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Are you suffering from Knee Pain?

Your knee is made up of many important structures, any of which can be injured. The most common knee injuries include fractures around the knee, dislocation, and sprains and tears of soft tissues, like ligaments. In many cases, injuries involve more than one structure in the knee.

Pain and swelling are the most common signs of knee injury. In addition, your knee may catch or lock up. Many knee injuries cause instability — the feeling that your knee is giving way.

Normal Anatomy of the Knee

Bones. Three bones meet to form your knee joint: thighbone (femur), shinbone (tibia) and kneecap (patella).

Articular cartilage. The ends of the femur and tibia, and the back of the patella are covered with articular cartilage. This slippery substance helps your knee bones glide smoothly across each other as you bend or straighten your leg.

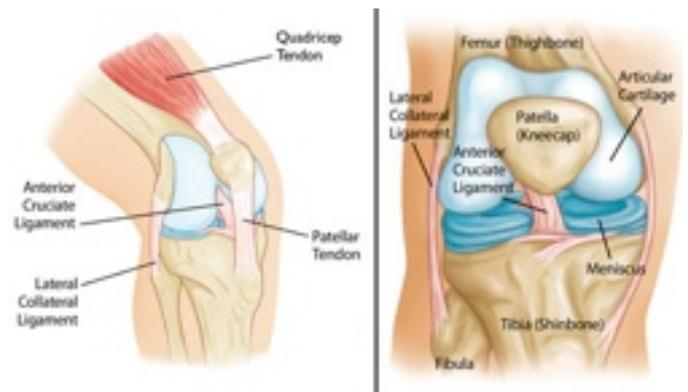
Meniscus. Two wedge-shaped pieces of meniscal cartilage act as "shock absorbers" between your femur and tibia. The meniscus is tough and rubbery to help cushion and stabilize the joint. When people talk about torn cartilage in the knee, they are usually referring to torn meniscus.

Ligaments. Bones are connected to other bones by ligaments. The four main ligaments in your knee act like strong ropes to hold the bones together and keep your knee stable.

Collateral Ligaments. These are found on the sides of your knee. The medial collateral ligament is on the inside of your knee, and the lateral collateral ligament is on the outside. They control the sideways motion of your knee and brace it against unusual movement.

Cruciate ligaments. These are found inside your knee joint. They cross each other to form an "X" with the anterior cruciate ligament in front and the posterior cruciate ligament in back. The cruciate ligaments control the back and forth motion of your knee.

Tendons. Muscles are connected to bones by tendons. The quadriceps tendon connects the muscles in the front of your thigh to your patella. Stretching from your patella to your shinbone is the patellar tendon.



Possibility of knee problem could be due to:

Osteoarthritis

In older people, repeated attacks of knee pain are likely to be a sudden worsening of osteoarthritis, the most common type of arthritis in the UK. Osteoarthritis causes damage to the articular cartilage (protective surface of the knee bone) and mild swelling of the tissues in and around the joints.

Osteoarthritis can sometimes affect younger people, especially those who are overweight or have had serious injuries to the knee in the past.

Gout

Caused by a build-up of uric acid in the body. Uric acid is a waste product that is produced during the process of metabolism (when the body breaks down food to use as energy). Usually, uric acid is excreted by the kidneys. People whose kidneys do not excrete uric acid properly, or those who produce too much, can have high levels of uric acid in their blood. If the level becomes very high, crystals form in the joints. The crystals cause the joints to become inflamed and painful.

Foods - that are high in a substance called **purines** can raise the uric acid level in your blood. This includes **organ meats like liver & kidney; seafood like sardines, anchovies, mussels;** and even some vegetables such as **spinach**. Eating just one of these foods or several of them together, can cause a gout flare. Purines are found in all foods that have protein.

Alcohol - **all alcohol** can raise the uric acid level in the blood and many bring on a gout flare. They can be extra bad for you because they also can make you dehydrated -- another common gout trigger.

Bursitis

A bursa is a sac of fluid that cushions and protects your joints. There are several in different parts of your knee. Overuse, a fall, or repeated bending can irritate the bursa, causing pain and swelling. Two types of bursitis are called "housemaid's knee" and "preacher's knee," since they are often caused by kneeling. A "Baker's cyst" -- a swelling of one of the bursa in the back of the knee -- can also result from injuries and from conditions like arthritis.



Damage to the menisci or cartilage

Sitting between the upper and lower leg bones at the knee joint are rubbery pads of tissue called menisci. These cushion the bones, acting as shock absorbers.

The menisci can become worn as you get older, and are commonly the reason for knee pain in middle-aged people.

Tendonitis

Swelling of the tendons. Tendons are tough bands of tissue that connect your bones and muscles. Overuse can make the tendons inflamed and sore. One type of knee tendonitis is called "jumper's knee."

Ways to Prevent/Help to Reduce Knee Problems

Maintain a Healthy Weight

Carrying extra pounds can exert additional pressure on your joints and contribute to knee pain. If you're overweight, losing as little as 5 percent of your body weight can help relieve the stress on your knees. Best advice is to follow a healthy eating plan and exercise program to help you lose weight sensibly.

Find a Low-Impact Exercise You Enjoy

Good choices for people with knee pain include walking and swimming. Be sure to warm up before and cool down after exercising. Avoid hilly terrain and high-impact activities like running and jumping, as these can worsen knee pain.



Physical Therapy

Physical and occupational therapy often are helpful for people with knee pain. A physical therapist can help design an exercise program that fits your individual ability level and teach you proper techniques to spare your joints. Occupational therapy can teach you how to reduce strain on your knees in your daily activities.

Get Enough Rest and Relaxation

Sure, physical activity is important, but Rest and Relaxation can go a long way to promote good health - and reduce pain. Achieve a healthy balance in your life by learning stress-relief techniques like deep breathing and meditation.

Use Ice and/or Heat

For many people with arthritis pain, ice can help relieve pain and swelling and heat can help ease stiffness. A hot shower in the morning or warm bath before bed at night also may be helpful.

What Types of Exercise Are Best for People With Knee Problems?

Ideally, everyone should get these types of exercise regularly:

- **Range-of-motion exercises to help maintain normal joint movement and relieve stiffness.**
- **Strengthening exercises to help keep or increase muscle strength. Keeping muscles strong with exercises, such as walking up stairs, doing leg lifts or dips, or riding a stationary bicycle, helps support and protect the knee.**
- **Aerobic or endurance exercises 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. Some studies show that aerobic exercise can reduce inflammation in some joints.**
- **If you already have knee problems, your doctor or physical therapist can help with a plan of exercise that will help the knee(s) 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.**