

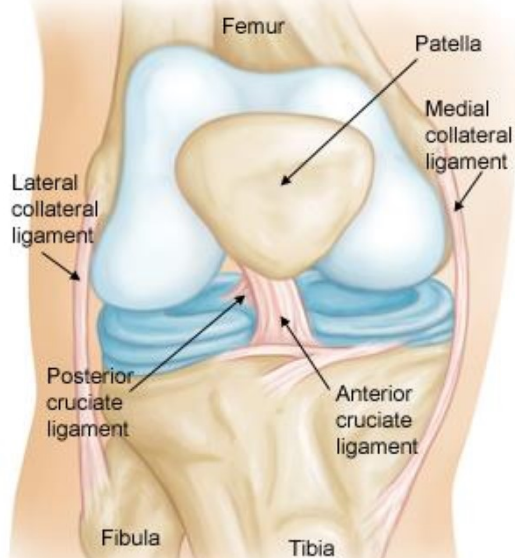
DISEASES & CONDITIONS

Combined Knee Ligament Injuries

The knee is the largest joint in your body and one of the most complex. It is also vital to movement.

Your knee ligaments connect your thighbone to your lower leg bones. Knee ligament sprains or tears are a common sports injury.

In the past, injuring more than one knee ligament would put an end to future sports activities. Today, many athletes are able to return to high level sports following multiple ligament injuries.



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

Anatomy

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

Bones are connected to other bones by ligaments. There are four primary ligaments in your knee. They 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 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.

Description

Because the knee joint relies just on these ligaments and surrounding muscles for stability, it is easily injured. Any direct contact to the knee or hard muscle contraction – such as changing direction rapidly while running – can injure a knee ligament.

Injured ligaments are considered "sprains" and are graded on a severity scale.

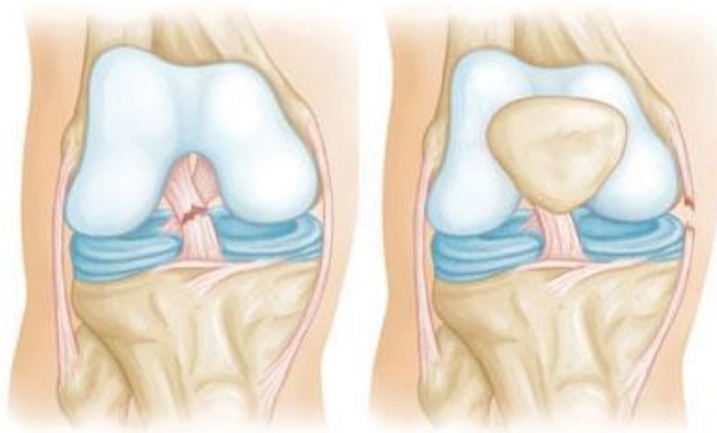
Grade 1 Sprains. The ligament is mildly damaged in a Grade 1 Sprain. It has been slightly stretched, but is still able to help keep the knee joint stable.

Grade 2 Sprains. A Grade 2 Sprain stretches the ligament to the point where it becomes loose. This is often referred to as a partial tear of the ligament.

Grade 3 Sprains. This type of sprain is most commonly referred to as a complete tear of the ligament. The ligament has been split into two pieces, and the knee joint is unstable.

It is possible to injure two or more ligaments at the same time. These multiple injuries can have serious complications. They can disrupt blood supply to the leg. They can also affect the nerves that supply the muscles of the limb. In severe cases, multiple ligament injuries may lead to amputation.

The MCL is injured more often than the LCL. Due to the more complex anatomy of the outside of the knee, if you injure your LCL, you usually injure other structures in the joint, as well.



Tears of the anterior cruciate ligament (left) can occur along with injuries to the medial collateral ligament (right).

Treatment

The individual with a suspected multiple ligament injury needs a thorough examination by an experienced physician. Depending on the injury, the orthopaedic surgeon may call in other specialists such as a vascular surgeon or microsurgeon.

In contrast to treatment for single ligament tears, surgery for combined ligament tears is often performed soon after the injury. This is done even though early surgery – before inflammation has resolved – poses an increased risk of arthrofibrosis (a scar forming in the joint). More than one operation may be required when treating multiple ligament injuries.

Outcome

Results from multiple ligament surgery are not as consistent as single ligament injury.

In the past, a multiple ligament injury prevented people from returning to sports activities. Today, it is possible to return to high level sports, although there is no certainty of it.

Last Reviewed

March 2014

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