



## What are they?

### Points To Remember About Knee Problems

- Knee problems may be caused by injury, arthritis, or other diseases.
- Men, women, and children can have knee problems. They occur in people of all races and ethnic backgrounds.
- The symptoms of your knee problem depend on the type of injury or disorder. However, most knee problems cause pain and may limit your ability to move your knee.
- Doctors diagnose knee problems by taking a medical history, performing a physical examination, and ordering tests.
- Treatment of knee problems depends on the type of injury or condition.
- Some knee problems, such as those resulting from an accident, can't be prevented. However, you can prevent some knee problems.
- When living with knee problems, everyone should get range of motion, strength, and aerobic exercise regularly.

Knee problems happen when you injure or develop disease in your knee and it can't do its job.

The knees provide stable support for the body. They also allow your legs to bend and straighten. Both flexibility and stability are needed to stand, walk, run, crouch, jump, and turn. Other parts of your body help the knees do their job. These are:

- Bones.
- Cartilage.
- Muscles.
- Ligaments.
- Tendons.

# What are the symptoms?

The symptoms of your knee problem depend on the type of injury or disorder.

## Arthritis

The most common type of arthritis of the knee is osteoarthritis. In this disease, the cartilage in the knee gradually wears away. The symptoms of osteoarthritis in the knee are:

- Pain.
- Stiffness.

Rheumatoid arthritis and gout are other types of arthritis that affects the knee. In rheumatoid arthritis, the knee becomes inflamed and cartilage may be destroyed. The symptoms of rheumatoid arthritis and gout in the knee can include:

- Pain.
- Stiffness.
- Swelling.
- Redness.
- Hot to the touch.

## Cartilage Injuries and Disorders

### Chondromalacia

Chondromalacia happens when the cartilage of the knee cap softens. This can be caused by

- Injury.
- Overuse.
- Muscle weakness.
- Problems with the knee alignment.
- Injury to the knee cap that tears off a piece of cartilage or a piece of cartilage containing a bone fragment.

The most frequent symptom of chondromalacia is a dull pain around or under the kneecap that worsens when walking down stairs or hills. A person may also feel pain when climbing stairs or when the knee bears weight as it straightens.

The disorder is common in runners and is also seen in skiers, cyclists, and soccer players.

### Meniscus Injury

The meniscus is a C-shaped piece of cartilage that acts like a pad between your femur or thigh bone and tibia or shin bone. You can easily injure it when the knee is twisted while bearing weight. You may have a partial or total tear. If the tear is tiny, the meniscus stays connected to

the front and back of the knee. If the tear is large, the meniscus may be left hanging by a thread of cartilage. The seriousness of the injury depends on the location and the size of the tear.

Symptoms of meniscus injuries include:

- Pain, particularly when the knee is straightened.
- Swelling.
- Clicking sound in the knee.
- Locking of the knee joint.
- Weakness.

Sometimes if you injure your knee, but did not seek treatment, you can develop symptoms months or years later. Although symptoms of meniscal injury may disappear on their own, they frequently persist or return and require treatment.

## **Ligament Injuries**

Two commonly injured ligaments in the knee are:

- Anterior cruciate ligament (ACL).
- Posterior cruciate ligament (PCL).

An injury to these ligaments is sometimes called a "sprain." The ACL is most often stretched or torn (or both) by a sudden twisting motion. The PCL is usually injured by a direct impact, such as in an automobile accident or football tackle. The symptoms may include:

- Hearing a popping sound.
- Buckling of the leg when you try to stand on it.

The medial and lateral collateral ligaments are usually injured by a blow to the outer side of the knee. This can stretch and tear a ligament. These blows frequently occur in sports such as football or hockey. The symptoms may include:

- Feeling a pop and the knee may buckle sideways.
- Pain.
- Swelling.

## **Tendon Injuries and Disorders**

There are three main types of tendon injuries and disorders.

### **Tendinitis and Ruptured Tendons**

Tendon injuries range from tendinitis (inflammation of a tendon) to a ruptured (torn) tendon. Torn tendons most often occur from:

- Overusing a tendon (particularly in some sports). The tendon stretches like a worn-out rubber band and becomes inflamed.
- Trying to break a fall. If thigh muscles contract, the tendon can tear. This is most likely to

happen in older people with weak tendons.

One type of tendinitis of the knee is called jumper's knee. In sports that require jumping, such as basketball, the tendon can become inflamed or can tear.

Symptoms of tendinitis include:

- Pain and tenderness to the touch.
- Pain when running, hurrying, walking, or jumping.

Symptoms of ruptured tendons symptoms include:

- Pain.
- Difficulty bending or extending the leg.
- Difficulty lifting the leg against gravity.

### **Osgood-Schlatter Disease**

Osgood-Schlatter disease is caused by stress or tension on part of the growth area of the upper shin bone. It can happen if your tendon tears away from the bone, taking a piece of bone with it. Young people who run and jump while playing sports can have this type of injury. The symptoms are usually:

- Pain below the knee that usually worsens with activity and is relieved by rest.
- A bony bump below the knee cap that is painful when pressed.

### **Iliotibial Band Syndrome**

Iliotibial band syndrome occurs when a tendon rubs over the outer bone of the knee causing swelling. It happens if you overuse the knee for a long time. This sometimes occurs in sports training. The symptoms can include:

- Pain at the side of the knee, which can travel up the side of the thigh.
- Feeling a snap when the leg is bent and then straightened.
- An ache or burning sensation at the side of the knee during activity.

### **Other Knee Injuries or Disorders**

#### **Osteochondritis Dissecans**

Osteochondritis dissecans happens when not enough blood goes to part of the bone under a joint surface. The bone and cartilage gradually loosen and some cartilage may break off. A person with this condition may develop osteoarthritis. The symptoms can include:

- Pain, which may be sharp if the cartilage breaks off.
- Weakness.
- Locking knee joint.

## **Plica**

Plica syndrome occurs when bands of tissue in your knee, called plicae, swell from overuse or injury. The symptoms can include:

- Pain.
- Swelling.
- Clicking sensation in the knee
- Weakness
- Locking of the knee joint.

## **Is there a test?**

Doctors diagnose knee problems by using:

- Medical history.
- Physical examination.
- Diagnostic tests, such as x-rays, bone scan, CAT scan, MRI, arthroscopy, and biopsy.

## **How are they treated?**

The treatment of knee problems depends on your type of injury or condition.

### **Arthritis in Knees**

The most common type of arthritis of the knee is osteoarthritis. In this disease, the cartilage in your knee gradually wears away. Treatments for osteoarthritis are:

- Medicines to reduce pain, such as aspirin and acetaminophen.
- Medicines to reduce swelling and inflammation, such as ibuprofen and nonsteroidal anti-inflammatory drugs (NSAIDs).
- Exercises to improve movement and strength.
- Weight loss.

Rheumatoid arthritis is another type of arthritis that affects the knee. In rheumatoid arthritis, your knee becomes inflamed and cartilage may be destroyed. Treatment includes:

- Physical therapy.
- Medications.
- Knee replacement surgery for a seriously knee damage.

### **Cartilage Injuries and Disorders**

Treatment for cartilage injuries includes:

- Exercises to strengthen muscles.
- Electrical stimulation to strengthen muscles.
- Surgery for severe injuries.

## **Ligament Injuries**

Treatment for ligament injuries include:

- Ice packs, right after the injury to help decrease swelling.
- Exercises to strengthen muscles.
- A brace.
- Surgery for more severe injuries.

## **Tendon Injuries and Disorders**

Treatment for tendon injuries and disorders includes:

- Rest.
- Ice.
- Elevation.
- Medicines such as aspirin or ibuprofen to relieve pain and reduce swelling.
- Limiting sports activity.
- Exercise for stretching and strengthening.
- A cast, if there is a partial tear.
- Surgery for complete tears or very severe injuries.

## **Other Knee Injuries**

The primary treatment for osteochondritis dissecans is:

- Rest and limiting activity.
- Physical therapy.

If conservative measures do not help or the cartilage fragments are loose, surgery may be recommended. Surgery can include:

- A surgeon placing a pin or screw. This can stimulate new blood flow to the cartilage.
- A surgeon scraping the cavity to reach fresh bone and add a bone graft to fix the fragments in position.

Research is being done to investigate cartilage and tissue transplants.

The treatments for plica syndrome include:

- Medicines such as aspirin or ibuprofen to reduce swelling.

- Rest.
- Ice.
- Elastic bandage on the knee.
- Exercises to strengthen muscles.
- Cortisone injection into the plicae.

You may need surgery to remove the plica if the other treatments do not fix the problem.

## Who treats them?

Injuries and diseases of the knees are usually treated by an orthopedist, a doctor who treats problems with bones, joints, ligaments, tendons and muscles. A rheumatologist specializes in nonsurgical treatment of arthritis and other rheumatic diseases.

## Living With Them

When living with knee problems, everyone should get three types of exercise regularly:

- Range-of-motion exercises to help maintain normal joint movement and relieve stiffness.
- Strengthening exercises to help keep or increase muscle strength. Keeping muscles strong with exercises, such as walking up stairs, doing leg lifts or dips, or riding a stationary bicycle, helps support and protect the knee.
- Aerobic or endurance exercises to improve function of the heart and circulation and to help control weight. Weight control can be important if you have arthritis because extra weight puts pressure on many joints. Some studies show that aerobic exercise can reduce inflammation in some joints.

Your doctor or physical therapist can help you come up with an exercise plan. This can help your knee(s) without increasing the risk of injury or further damage. As a general rule, you should choose gentle exercises such as:

- Swimming.
- Aquatic exercise.
- Walking.

You should avoid jarring exercises such as jogging or high-impact aerobics.

## Can I prevent them?

Some knee problems, such as those resulting from an accident, can't be prevented. However, you can prevent many knee problems by doing the following:

- Warm up before playing sports. Walking and stretching are good warm-up exercises. Stretching your muscles in the front and the back of the thighs is a good way to warm up your knees.
- Make your leg muscles strong by doing certain exercises. For example, try walking up stairs, riding a stationary bicycle, or working out with weights.
- Avoid sudden changes in the intensity of your exercise.
- Increase the force or duration of your activity slowly.
- Wear shoes that fit and are in good condition.
- Aim to maintain a healthy weight. Extra weight puts pressure on your knees.

## For More Info

### **U.S. Food and Drug Administration**

Toll free: 888-INFO-FDA (888-463-6332)

Website: <https://www.fda.gov>

[Drugs@FDA](https://www.accessdata.fda.gov/scripts/cder/daf) at <https://www.accessdata.fda.gov/scripts/cder/daf>. [Drugs@FDA](https://www.accessdata.fda.gov/scripts/cder/daf) is a searchable catalog of FDA-approved drug products.

### **Centers for Disease Control and Prevention, National Center for Health Statistics**

Website: <https://www.cdc.gov/nchs>

### **American Academy of Orthopaedic Surgeons**

Website: <https://www.aaos.org>

### **American College of Rheumatology**

Website: <https://www.rheumatology.org>

### **American Physical Therapy Association**

Website: <https://www.apta.org>

### **Arthritis Foundation**

Website: <https://www.arthritis.org>

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- [Asian Language Health Information](#)
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