

## Knee Injuries

### Common Causes of Knee Pain

**Joint Effusion:** after injury, fluid can accumulate in the joint. This may be treated with ice, compression, rest and elevation. Another treatment is to have it drained by a medical provider.

**Patellofemoral pain syndrome (PFPS)** is a frequently encountered overuse disorder that involves the patellofemoral region and often presents as anterior knee pain. PFPS is the most common cause of knee pain seen by primary care physicians, orthopedic surgeons, and sports medicine specialists. The terms runner's knee, patellofemoral joint syndrome and chondromalacia patellae are also used to describe this condition. The pain comes from the joint under the kneecap ("patella") where it slides up and down over the thigh bone ("femur"). It causes an aching pain and often a rubbing sound in the front of the knee, usually worse after squatting and going up and down hills (steps). We do know some factors that contribute to it; for instance, the anatomy of your legs and kneecaps and whether you have fallen or banged your knees in the past. Some factors can be controlled: mainly the strength and flexibility of your muscles, amount of overuse, improper exercise techniques, and your weight.

**Anserine bursitis:** The anserine bursa (protective sack) is located on the inside of the knee below the joint. It is the most frequently inflamed bursa. Anserine bursitis also can result from trauma, but more commonly is caused by an abnormal gait. Anserine bursitis should be suspected when pain, particularly at night, occurs on the inside of the knee region.

**Prepatellar bursitis:** Acute prepatellar bursitis is an inflammation of the largest knee bursa (protective sack), located between the kneecap and the overlying skin. It is most commonly caused by trauma, as a result of a fall or the direct pressure and friction of repetitive kneeling ("housemaid's knee"). Patients with prepatellar bursitis complain of knee swelling and pain over the front of the knee.

**Cruciate ligament injury:** This diagnosis should be suspected if the patient has suffered a knee injury, describes symptoms of looseness and unexplained giving out, had knee swelling beginning shortly after the injury, and demonstrates looseness with examination. The typical injury involves a noncontact deceleration, cutting movement, or hyperextension, often accompanied by a "pop," with the inability to continue sports participation. There are two cruciate ligaments; the anterior cruciate ligament (ACL) is more often injured than the posterior cruciate ligament (PCL).

**Collateral Ligament Sprain (Knee Sprain):** Stretching or tearing the fibers that attach the upper and lower leg bones ("ligaments"). These are usually associated with a twisting type injury to the knee, or externally applied trauma. The stability of the knee on examination will determine what treatment is required. They can occur on the inside of the knee (medial collateral ligament or MCL) or the outside (lateral collateral ligament or LCL). MCL sprains are the most frequently injured knee ligament.

**Meniscus Tears (Torn Cartilage):** The meniscus can be caught between the tibia (lower leg bone) and femur (upper leg bone) and torn. There is often a history of twisting the knee with the foot planted, leading to sudden pain in the knee, followed by swelling several hours later. Diagnosis sometimes needs to be made by having an MRI. Conservative treatment: such as rest, ice and medication is sometimes enough to relieve the pain of a torn meniscus and give the injury time to heal on its own. In other cases, surgery may be required to repair the meniscus.

**Iliotibial band syndrome:** The iliotibial band consists of tendon tissue that runs from the hip to the outside of the knee. The iliotibial band syndrome, which occurs most commonly in runners, is characterized by an aching or burning pain at the site where the band runs over the outer knee; occasionally the pain radiates up the thigh toward the hip. Risk factors for developing this syndrome include a misalignment of the knee, excessive running mileage, worn shoes, or continuous running on uneven terrain.

**Patellar Tendinitis (Jumper's Knee):** Pain and tenderness over the patellar tendon (connects the kneecap to the lower leg bone) caused by inflammation due to excessive stress.

### Treatment

**Rest:** Avoid kneeling and squatting.

**Ice:** Apply ice twenty minutes at a time, 3 to 4 times a day while symptoms persist. Lie a towel on knee and place ice over painful or swollen area.

**Elevate:** To reduce swelling. Sit or lie down and raise leg above the level of your heart while icing.

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**Medication:** Take ibuprofen (generic Advil or Motrin) or naproxen (generic Aleve) as directed on the label to reduce inflammation and pain. Your clinician may prescribe an alternative anti-inflammatory medication.

**Stretching:** After your muscles are warmed-up, hold each stretch as directed. Don't cause pain. Don't bounce.

- **Single Quadriceps Stretch:** Standing with your back straight, pull your foot back until your thigh muscle stretches moderately. Push down and back with your knee. Hold for 30 seconds and relax. Do 3 to 5 repetitions several times daily.
- **Hamstring stretch:** Standing up, prop up injured leg, knee straight. Bend standing leg slightly. Place hands on lower thigh just above the knee. With back straight, bend forward from the hip until you feel a stretch under your thigh. Hold for 20 to 30 seconds. Do 3 to 5 repetitions, several times daily.
- **Iliotibial band stretch:** Lie on your back on the floor. Bend the knee and hip of your injured leg to 90 degrees. Using the opposite hand, gently pull the leg across your body until you feel the stretch. Hold for 20 to 30 seconds. Do 3 to 5 repetitions, several times daily.

### Additional Tips

- Sports that are easy on the knees include swimming, slow jogging, walking, skating, and cross-country skiing.
- Wear well-cushioned shoes.
- Do not wrap your knee with an elastic bandage unless specifically instructed by your clinician.
- Certain conditions are made worse by pushing the kneecap against the femur. Your clinician may recommend a neoprene brace with a hole cut out for the kneecap.

### When to see a Healthcare Provider

- Unable to put weight on knee or knee "gives out"
- Knee is very swollen or painful
- You have fever with knee pain, swelling and redness
- Your knee pain doesn't get better or gets worse after you treat it on your own for a few days.

### Test Results and Advice Nurse

Please call the nurse for test results and advice: 863-4463

### Appointments

Appointments can be made online via the UHS website, by phone or in person. If you are unable to keep your appointment, please call and cancel. Otherwise you will be charged for the visit.

To schedule or cancel appointments call 863-0774 or schedule your appointment online through the UHS website

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