

Physical Therapist's Guide to Knee Pain

Knee pain can be caused by disease or injury. The most common disease affecting the knee is osteoarthritis. Knee injuries can occur as the result of a direct blow or sudden movement that strains the knee beyond its normal range of movement. Knee pain caused by an injury is most often associated with knee cartilage tears, such as meniscal tears, or ligament tears, such as anterior cruciate ligament tears.

What is Knee Pain?

Knee pain can be caused by disease or injury. Knee pain can restrict movement, affect muscle control in the sore leg, and reduce the strength and endurance of the muscles that support the knee.

The most common disease affecting the knee is osteoarthritis, which is caused by the cartilage in the knee gradually wearing away, resulting in pain and swelling.

Knee injuries can occur as the result of a direct blow or sudden movement that strains the knee beyond its normal range of motion, as can happen in sports, recreational activities, a fall, or a motor vehicle accident. Knee pain caused by an injury often is associated with tears in the knee cartilage or ligaments. Knee pain also can be the result of repeated stress, as often occurs with the kneecap, also known as patellofemoral pain syndrome. Very rarely, with extreme trauma, a bone may break at the knee.

How Does it Feel?

You may feel knee pain in different parts of your knee joint, depending on the problem affecting you. Identifying the location of your pain can help your physical therapist determine its cause.

How Is It Diagnosed?

Your physical therapist will make a diagnosis based on your symptoms, medical history, and a thorough examination. X-ray and magnetic resonance imaging (MRI) results may also be used to complete the diagnosis.

To help diagnose your condition, your physical therapist may ask you questions like these:

- Where exactly on your knee is the pain?
- Did you twist your knee?
- Did you feel a "tearing" sensation at the time of injury?
- Do you notice swelling?
- Have you ever felt like your knee joint is "catching," or "locking," or will give way?
- Do you have difficulty walking up and down stairs?
- Do you have difficulty sitting with your knee bent for long periods, as on an airplane or at the movies?
- Does your pain increase when you straighten or bend your knee?
- Does your knee hurt if you have to twist or turn quickly?

The physical therapist will perform tests to find out whether you have:

- Pain or discomfort with bending or straightening your knee
- Tenderness at the knee joint
- Limited motion in your knee
- Weakness in the muscles around your knee
- Difficulty putting weight on your knee when standing or walking

The physical therapist also is concerned about how well you are able to use your injured knee in daily life. To assess this, the therapist may use such tests as a single-limb hop test, a 6-minute walk test, or a timed up and go test.

How Can a Physical Therapist Help?

Based on the evaluation, your physical therapist will develop a customized rehabilitation program, including a specific set of knee exercises, for you.

If you already have knee problems, your physical therapist can help with a plan of exercise that will strengthen your knee without increasing the risk of injury or further damage. As a general rule, you should choose gentle exercises such as swimming, aquatic exercise, or walking rather than jarring exercises such as jogging or high-impact aerobics.

Consult your physical therapist about specific ways to maintain your knee health following injury or surgery. Your physical therapist has the relevant educational background and expertise to evaluate your knee health and to refer you to another health care provider if necessary.

Depending on the severity of your knee problem, your age, and your lifestyle, the therapist may select such treatments as:

Strength training and functional exercises, which are designed to increase strength, endurance, and function of your leg muscles (quadriceps and hamstrings). This in turn helps support the knee and reduce stress to the knee joint.

Electrical stimulation of the knee, which further increases leg muscle strength and can help reduce knee pain. To increase strength, electrical impulses are generated by a device and delivered through electrodes to stimulate the primary muscle that supports the knee, the quadriceps femoris. To reduce your knee pain, the electrodes are placed on the skin to gently stimulate the nerves around the knee.

Your physical therapist can determine just how much you may need to limit physical activity involving the affected knee. He or she also can gauge your knee's progress in function during your rehabilitation.

How Can a Physical Therapist Help Before & After Surgery?

Your physical therapist, in consultation with your surgeon, will be able to tell you how much activity you can do depending on the type of knee surgery (such as [total knee replacement](#)) you undergo. Your therapist and surgeon also might have you participate in physical therapy prior to surgery to increase your strength and motion. This can sometimes help with recovery after surgery.

Following surgery, your physical therapist will design a personalized rehabilitation program for you and help you gain the strength, movement, and endurance you need to return to performing the daily activities you did before.

Can this Injury or Condition be Prevented?

Ideally, everyone should regularly get 3 types of exercise to prevent injury to all parts of the body, including the knees:

- Range-of-motion exercises to help maintain normal joint movement and relieve stiffness.
- Strengthening exercises to keep or increase muscle strength.
- Aerobic or endurance exercises (such as walking or swimming) to improve function of the heart and circulation and to help control weight. Weight control can be important to people who have arthritis because extra weight puts pressure on many joints, including the knee.

To keep knee pain and other musculoskeletal pain at bay, it's important to maintain an overall healthy lifestyle, exercise, get adequate rest, and eat healthy foods. It's also important for runners and other athletes to perform physical therapist-approved stretching and warm-up exercises on a daily basis—especially before beginning physical activity.

Real Life Experiences

At age 56, Monica was in very good health—eating right, maintaining her weight, and exercising daily at home. One day she fell off her exercise equipment and twisted her knee. The pain was excruciating. Even though she could walk short distances, using her sore leg during her daily activities soon became impossible. Monica made an appointment with her physical therapist. The therapist reviewed her medical history, conducted a thorough examination, and consulted with Monica's physician regarding the need for a series of X-rays to ensure no bones were broken in the fall.

Consultation with an orthopedic surgeon confirmed that there were no broken bones and no need for surgery. Monica's physical therapist developed a program of strength training and functional exercises to increase her hip, knee, and ankle muscle strength and endurance. The physical therapist also recommended electrical stimulation of the knee to increase her quadriceps (thigh) muscle strength.

By following the physical therapist's regimen, Monica decreased her knee pain, and her mobility improved dramatically. Regular ongoing strength-training knee exercises—and more careful use of her exercise equipment—have helped Monica remain free of knee pain.

What Kind of Physical Therapist Do I Need?

Although all physical therapists are prepared through education and experience to treat people with knee pain, you may want to consider:

- A physical therapist who is experienced in treating people with orthopedic, or musculoskeletal, problems
- A physical therapist who is a board-certified clinical specialist or who has completed a residency or fellowship in orthopedic physical therapy, giving the therapist advanced knowledge, experience, and skills that may apply to your condition

You can find physical therapists who have these and other credentials by using [Find a PT](#), the online tool built by the American Physical Therapy Association [www.APTA.org] to help you search for physical therapists with specific clinical expertise in your geographic area.

General tips when you're looking for a physical therapist:

- Get recommendations from family and friends or from other health care providers.
- When you contact a physical therapy clinic for an appointment, ask about the physical therapist's experience in helping people with TKR.

During your first visit with the physical therapist, be prepared to describe your symptoms in as much detail as possible, and say what makes your symptoms worse.