Do this for 10 to 20 seconds every hour, even if you're sitting or lying down.

After 48 hours:

- Try to use your leg more, as staying active can help with long-term pain.
- When going upstairs, lead with your stronger leg and use the handrail.
- When going downstairs, lead with your painful leg and use the handrail.
- Try to stick to your normal routine if you can, as this can help your recovery. This includes staying at work or returning to work.

If there are aspects of your job that are difficult because of knee pain, speak to your employer about reasonable adjustments. Employers may ask for a fit note setting out the changes needed. You can get this from your GP or first contact physiotherapist.

Avoid heavy lifting until your pain has eased and you have a good range of movement in your knee.

Low-impact exercise, such as cycling and swimming, can be useful

when recovering from a knee injury. You can also try the exercises at the back of this booklet.

Pain relief medicines

Paracetamol

If you need pain relief, you could try taking paracetamol for a few days. It's widely available over the counter and cheaper brands work just as well as more expensive ones.

Make sure you follow the instructions that come with the medicine or the advice of a pharmacist.

Non-steroidal anti-inflammatory drugs (NSAIDs)

NSAIDs can help reduce pain, inflammation and swelling. They are available as gels and creams that you apply to your skin, and as tablets or capsules.

Ibuprofen is widely available over the counter, but it's best to check with a pharmacist whether it's suitable for you.

You might prefer to try the creams or gels first, especially if you have trouble taking tablets. There's good evidence for ibuprofen gel for knee pain, and the amount that gets into your bloodstream is much less than with tablets, so there is less risk of side effects.



Heat/ice packs

Heat

Heat is an effective and safe treatment for most aches and pains. But don't use heat on a new injury as this could increase bleeding under the skin.

You could use a wheat bag, heat pads, a hot water bottle or a heat lamp. Gentle warmth will be enough.

Use a cloth between the heat pack and your skin and check regularly to make sure it's not burning you.

Ice

Many people find that ice is helpful, especially to help reduce swelling. You could use a bag of frozen peas if you don't have a ready-made ice pack.

Wrap the ice pack or bag of frozen peas in a cloth before placing it on your skin. Check your skin regularly, and don't leave the ice pack in place for more than 20 minutes. You can repeat this every 2 to 3 hours.

Suitable footwear

High heels and shoes that don't fit well or support your feet can make knee pain worse. They can also cause problems in your feet, hips and back.

Comfortable shoes with a low heel and well cushioned soles are best for your joints. Arch supports may be helpful if you have flat feet.

Weight management

Carrying extra body weight can increase your risk of developing knee pain. If you already have knee pain, extra weight can make it worse, as it increases strain on your knees and also increases inflammation in the body. Losing even a small amount of weight can make a big difference to knee pain.

Try to eat a healthy, balanced diet with plenty of fruit and vegetables, and cut down on foods that are high in fat or sugar.

The NHS Better Health website has advice and practical tools to help you lose weight safely and make healthier changes to your diet.

Read more about the NHS weight loss plan:
nhs.uk/better-health/lose-weight



Could my knee pain be arthritis?

Knee pain can develop gradually, come on suddenly, or it might come and go. Most types of knee pain will improve with simple treatments that you can try without seeing a healthcare professional.

If your knee pain isn't improving, then it could be caused by arthritis. 'Arthritis' simply means inflammation in a joint, but there are several different types of arthritis:

- **Osteoarthritis** is the most common type of arthritis and usually affects people over the age of about 45. It commonly affects the knee and can cause pain, stiffness and swelling either in one knee or both.

  Pain tends to be worse at the end of the day or when moving your knee and often improves with rest. Your knee may feel stiff in the morning but this usually eases after half an hour or so.

- **Rheumatoid arthritis** is an autoimmune condition that causes inflammation in the joints. It happens when your immune system mistakenly attacks healthy tissue in your joints. Symptoms can vary, sometimes improving and then flaring up again.

  It usually affects multiple joints in the body, and if it affects a joint on one side of the body it's likely to affect the same joint on the other side.

  Joint stiffness usually lasts longer than in osteoarthritis. It may be worse in the morning or after periods of inactivity but can sometimes last a lot longer.

You may have other, more general symptoms – such as extreme tiredness (fatigue) that doesn't improve with rest, or feeling generally unwell. Sometimes your eyes may be sore, red or sensitive to bright light – this is called uveitis and needs prompt treatment.

- **Gout** is a form of arthritis caused by uric acid crystals that can collect in the cartilage in a joint. It commonly affects the big toe but can affect any joint, including the knee.

  A gout attack can cause sudden, severe pain, swelling and redness in the affected joint.

- **Septic arthritis** can also cause knee pain. It is likely to be very painful and usually develops quickly. It's commonly caused by an infected cut or wound to the knee.

  It can also happen if an infection elsewhere in the body spreads through the blood to the joint, or sometimes as a complication of joint surgery.

  Septic arthritis needs urgent treatment. If your knee is red, hot, swollen and painful and you have a fever or sickness, you should go to A&E or call 111.



You can find out more about the above types of arthritis at our website: **arthritis-uk.org**

How are knee problems diagnosed?

Your healthcare team will often be able to diagnose your knee problem from your symptoms along with a physical examination of your knee.

Occasionally, they may suggest tests or a scan. These are most helpful when there is some doubt about the diagnosis. In most cases they won't be needed.

However, X-rays or other scans may be taken if your knee pain is affecting your everyday activities to the point where surgery might be needed.

You will be offered blood tests if your doctor thinks you may have rheumatoid arthritis. There isn't a single blood test for rheumatoid arthritis, but there are several tests which together may point to a diagnosis of rheumatoid arthritis.

If your doctor suspects gout, you may have a blood test to check the urate levels in your blood. Or a sample of fluid may be taken from the knee joint and examined for crystals.

If your doctor thinks you may have septic arthritis, you may have blood tests and a sample of fluid taken from your knee to check for infection.

What treatments are there for knee pain?

If your pain doesn't improve, your doctor may suggest other treatments depending on what is causing it.

Stronger painkillers

If your pain is severe, you may be prescribed stronger pain relief medications, such as higher doses of ibuprofen, naproxen or codeine. Because these have more side effects than standard pain relief medications, they will usually only be prescribed for a short time.

Your doctor may suggest using these medicines alongside other treatments to help manage your knee pain. These might include physiotherapy, talking therapies, support with weight loss, pain management programmes, surgery or injections.

Physiotherapy

Physiotherapy may help your knee pain, depending on what has caused it and which part of your knee hurts. Physiotherapists can give advice tailored to your individual situation.

Treatments your physiotherapist may suggest include:

- a programme of exercises tailored to your needs
- applying adhesive tape over the kneecap to change the way your kneecap sits or moves
- knee braces – these can support or stabilise your knee but are not suitable for all knee problems. Your physiotherapist will be able to advise you.

Talking therapies and pain management programmes

Pain can affect your mood, especially if it lasts a long time, and feeling low can make your pain worse. This can become a vicious circle. If you're feeling low or anxious, it's important to talk to someone you feel at ease with.

Talking therapies can also be useful for some people. You may be offered counselling on the NHS if you're struggling with long-term pain. Counselling on the NHS usually consists of 6 to 12 sessions. You can also pay for counselling privately.

Pain management programmes can also help you develop skills and strategies to manage long-term pain and its impact on your life.

ESCAPE-pain is a rehabilitation programme that combines exercise with advice and support to help you manage long-term joint pain. It is delivered in small groups over 6 weeks, and is available in many locations across the UK.



Find out if there is an ESCAPE-pain programme near you: **escape-pain.org**

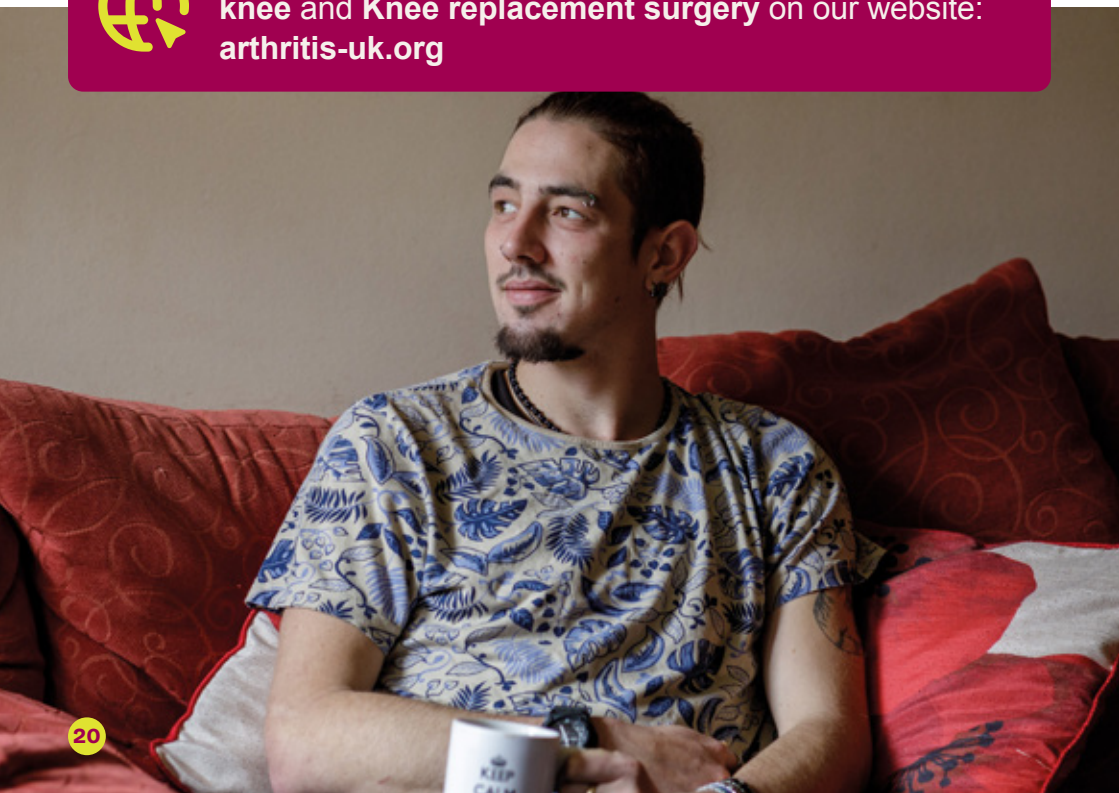
Surgery or injections

Surgery and injections into the knee are not recommended for most types of knee pain, as many people often improve without these treatments.

A steroid injection will not cure the cause of your knee pain but may provide short-term relief from pain and swelling caused by an arthritis flare-up or an attack of gout. Unfortunately, injections can sometimes cause side effects, so it's worth discussing with your doctor whether an injection would be a good option for you.

If you have osteoarthritis of the knee and it's causing you a lot of pain and difficulty with everyday activities, you may be referred to discuss whether surgery might help.

You can find out more about **Osteoarthritis of the knee** and **Knee replacement surgery** on our website: **arthritis-uk.org**



What if my knee pain is affecting my work?

If you have a job, try to continue working if you can. Speak to your employer about any changes that could help you manage at work. These might include working from home, changing your hours or making adjustments to your workplace.

If you do need to take some time off, getting back to work as soon as you can may help your recovery. You don't need to wait until your knee problem has completely gone to do this.

If you have to take time off, keep in contact with your employer and discuss what can be done to help you return to work. If your work involves heavy lifting or other physically demanding tasks, you might need to do lighter duties or fewer hours for a while.

If your workplace has an occupational health advisor, they can help suggest what work you are fit to do and arrange for any simple adjustments to your work or workplace to help you stay in work. You can ask for a workplace assessment. Tell whoever carries it out about the problems you have at work.

When working, try to take regular breaks, and have a stretch and walk around. You could set a timer on your phone or computer to remind you to do this every 1 to 2 hours. If you're having any difficulties travelling to or from work, or need an item of equipment, the government's Access to Work Scheme might be able to help. You can refer yourself for this.



For more information visit: **gov.uk/access-to-work**

Knee exercises

Keeping active is an important part of managing knee pain and will help your recovery.

Being physically active while recovering from knee pain can:

- help prevent the pain coming back
- help to maintain your fitness level or improve it – any activity is better than none
- keep the muscles that support your joints strong and flexible.

Keeping the muscles around the knee strong will take some of the strain off the knee joint. These muscles include the thigh, calf and hip muscles.

This section contains some simple exercises that are designed to stretch, strengthen and stabilise your knee.

It might help to go through these exercises with a physiotherapist at first, or they might be able to give you a personalised exercise plan.

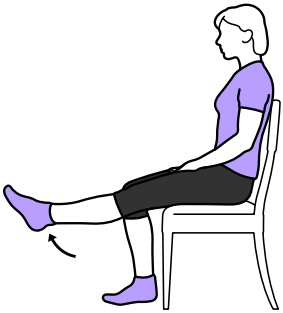
If you feel some pain while exercising it doesn't mean you're harming your knee. You could try taking some pain relief medications if they're suitable for you. Once they've had time to take effect, try the exercises again. People often find the exercises get easier over time.

Knee stretching exercises

Try to do these exercises every day.

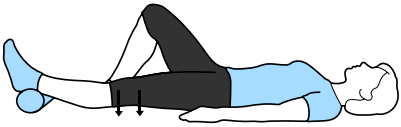
Active knee extensions

Sit with good posture in a chair. Straighten 1 of your legs, hold for a slow count to 10 and then slowly lower your leg. Repeat 10 times with each leg. Try to do this exercise regularly throughout the day.



Straight-knee stretch

Lie down on your back with a rolled-up towel under the ankle of your affected leg. Bend the other leg at the knee. Use the muscles of your straight leg to push the back of your knee firmly towards the bed or the floor. Hold for a slow count of 5.



Repeat at least 5 times with each leg. Try to do this at least once a day. This will help you maintain your ability to fully straighten your knee.

Bent-knee stretch



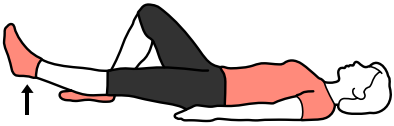
Sit on the floor with your legs stretched out straight in front of you. Slowly bend a knee up towards your chest, sliding your foot along the floor, until you feel a gentle stretch. Hold for 5 seconds. Straighten your leg as far as you can and hold in this position for 5 seconds.

Repeat 10 times with each leg. If you can't get down onto the floor, sit on a sofa and use a board or tea tray as a surface to slide your foot along.

Knee strengthening exercises

The following exercises may be harder to do, so try to do them 2 to 3 times a week.

Straight-leg raise (lying)



Lie down and bend one of your legs at the knee. Hold your other leg straight and lift your foot just off your bed or floor. Hold for a slow count of 5, then lower. Do this as many times as you comfortably can, rest for a minute, then do this a further 3 times.

Step ups



Step onto the bottom step of stairs with your right foot. Bring up your left foot, then step down with your right foot, followed by your left foot. Hold on to the banister if necessary. Repeat with each leg as many times as you comfortably can. Rest for 1 minute and then repeat this another 2 times. As you improve, use a higher step, or take 2 at a time.

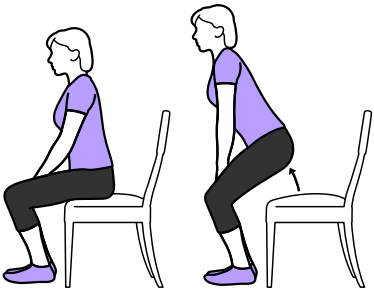
Knee squats



Hold onto a chair or work surface for support. Squat down until your kneecap is directly over your big toe. Your knees should not go in front of your toes. Return to your normal standing position.

Repeat as many times as you comfortably can, rest for 1 minute, then repeat another 2 times. As you improve, try to squat a little further, but don't bend your knees beyond a right angle.

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 until you can't do any more.

Rest for 1 minute then repeat another 2 times. If the chair is too low, start with rising from a cushion on the seat and remove when you don't need it anymore.



Notes

Discover our support services

You don’t need to face arthritis alone. Get the information, advice and support that you need.



Call our free helpline:
0800 5200 520



Connect with our online community, go to:
community.arthritis-uk.org



Chat with AVA, our online assistant, go to:
arthritis-uk.org/ask-AVA-our-virtual-assistant



Track your symptoms with our easy app, go to:
arthritis-uk.org/track-my-arthritis-symptoms-app

Thank you!

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Support our work

At Arthritis UK we rely on donations to fund our work. Help support people with arthritis and fund life-changing research by making a donation today. Every contribution makes a difference.

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