

What are some common knee problems?

The knee is made up of many important structures, any of which can be injured.

Articular Cartilage-Osteoarthritis

Osteoarthritis and aging or injury can cause a gradual wearing away of the articular cartilage lining our joints. This is called osteoarthritis and most often causes pain and stiffness in the knee.

Posterior Cruciate Ligament (PCL)

The PCL is often injured when an athlete receives a blow to the front of the knee or makes a simple misstep on the playing field. (Tear shown from back view of knee)

Menisci

Meniscal tears can occur when twisting, cutting, pivoting or squatting. Direct contact, like a tackle, is sometimes involved.

What are the symptoms?

Pain and swelling are the most common signs of knee injury. Your knee may catch or lock up.

Many ligament injuries cause instability – the feeling that your knee is giving way.

Articular Cartilage-Chondral Defect

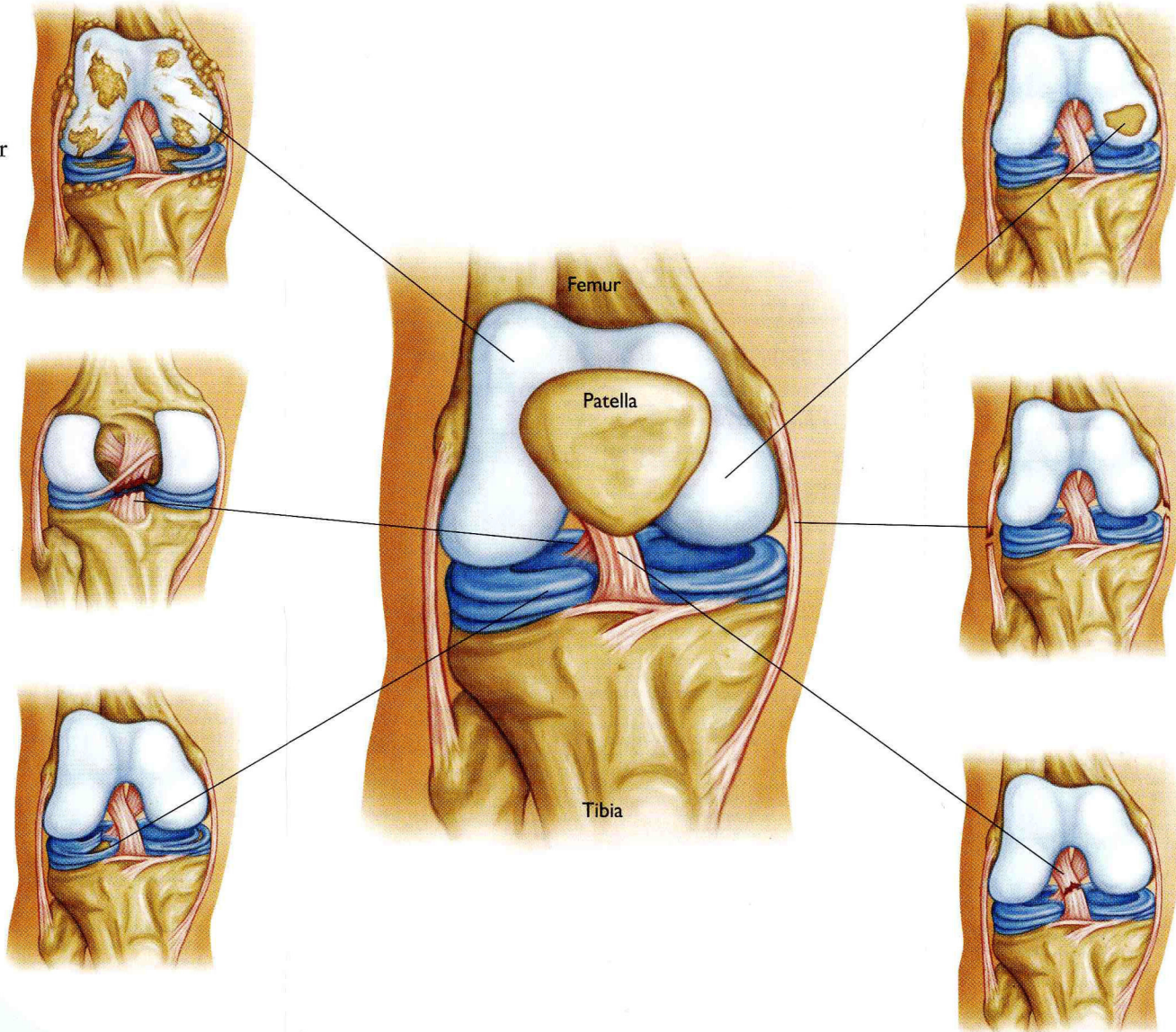
The joint surface can sometimes be damaged in a single, or focal, location. The rest of the joint is still healthy.

Collateral Ligaments

Medial collateral ligament tears often occur as a result of a direct blow to the outside of the knee. Lateral collateral ligament tears occur less frequently than other knee injuries. They are typically caused by a blow to the inside of the knee.

Anterior Cruciate Ligament (ACL)

A quick cutting maneuver or landing from a jump incorrectly can tear your ACL. Athletes often hear a “pop” at the time or injury.



What are ligaments and tendons?

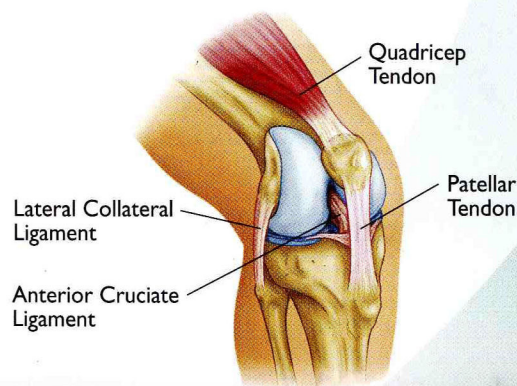
Ligaments and tendons connect your thighbone to the bones in your lower leg.

Ligaments. Bones are connected to other bones by ligaments. The four 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 and the lateral collateral ligament 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 kneecap. Stretching from your kneecap to your shinbone is the patellar tendon.



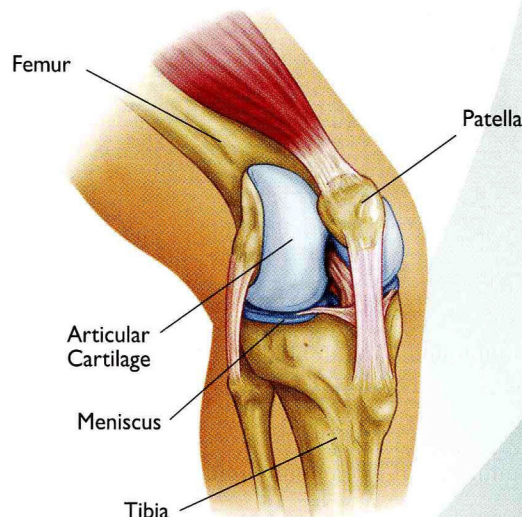
What are the parts of the knee?

Your knee is made up of four main things: bones, cartilage, ligaments, and tendons.

Bones. Three bones meet to form your knee joint: your thighbone (femur), shinbone (tibia), and kneecap (patella). Your patella sits in front of the joint to provide some protection.

Articular cartilage. The ends of your thighbone and shinbone are covered with *articular cartilage*. This slippery cushion 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 thighbone and shinbone. Different from articular cartilage, 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.



For more information

For more information about your knee and common knee problems, visit *Your Orthopaedic Connection* online at www.orthoinfo.org.

Your Orthopaedic Connection online is a trusted source of information about musculoskeletal conditions and injuries. Our articles are developed by orthopaedic surgeons. They provide detailed information — from symptoms to treatment options — about a range of diseases and injuries.

Your orthopaedist is a medical doctor with extensive training in the diagnosis and nonsurgical and surgical treatment of the musculoskeletal system, including bones, joints, ligaments, tendons, muscles, and nerves.

This brochure has been prepared by the American Academy of Orthopaedic Surgeons and is intended to contain current information on the subject from recognized authorities. However, it does not represent official policy of the Academy and its text should not be construed as excluding other acceptable viewpoints.

© 2009 American Academy of Orthopaedic Surgeons

AAOS
AMERICAN ACADEMY OF
ORTHOPAEDIC SURGEONS

www.orthoinfo.org

