



## COMMON RUNNING KNEE INJURIES

For runners, knees are often the first to go. Your knees play a crucial role on the running track, so it's important to pay attention to the signs of knee damage and seek medical treatment when necessary. We spoke to Dr Shane Blackmore, specialist orthopaedic surgeon with St Vincent's Private Hospital Melbourne, about the most common knee injuries faced by runners. There are many knee injuries runners can experience, but the three most common are:

#### MENISCAL TEAR

Like most of the joints in your body, your knee is lined by cartilage. Over time, cartilage will gradually wear away, but sometimes it can suffer severe injuries. A meniscal tear is a tear in a particular cartilage in your knee called the meniscus, which acts as a kind of shock absorber to protect the other cartilage in your knee joints. For more information, refer to our page on Meniscal Tear.

#### **ACL TEAR**

An ACL tear is the common name for what happens when you rupture your Anterior Cruciate Ligament, one of the four major stabilising knee ligaments. The ACL isn't the most commonly injured knee ligament, but it's the one that surgeons see most often in the operating theatre. For more information, refer to our page on ACL Tear.

#### CHONDRAL INJURY

A chondral injury is an acute injury to the cartilage surface of your knee. The cartilage in your knee is like the tyre on your bike: it should slowly wear down over a lifetime of use. But sometimes, it might suffer a puncture, and hold up all movement. A chondral injury is like a puncture in your knee cartilage. For more information, refer to the section on Chondral Injury.



## WHEN SHOULD YOU CONSULT A SPECIALIST FOR YOUR KNEE PAIN?

An Orthopaedic Surgeon is a medical doctor with extensive training in the assessment, diagnosis and management of muscoskeletal injuries and diseases. Muscuskeletal refers to your bones, joints and muscles. Orthopaedic surgeons can undertake further training to sub-specialise and develop expertise in both surgical and non-surgical care treatment of knee pain.

Surgery is usually the last option doctors consider. Knee specialists prefer non-invasive treatment options, such as physical therapy, splinting, rehabilitation and other solutions. However, if these treatments do not provide significant results or relieve pain, a knee specialist can help you choose the best surgical options for getting you back on the running track!

## HERE ARE SOME WARNING SIGNS THAT YOUR KNEE CONDITION OR INJURY REQUIRES HELP FROM A SPECIALIST:

- Hard to walk due to knee instability
- Limping
- Difficulty walking up or down steps due to ligament damage
- Unable to bend the knee
- Unable to extend the knee
- Swelling or redness

## MENISCAL TEAR

Symptoms of meniscal tears can vary widely, but most patients will experience:

#### TYPICAL SYMPTOMS

- Pain in the knee area
- Swelling (worse at the time of injury)
- Loss of range of motion
- Locking of the knee (due to the torn meniscus jamming the joint)
- A loose or unstable knee (feeling like you 'can't trust it')

#### **COMMON CAUSES**

The most common reason for a torn meniscus is degenerative joint disease (arthritis). Over your lifetime, your meniscus will gradually degenerate, which can also cause tearing. For people under the age of 50, meniscal tears usually happen as a result of contact sports or sports that require twisting and pivoting. Most tears occur when your knee is in a weight-bearing, flexed position, and then rotates. Once the meniscus is damaged, it's very easy for it to tear even further, like a rip in a t-shirt.

#### THE FIX

Meniscal tears can be treated in one of three ways. The most conservative approach can involve modifying your activity, getting physical therapy (physiotherapy, osteopath) or even injections (steroid, PRP). Another treatment involves surgery to resect (cut out) the torn part of the meniscus. A final approach is undergoing surgery to repair the meniscus. Repair surgeries are much more complex, requiring more time in the operating theatre, a longer recovery time, and putting patients at a higher risk (especially of repair failure).

#### **DETERMINING TREATMENT**

There are a few things that will affect the kind of treatment your doctor will recommend. Firstly, they'll consider:

- Your age
- Your activity level
- Your profession
- The nature of your symptoms

Then, they'll consider the meniscal tear itself, asking questions like:

- How severe is the tear?
- How long has it been torn?
- What associated injuries are there (arthritis, torn ligament, cartilage injury)?
- What is the tear pattern?

If your knee is locked due to a torn and flipped meniscus, you'll almost always need surgery. In this case, you'll most likely undergo an operation known as an arthroscopic partial meniscectomy.

## ARTHROSCOPIC PARTIAL MENISCECTOMY

It's a complicated name, but the terms 'arthro' (joint) and 'scope' (camera) refer to this as a keyhole camera procedure. 'Ectomy' means to cut out. In this case, the surgeon will remove the torn part of the meniscus, leaving the intact remnant in place.

The operation usually takes between 10-30 minutes. You'll be put under a general anaesthetic, and the surgeon will make two small keyhole incisions to the front of your knee. It's a simple day procedure, so you'll be discharged on the same day you come in, and you'll need to use crutches for a day or two.

The risks of this kind of surgery are minor, and most patients tolerate the procedure very well, coming to a full recovery between 2-6 weeks.



## **ACL TEAR**

An ACL tear is usually accompanied by:

#### TYPICAL SYMPTOMS

- Pain
- Swelling (slowly increasing over 24 hours)
- Stiffness

Usually, the pain, swelling and stiffness you feel will calm down after a couple of weeks, but your knee might still feel unstable, particularly if you're trying to twist or pivot on it.

#### **COMMON CAUSES**

There's usually a clearly defined event that will cause your ACL to tear. This might be during a contact, over-extension or in a twist or pivot action gone wrong. You might hear a pop or a crack as your ACL breaks. Your knee will slowly swell over the next 24 hours.

Some people are genetically prone to injuring their ACL. If you rupture an ACL on one side, you'll be at a higher risk for tearing your opposite ACL in time. If you play netball, football, rugby, soccer or like skiing, you're also more likely to injure your ACL.

#### THE FIX

Most people who rupture their ACL will need surgery. The operation is known as an ACL reconstruction (knee reconstruction).

#### **ACL RECONSTRUCTION**

In an ACL reconstruction, the surgeon will usually take tendon from your hamstrings, patellar tendon or quadriceps to replace the torn ligament in your knee. The operation takes an hour, and you'll most likely need to stay in hospital overnight. It should only take 2-6 weeks before your knee seems back to normal, but full recovery will take around a year, and you'll need to follow a specific rehabilitation and return-to-activity program.

## CHONDRAL INJURIES

If you've injured the cartilage in your knee, you'll **RUNNING CONDITIONS** most likely experience:

#### TYPICAL SYMPTOMS

- Knee pain
- Swelling

#### **COMMON CAUSES**

Chondral injuries are usually caused by direct trauma to the knee, such as from a contact sports injury. Other times, chondral injuries can be a side effect of an ACL injury, poor leg alignment, a history of knee surgeries, or (in younger patients) a condition called osteochondritis dissecans. Sometimes, you won't be able to identify the cause of chondral damage.

#### THE FIX

Most chondral injuries can be managed relatively easily the first time around.

Take a look at the surface you're running on, the shoes you're wearing, and your posture while running. You may need to invest in more supportive shoes, a posture assessment, or maybe even find a new place to run.

#### **BRACES AND TAPING**

If your doctor decides that a knee brace or taping is necessary, this can help the knee or patella joint track better, similar to correcting the wheel alignment in your car. This will hopefully provide extra support and help to prevent further injury. If a brace fails to keep your joint aligned, your doctor may consider surgery to permanently correct your knee's alignment.

#### **SURGERY**

If you've badly injured your cartilage, you'll most likely need surgery. The type of surgery you'll need will depend on:

- The location of the injury
- The size of the injury
- Whether it's a chondral injury (cartilage only) or an osteochondral injury (bone and cartilage)

#### RISK OF NOT TREATING KNEE INJURIES

Generally, you can manage a meniscal or chondral injury without surgery, but the chances of the cartilage healing fully are unlikely, which could lead to more damage down the road.

If your knee is painful, but you can't identify a specific incident that triggered it, you shouldn't need to undergo formal scans. If your symptoms don't improve within 4-6 weeks, then you'll probably need some imaging done on your knee—usually an MRI.

If your knee continues to swell, give way or lock up, you should speak to your doctor and investigate the issue with an MRI sooner rather than later.



# The Difference.

ST VINCENT'S PRIVATE HOSPITAL MELBOURNE ORTHOPAEDIC CARE

St Vincent's Private Hospital Melbourne performed over 10,000 orthopaedic surgeries in 2018. We have an enviable reputation for orthopaedics in Australia and around the world. As a centre of excellence for orthopaedics, we attract local, interstate and international sports stars. Our commitment to the specialty is evident in the delivery of safe and high quality healthcare and is what really stands St Vincent's Private apart.

#### MELBOURNE'S LEADING ORTHOPAEDIC SURGEONS

Many of the state's most experienced orthopaedic surgeons consult on site at St Vincent's Private Hospital or are located within immediate proximity. Our surgeons specialise in many areas of orthopaedic expertise like joint replacement surgeries including hip, knee, ankle, wrist, shoulder and elbow; orthopedic interventions including sport medicine and injuries; and tumour and reconstructive surgery.

#### STATE OF THE ART THEATRES

Our theatres are equipped with the latest technology and instruments to support our surgeons in providing the best treatment plan for patients and to help patients achieve the best outcome. We are one of the first hospitals in Victoria to have the Mako Stryker system. Stryker's robotic-arm assisted surgery is a minimally invasive treatment option. The robotic arm is controlled by the surgeon and allows for tactile, auditory and visual feedback and limits the bone preparation to the diseased areas. It provides customised implant positioning, placement and real time adjustments for each individual patient.



#### HIGHLY EXPERIENCED TEAM

Our orthopaedic unit has dedicated nursing and allied health staff who are highly trained and well experienced in managing all orthopaedic conditions. Our primary theatre nurses have all undergone additional orthopaedic specialty training. All of which means our surgeons have a great sense of trust in our medical teams care and capacity to identify clinical issues.

#### ON-SITE REHABILITATION

Our purpose-built on-site inpatient rehabilitation facilities at both <u>East Melbourne</u> and <u>Werribee</u> hospitals provide assistance for patients recovering and reconditioning from surgery and injury.

Our outpatient rehabilitation programs continue to aid patients in their recovery even after they return home, and also includes vital exercise programs.

Our rehabilitation therapy spaces include brand new purpose built gymnasiums, indoor hydrotherapy pool with change rooms and shower facilities and therapy areas designed for practicing everyday occupations including our home-style kitchen.

#### PAEDIATRIC ORTHOPAEDIC

Our paediatric unit is the busiest and longest running private paediatric unit in Victoria. The unit is proud to have many highly regarded leaders in the field of paediatric orthopaedics mostly working both at The Royal Children's Hospital and privately at East Melbourne.

There are two on-site clinics catering to paediatric orthopaedic patients.

The <u>St Vincent's Kids Hip Dysplasia clinic</u> allows patients to see an orthopaedic hip specialist, with low radiation paediatric X-rays and ultrasounds all on-site. Paediatric bracing and orthotic services are also provided within the rooms, along with specialised physiotherapy and rehabilitation services.

The <u>St Vincent's Kids Sports Injury clinic</u> provides patients with the benefit of reduced waiting times to see a specialist. The clinic can provide patients with scanning, bracing and rehabilitation facilities in one easy location as well as timely access to surgical management if required.



#### ST VINCENT'S PRIVATE HOSPITAL MELBOURNE **ACCREDITED HIP AND KNEE SURGEONS**

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