SYMPTOM

Anterior knee pain

Anterior knee pain is discomfort felt at or around the front of the knee.

WHAT IT FEELS LIKE
Aching, soreness, or sharp pain around the kneecap

WHERE IT IS FELT
At or around the front of the knee

MOST COMMON CAUSES
Patellofemoral pain, tendon overload, osteoarthritis

WHEN IT IS URGENT
Hot, swollen knee with fever or feeling unwell

USUALLY LASTS
Days to months, based on the cause and activity

SEE A DOCTOR IF
Pain persists several weeks, worsens, or limits daily activities

Overview

Anterior knee pain means pain at the front of the knee, including around, behind, above, or below the kneecap. It is a symptom rather than a single condition.

Pain may begin after increased exercise, repeated kneeling, a fall, or a direct blow. It can also develop gradually without a clear injury. Most cases are not emergencies, but a hot and swollen knee, fever, major injury, or inability to use the leg needs prompt assessment.

What it may feel or look like

The pain may be dull, aching, or briefly sharp and can affect one or both knees. It may occur during running, jumping, squatting, kneeling, climbing stairs, or prolonged sitting with the knee bent.

Other features can include:

Clicking without pain or swelling is often harmless. True locking, where the knee becomes physically stuck and cannot straighten, should be assessed.

- Tenderness around or below the kneecap

- Mild swelling or stiffness
- Grinding, clicking, or popping
- A feeling that the knee may give way
- Pain when getting up from a chair

Common causes

Patellofemoral pain involves the kneecap and the joint beneath it. It often follows an increase in running, jumping, squatting, or stair use. Training load, muscle strength, movement patterns, and footwear may contribute.

Patellar tendinopathy affects the tendon between the kneecap and shinbone, causing pain just below the kneecap during jumping, running, or forceful knee straightening.

Quadriceps tendinopathy causes overload pain just above the kneecap, often after repeated jumping, sprinting, or heavy lifting.

Osteoarthritis is more likely with age or after a previous knee injury. It can cause pain, stiffness, swelling, or grinding, although symptoms do not always match X-ray changes.

Other causes include irritation of a fluid-filled bursa or tissue beneath the kneecap. In growing children and teenagers, irritation where the patellar tendon attaches to the shin can cause a tender bump below the knee.

Pain may occasionally come from the hip, lower back, or nerves. Less common but important causes include fracture, torn tendon, gout, inflammatory arthritis, and joint infection.

When to seek medical care

Seek same-day medical care if your knee becomes hot, clearly swollen, and very painful, especially with fever, chills, or feeling generally unwell. These symptoms can indicate joint infection or intense inflammation.

Go to an emergency department after an injury if:

Book a routine appointment if pain lasts several weeks, keeps returning, worsens, or limits sleep, work, exercise, or daily movement. Seek assessment sooner for persistent swelling, repeated giving way, true locking, or unexplained pain at rest.

- The knee or leg looks deformed

- Bone is visible or there is a deep open wound
- Your foot becomes cold, pale, numb, or unusually weak
- You cannot straighten the knee after a sudden injury
- You cannot put weight on the leg after significant trauma

How the cause is found

A healthcare professional will ask where the pain is, how it began, what affects it, and whether the knee swells, locks, or gives way. They may ask about activity changes, previous injuries, fever, other painful joints, and your general health.

The examination may include watching you walk and checking knee movement, tenderness, strength, and stability.

Imaging is not always needed. An X-ray may be used after certain injuries or when arthritis is suspected. Ultrasound can show some tendon or bursa problems. MRI may be considered for suspected deeper injury, locking, or persistent symptoms that have not improved.

Blood tests or a joint-fluid sample may be needed if infection, gout, or inflammatory arthritis is possible.

Treatment and self-care

Treatment depends on the cause. If pain followed increased activity, temporarily reduce movements that aggravate it. Complete rest is not usually necessary; walking or another comfortable activity can help you stay active.

A wrapped ice pack may ease pain after activity or minor injury, while gentle warmth may help stiffness. Protect your skin and limit exposure to prevent burns or cold injury.

Over-the-counter pain medicine may help but is not safe for everyone. Follow the label and ask a pharmacist or healthcare professional if you have other health conditions, take regular medicines, or are unsure what to use.

Exercise-based rehabilitation is often recommended for patellofemoral pain and tendon problems. A physiotherapist may suggest gradual thigh and hip strengthening and changes to training load. Taping or a brace may offer short-term support but does not replace rehabilitation.

Avoid repeatedly pushing through increasing pain. Return to activity gradually once ordinary

movement is comfortable and swelling is not increasing.

What to expect

Recovery depends on the cause and how long pain has been present. Minor irritation may settle within days or weeks. Tendon and patellofemoral problems may require several weeks or months of consistent exercise and activity changes.

Symptoms can fluctuate. A brief increase after extra activity does not always mean new damage, but repeated or steadily worsening pain should be reassessed.

Common questions

Can I exercise with anterior knee pain?

Often, yes, if the activity does not sharply increase pain or swelling. Temporarily reducing running distance, hills, jumping, or deep squats may help. Return to harder activity gradually.

Does grinding mean my kneecap is damaged?

Not necessarily. Grinding or crackling is common without joint damage. It is more concerning with persistent pain, swelling, locking, or reduced movement.

Should I use a knee brace?

A brace or taping may provide short-term relief for some causes. Proper fit matters, but strengthening and sensible activity changes are usually more important.

Can foot position cause pain at the front of the knee?

Foot and leg movement may contribute, but it is rarely the only factor. Training changes, muscle capacity, previous injury, and demands on the knee can also matter.

Sources

- Willy RW, Hoglund LT, Barton CJ, et al. "Patellofemoral Pain." Journal of Orthopaedic & Sports Physical Therapy . 2019;49(9):CPG1-CPG95.
- Crossley KM, van Middelkoop M, Callaghan MJ, et al. "2016 Patellofemoral Pain Consensus Statement." British Journal of Sports Medicine . 2016;50:844-852.

- Bunt CW, Jonas CE, Chang JG. "Knee Pain in Adults and Adolescents: The Initial Evaluation." American Family Physician . 2018;98(9):576-585.
- American College of Radiology. ACR Appropriateness Criteria: Acute Trauma to the Knee . 2020.
- American Academy of Orthopaedic Surgeons. Patellofemoral Pain Syndrome . OrthoInfo.