

Patellar Instability and Patellofemoral Pain

What is Patellar Instability? What is Patellofemoral Pain?

Patellar instability occurs when the kneecap (also known as the patella) slips out of where it sits in the knee joint (the trochlear groove). Normally, the kneecap glides smoothly in this groove, allowing it to track in a straight line. Some people refer to this condition as patellar dislocation or unstable kneecap.

Patellofemoral pain is felt in the front of the knee.

What Causes Patellar Instability or Patellofemoral Pain?

Some people only have one episode of patellar instability; others experience it frequently.

Sometimes patellar instability is caused by:

- A shallow or uneven groove in the thighbone (also known as femur).
- **Hypermobility**.
- An underlying condition.
- Muscle imbalance or weakness.
- Bones that are out of alignment in relation to joints (also known as bony malalignment).

Sometimes patellofemoral pain is caused by:

- Misalignment of the kneecap.
- Dislocation or injury.
- Tight, weak or imbalanced thigh muscles.
- Overuse.
- Excess weight.

People who are at the greatest risk for patellar instability and patellofemoral pain are:

- Teens.
- Those who are overweight or obese.
- Children who have conditions that include imbalance and muscle weakness, such as **cerebral palsy** or Down syndrome.

- Athletes.
- Those who have hypermobile joints (joints that move beyond a normal range of motion).

Patellar Instability and Patellofemoral Pain Symptoms and Effects

The most common symptoms and effects of patellar instability include:

- Knee pain.
- Swelling.
- A clicking, buckling or locking sensation at the knee.
- Appearance of the kneecap slipping or sliding out of the knee joint.
- A sensation the knee is giving way.

The most common symptoms and effects related to patellofemoral pain include:

- A dull ache or burning sensation under or around the kneecap when using stairs, squatting, or getting up after prolonged sitting or kneeling.
- A creaking, grinding or grating sensation when moving the knees.
- A sensation of the knee catching when bending.

Patellar Instability and Patellofemoral Diagnosis and Treatment

At Gillette Children's Specialty Healthcare, specialists typically diagnose patellar instability or patellofemoral pain by:

- Reviewing your child's medical history and test results.
- Performing a physical examination.
- Taking **X-rays** or doing an **MRI** to rule out other conditions.

Patellar instability and patellofemoral pain are usually treated effectively without surgery. Typical treatments include:

- Activity restrictions and rest.
- Anti-inflammatory medications.
- Ice.
- Physical therapy.
- Bracing.

In some cases—when severe pain isn't minimized through nonsurgical treatments—surgery is needed. The most

common surgeries include:

- **Arthroscopy/Cartilage Procedure:** Special tools smooth the rough surface of any damaged cartilage behind the kneecap to reduce pain and repair or restore damaged cartilage.
- **Lateral Release/Ligament Tightening:** Moves the kneecap back to a more normal position and tightens the inside edge of the knee to avoid repeated dislocations.
- **Bony Realignment:** Moves the bony attachment of the patellar tendon to a new position on the tibia bone, changing the way the tendon pulls the kneecap through the femoral groove.

Integrated Care

To help your child minimize kneecap pain and live a full and active life, leading experts at Gillette in pediatric orthopedics collaborate to develop a custom treatment plan.

Sometimes treatment includes working with a variety of specialists. If your child has patellar instability or patellofemoral pain, your family might work with these Gillette teams:

- **Child life.**
- **Orthopedics**
- **Orthotics.**
- **Radiology and imaging.**
- **Rehabilitation medicine.**
- **Rehabilitation therapies**, including **physical therapy**.

Make An Appointment **651-290-8707** Refer a Patient **651-325-2200**

This information is for educational purposes only. It is not intended to replace the advice of your health care providers. If you have any questions, talk with your doctor or others on your health care team.

If you are a Gillette patient with urgent questions or concerns, please contact Telehealth Nursing at **651-229-3890**.