

# patellar knee pain

Patellar knee pain, or more commonly anterior knee pain, is pain that develops in the front and center of the knee, usually around and underneath the knee cap (patella). It commonly affects children and adolescents with activity. It is more common in girls.

## what is the cause?

**It is not usually caused by a physical abnormality in the knee, but by overuse and deconditioning.** The true

cause may not be clear. The anatomy of the knee joint is complex in order to function well during a wide variety of activities. The front of the knee can be sensitive to small problems in alignment, improper sports technique, changes in training and overuse. There are many muscle forces acting on the patella (as seen above). A minor imbalance in flexibility and strength can lead to poor tracking of the patella within the groove of the femur. It can also cause extra stress on the tendons in the front of the knee or irritate the underlying cartilage.

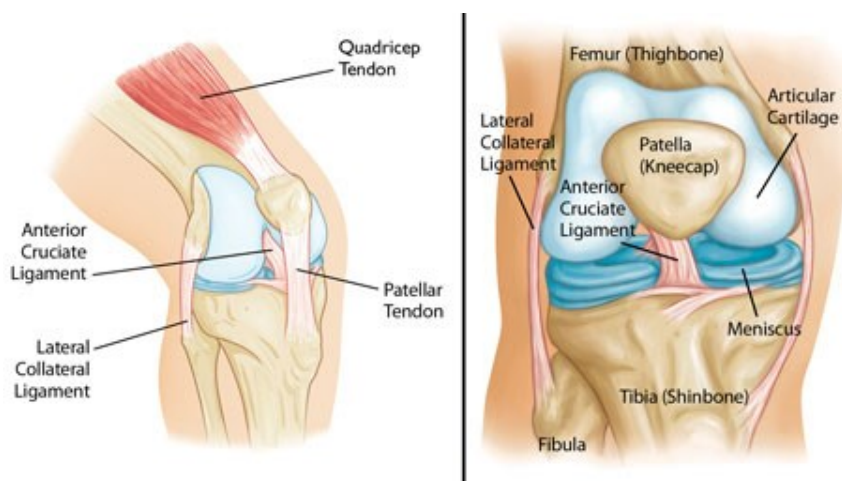
Other related/common kneecap problems such as patellar subluxation, patellar tendonitis, plica band syndrome, or cartilage damage may be discussed with you and are always considered by your provider.

## what are the symptoms?

Patients most commonly experience pain in the front of the knee. It is typically dull and achy, beginning gradually with activity and then worsens. Some patients experience popping/ cracking. It does not typically cause swelling or redness. There can be tenderness to touch around the patella. Pain typically improves with rest from activities, but may become severe enough to limit activities or cause persistent painful weightbearing.

## diagnosis

A physical exam is usually all that is necessary for diagnosis. Knee X-rays may be performed to rule out other diagnoses. X-rays can be helpful in determining the alignment of the kneecap. Further imaging such as an MRI is not necessary.



## **treatment**

The goal of treatment is to return your child to his/ her sport or activity as soon as possible. The primary treatment is rest with ice and an anti-inflammatory (such as ibuprofen). Your child should rest from the activities that seem to increase the pain. Some low-impact activities, such as biking and swimming may be better tolerated. A patellar stabilizing brace may be helpful to use with activity.

Exercises to improve flexibility, strength and endurance are key to improving symptoms and increasing activity tolerance. It is important to focus on stretching and strengthening of the quadriceps, the muscles of the thigh. These muscles are the main stabilizers of the knee cap. Core strengthening is also very important.

Your provider may provide you with exercises. Formal physical therapy may even be prescribed. It is very important to stick to the exercise program for as long as your provider or physical therapist recommend. It is not uncommon for anterior knee pain to return.

Occasionally, when pain is severe or refractory to conservative treatment your provider may wish to perform further testing.

This condition may briefly slow your child down. Most children/ adolescents do not have recurrent/debilitating pain and do not have arthritis or long-term knee issues.

## **example exercises**

### **Leg raise**

Tighten the thigh muscles on the \_\_\_ leg. Your child should feel the muscles contract. Raise the leg to almost full extension. Then lower it slowly and steadily to the floor. Relax. Repeat \_\_\_\_\_ times.

### **Hamstring Stretch**

Bend the \_\_\_ leg, straighten the opposite leg. Reach out to the toes of the straight leg. When your child feels a mild stretch, hold for 10-15 seconds. Repeat \_\_\_\_\_ times.

*This handout is for general information only and should not be considered complete. For more specific information, please ask your child's health care provider.*

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