

Patient Information: Meniscus Injuries

Introduction

Every joint in the body is lined by extremely smooth tissue called "articular cartilage." The articular cartilage of the knee coats the end of the femur (thigh bone), the top surface of the tibia (shin bone) and the back surface of the patella (kneecap). This smooth cartilage allows the surfaces of your knee joint to move without friction, pain and minimal wear. In between these moving surfaces is special 'C' shaped tissue that function mainly as shock absorbers protecting the joint cartilage? This tissue is called the 'meniscus.

Each knee has two menisci, one on the inner side (medial meniscus) and one on the outer side (lateral meniscus). The menisci also assist with stability of the knee joint as well as helping disperse fluid around the knee joint effectively.



What is a meniscal tear?

The menisci are at risk of tearing due to their constant exposure to repetitive loading as we walk, run or perform other activities. An acute traumatic meniscal tear usually develops when the knee is partially bent under load, especially with twisting motions such as pivoting during sports, squatting and changing direction. Tears can also occur in combination with tears of ligaments around the knee (e.g. an ACL tear). It is also possible to injure a meniscus without any trauma as the meniscus stiffens and weakens with age.

What symptoms can you experience with a meniscal tear?

You might experience a crack or a popping sensation when you initially tear your meniscus. However, on many occasions you may not have had a precipitating event or injury. The pain from a meniscal tear is often localised to the inner or outer part of the knee joint, and less so at the front of the joint. Symptoms include pain with bending and twisting on your knee, and sometimes pain at night. Often people with meniscal tears complain of stiffness within the joint, recurrent swelling of the knee joint ("water on the knee"), or a sensation of catching or locking of the knee.

Some meniscal tears are very large. Depending on their pattern, a fragment of the damaged meniscus may loosen partially and drift into the knee joint. When this occurs, the fragment may cause a block to movement and the knee becomes locked, limiting your ability to straighten or bend your knee.

Diagnosis

Your doctor will take a thorough history and examination to assess all the symptoms and signs of a meniscal tear. As part of your workup, x-rays will be ordered to exclude other conditions in the knee such as arthritis or pieces of floating, loose bone within the joint. Additionally, you may undergo a test called an MRI (magnetic resonance imaging scan) which looks more specifically at the soft tissues within the knee, especially the meniscus and the articular cartilage.

What else apart from a meniscus tear could be causing my pain?

Meniscal tears are extremely common and often are the cause of people's symptoms. Other things, however, can mimic these symptoms. These include loose pieces of bone or cartilage ("loose body") floating around the knee joint, a loose flap of articular cartilage that has become unstable on either the femoral or the tibial articular surface, patellofemoral pain syndrome or a 'plica' (soft tissue fold within the knee). Meniscal tears are also commonly associated with arthritis. Pain from arthritis is usually duller like a toothache and associated with stiffness, especially first thing in the morning.

Initial treatment

The initial treatment for an acute meniscal tear should follow the basic RICE formula: Rest, Ice, Compression and Elevation, often combined with oral pain tablets such as paracetamol and ibuprofen. It is important to also maintain muscle strength around the knee as the joint can lose its function quite quickly in the first few days after injury.

Surgical treatment

If your meniscal tear causes pain and mechanical symptoms such as clicking, locking, or catching, you may benefit from arthroscopic knee surgery. This is performed as a day surgery "keyhole" procedure. Knee arthroscopy is one of the most commonly performed surgical procedures. In it, a miniature camera is inserted through a small incision. This provides a clear view of the inside of the knee. Your orthopaedic surgeon inserts miniature surgical instruments through other small incisions to trim or repair the tear. In most circumstances only the damaged portion of the meniscus is excised. In some circumstances depending on the configuration of the meniscus tear, this can be repaired.

Prognosis

Not all meniscal tears require surgery. As a rule the younger you are, the more likely you are to require surgery to repair your meniscus tear. As the meniscus has a vital role in protecting the articular cartilage within the knee, it is critical that large tears of the meniscus, especially in young people, are investigated for the possibility of a repair.

Meniscal tears are an extremely common injury. With proper diagnosis, treatment, and rehabilitation, return to pre-injury ability is readily achievable.