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READ

What's Causing My Knee Pain?

When your knee's healthy, it moves easily allowing you to move without pain.

But when it hurts, it's natural to wonder why. Here are a few reasons you may be experiencing knee pain.

How the knee works

The knee is one of the largest weight-bearing joints in the body. A healthy knee moves easily, allowing you to walk, turn, and do many other activities without pain. A complex network of bones, cartilage, ligaments, muscles, and tendons work together to make the knee flexible.

There are three bones in your knee joint. Your thighbone (femur) sits on top of your shinbone (tibia). When you bend or straighten your knee, the rounded end of your thighbone rolls and glides across the relatively flat upper surface of your shinbone. The kneecap (patella) provides leverage and reduces strain on your muscles as your knee moves.

In a healthy knee joint, the surface of each bone is very smooth and covered with a tough protective tissue called cartilage.

Ligaments line the sides and back of the knee, holding the bones of the knee joint in place. These ligaments work with the muscles, bones, and tendons so you can bend and straighten your knee. Fluid-filled sacs (bursae) cushion the area where skin or tendons glide across bone. The knee also has a lining (synovium) that secretes a clear liquid called synovial fluid. This fluid lubricates the joint, further reducing friction and making movement easier.

As you might expect, there are many different reasons you could be feeling knee pain, including arthritis, injury, infection, and more.¹⁻⁶

Types of arthritis and associated diseases

There are more than 100 different types of arthritis and associated diseases.¹⁻² A few types likely to affect the knee include:

Osteoarthritis

One of the most common forms of arthritis is osteoarthritis (OA)¹⁻² and is a leading cause of knee pain. OA is a degenerative joint disease that causes the cartilage in your joints to break down. When that layer of cartilage — which is meant to “cushion” the joints and protect the surface of the bones — is damaged or worn away, your bones grind against one another, and that grinding hurts. You can feel it climbing stairs, working in the garden, or just bending your knees to sit. It may even keep you up at night.

OA can damage the entire knee or be limited to just one side of the knee. You can also experience pain under the kneecap that your doctor may diagnose as patellofemoral pain. Factors leading to the development and progression of OA may include aging, obesity, joint injuries, and a family history of arthritis (genetics).

Rheumatoid arthritis

Rheumatoid arthritis (RA) is an autoimmune disorder in which the lining of the joint (synovium) becomes inflamed. This inflammation causes pain, swelling, and can eventually erode or deform the joint. According to the Mayo Clinic, RA is the most debilitating form of arthritis.²

Pseudogout

Pseudogout is caused when calcium crystals develop in the synovial fluid of the joint. It is commonly mistaken for gout, which is caused when uric acid crystals develop in the joint. Both forms can occur in the knee joint.²

Injury

A knee injury can affect any part of the joint.

A few injuries likely to occur in the knee include:

Kneecap dislocation

This occurs when the kneecap slides out of place toward the outside of the knee. It's usually the result of trauma, a fall, or abruptly changing directions when the leg is planted.³

Ligament tear

A tear can occur in any of the four knee ligaments. The most commonly torn/injured ligament is the anterior cruciate ligament (ACL)⁴ which is common among athletes.²

Meniscus tear

This occurs when the cartilage between your thighbone and shinbone is torn. It's usually caused by a sudden twist of the knee.²

Fracture

Any of the three knee bones can break, especially if the bones are brittle from age or osteoporosis.²

Knee bursitis

Bursitis is a condition in which the fluid-filled sacs (bursae) become inflamed due to overuse or injury to the joint.

Patellar tendinitis

Tendinitis is a condition in which a tendon becomes irritated and inflamed. It can occur to any type of tendon. According to the Mayo Clinic, activities such as jumping sports, running, skiing, or even cycling may develop inflammation in the patellar tendon.²

A few more reasons for knee pain

Infection

An infection in the knee can lead to swelling, pain, and redness. Septic arthritis, a form of knee infection, often occurs with a fever.

Pain in the hip, ankle, or foot

Experiencing pain in another portion of the leg can cause a change in the way we walk or stand as we attempt to alleviate the pain. This change can lead to increased stress and wear of the knee joint.

Foreign object

As bone and cartilage of the knee wear, it's possible for a piece to break off over time. Pain occurs when these pieces begin to disturb the knee's movement.

Chondromalacia patella

This condition occurs when the cartilage under the kneecap wears out or becomes damaged. The kneecap then rubs against the thighbone during movement which causes pain.⁵

Baker's cyst

When synovial fluid builds up behind the knee, a Baker's cyst can form. These usually develop because of damage to the joint or a previous injury and sometimes resolve on their own.⁶

While this is not an exhaustive list of all the possible reasons for knee pain, the good news about these knee conditions is that they are treatable. Arthritis, for example, is a disease that typically worsens over the years, so it is common for treatment to involve more than one approach and to change over time. For some people, nonsurgical treatments such as lifestyle changes, medications, and walking aids help alleviate certain types of pain. For others, replacing lost cartilage with tissue grafts may help restore normal function. And for many, knee replacement surgery may be an appropriate solution. Together, you and your doctor can determine the best treatment plan for you.

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