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Anterior knee pain

Anterior knee pain is pain that occurs at the front and center of the knee. It refers to many different problems, including:

- Chondromalacia of the patella -- the softening and breakdown of the tissue (cartilage) on the underside of the kneecap (patella)
- Runner's knee (sometimes called patellar tendinitis)

Causes

Your kneecap (patella) sits over the front of your knee joint. As you bend or straighten your knee, the underside of the patella glides over the bones that make up the knee.

Strong tendons help attach the kneecap to the bones and muscles that surround the knee. These tendons are called:

- The patellar tendon (where the kneecap attaches to the shin bone)
- The quadriceps tendon (where the thigh muscles attach to the top of the kneecap)

Anterior knee pain begins when the kneecap does not move properly and rubs against the lower part of the thigh bone. This may occur because:

- The kneecap is in an abnormal position (also called poor alignment of the patellofemoral joint)
- There is tightness or weakness of the muscles on the front and back of your thigh
- You are doing too much activity that places extra stress on the kneecap (such as running, jumping or twisting, skiing, or playing soccer)
- You have flat feet

Anterior knee pain is more common in:

- People who are overweight
- People who have had a dislocation, fracture, or other injury to the kneecap
- Runners, jumpers, skiers, bicyclists, and soccer players who exercise often
- Teenagers and healthy young adults, more often girls

Other possible causes of anterior knee pain include:

- Arthritis
- Pinching of the inner lining of the knee during movement (called synovial impingement or plica syndrome)

Symptoms

Anterior knee pain is a dull, aching pain that is most often felt:

- Behind the kneecap (patella)
- Below the kneecap
- On the sides of the kneecap

One common symptom is a grating or grinding sensation when the knee is flexed (when the ankle is brought closer to the

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back of the thigh).

Symptoms may be more noticeable with:

- Deep knee bends
- Going down stairs
- Running downhill
- Standing up after sitting for awhile

Exams and Tests

The health care provider will perform a physical examination. The knee may be tender and mildly swollen, and the kneecap may not be perfectly lined up with the thigh bone (femur).

When you flex your knee, you may feel a grinding sensation below the kneecap. Pressing the kneecap when the knee is straightening out may be painful.

X-rays are usually normal, although a special x-ray view of the kneecap may show signs of arthritis or tilting.

MRI scans are rarely needed.

Treatment

Resting the knee for a short period of time and taking nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen, naproxen, or aspirin may help relieve pain.

Other treatments or self-care for anterior knee pain include:

- Changing the way you exercise
- Learning and performing exercises to both strengthen and stretch the quadriceps and hamstring muscles
- Losing weight (if you need to)
- Special shoe inserts and support devices (orthotics -- for people with flat feet)
- Taping to realign the kneecap
- Wearing the correct running or sports shoes

Surgery for pain behind the kneecap (anterior knee pain) is rarely needed. During the surgery:

- Kneecap cartilage that has been damaged may be removed.
- Changes may be made to the tendons to help the kneecap move more evenly.

Outlook (Prognosis)

Anterior knee pain often improves with a change in activity, exercise therapy, and the use of NSAIDs.

Possible Complications

When to Contact a Medical Professional

Call for an appointment with your health care provider if you have symptoms of this disorder.

Alternative Names

Patellofemoral syndrome; Chondromalacia patella; Runner's knee; Patellar tendinitis; Jumper's knee

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