

Adolescent Anterior Knee Pain

A teenager who is active in sports and starts to feel a dull, aching pain behind the kneecap (patella) on either or both legs may need to adjust his or her training routine. Chronic pain in the front and center of the knee (anterior knee pain) is common among active, healthy young people. It does not mean that you will damage your knee by continuing to do activities. You may just hurt more. Treatment for pain behind the knee cap usually helps and surgery is not usually necessary.

Risk Factors

The complex anatomy of the knee joint that allows it to bend while supporting heavy loads is extremely sensitive to small problems in alignment, training, and overuse. Pressure may pull the kneecap sideways out of its groove, causing pain behind the kneecap. In teenagers, a number of factors may be involved.

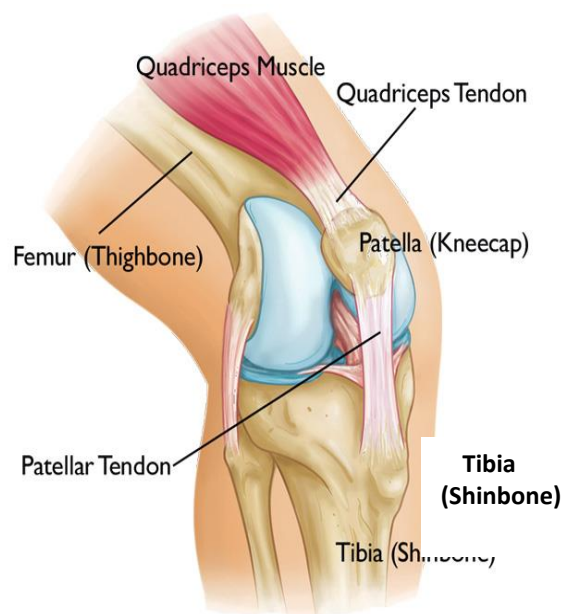
- Imbalance of thigh muscles that support the knee joint
- Poor flexibility
- Problems with alignment
- Using improper sports training techniques or equipment
- Overdoing sports activities

You may be able to prevent recurrences of pain behind the kneecap. Recommendations include:

- Wear shoes appropriate to your activities.
- Warm up with stretching exercises before physical activity.
- Stop doing any activity that hurts your knees.

Symptoms

The pain usually begins gradually. You might hear popping or crackling sounds in the knee when you climb stairs or stand up and walk after prolonged sitting. Pain might flare up when you do activities that repeatedly bend the knee (i.e., jumping, squatting, running, and other exercise) and at night. Without treatment, you may also develop thigh muscle (quadriceps) weakness. Your knees could begin to buckle or give way from pain.



Diagnosis

To help your physician with making the diagnosis, tell him or her when your knee pain started and provide details about your sports participation and training. Were there any recent changes to the duration, frequency or intensity of your activities? Are there any alterations in your equipment or the surfaces you play upon? What activities aggravate your knee pain?

A standard knee examination will help your doctor determine the cause of pain behind your kneecap and rule out other problems. He or she may ask you to stand, walk, jump, squat, sit, and lie down. It's important to relax! Your doctor may check:

- Alignment of the lower leg, kneecap, and quadriceps
- Knee stability, hip rotation, and range of motion of knees and hips
- Under the kneecap for signs of tenderness
- The attachment of thigh muscles to the kneecap
- Strength and flexibility of the leg muscles
- Both of your legs may be X-rayed.

Treatment

Ice, rest, and rehabilitation are the usual treatments for teenagers with pain behind the kneecap. Nonsteroidal anti-inflammatory drugs (NSAIDs), like ibuprofen, may also help particularly painful episodes.

Ice

To relieve swelling and inflammation, apply ice wrapped in a towel to your sore knee a few times each day.

Rest

Until the tissues heal, stop doing the activities that make your knee hurt. This probably means changing your training routine. You might need to learn proper exercise techniques. If you are obese, your doctor may recommend that you lose weight to reduce pressure on the knee. You may also benefit from using a simple knee sleeve with the kneecap cut out. Strap or support devices (i.e., braces or shoe orthoses) may also help.

Rehabilitation

After the pain and swelling go down, you will probably need to rehabilitate your knee to regain range of motion, strength, power, endurance, speed, agility, and coordination. Your doctor may prescribe an exercise program to normalize your thigh muscle and hamstring flexibility and strength, or recommend cross-training activities that emphasize stretching of the lower extremities (i.e., water aerobics, bike riding). Resume running and other sports activities gradually.

NSAIDs

Use these medications as needed for pain. Occasionally, three times a day dosing for several days can also help if pain doesn't go away.