

Your Complete Guide to ACL Injuries

Getting you back to your game



eBook



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Introduction

So, you suspect or already know that you or a loved one has an ACL injury...

If you are a big sports fan, you have probably heard of an ACL rupture. This is a common injury that affects both professional and weekend athletes alike, and it is also a common workplace injury.

After surgery and recovery, high level athletes can return to sport on a professional and even international level. The right treatment can get you back to doing what you love at the same level of function that you enjoyed previously.

This guide will walk you through the types and symptoms of an ACL injury, the treatment process, and the rehabilitation stages.



Understanding your injury

What is the ACL?

Before we take you through the treatment of your injury, it helps to first understand what the ACL is and the role it plays in your knee. The ACL or anterior cruciate ligament is one of the most important of the four main ligaments that keep your knee stable. It attaches to the front of the top of the tibia (shin bone) and the bottom end of the femur (thigh bone). The role of the ACL is to stop the tibia from sliding too far forward and to help control the rotation and twisting of your knee.

What is an ACL injury?

ACL injuries are one of the most talked about injuries in football, basketball, netball and alpine skiing. An ACL injury can be a complete rupture or tear (grade three injury) or a partial tear or sprain (grade one or two injury). The more common injury is a complete rupture. A ruptured ACL will not heal on its own and is likely to require surgery. It's also common for people who have injured their ACL to experience injury to another ligament in the knee or to the meniscus.

How does an ACL injury occur?

ACL injuries most commonly occur while playing sport or during physical work, however everyday accidents can also injure your ACL. There are a number of different mechanisms which can lead to an ACL injury. The most common is a twisting injury such as when changing direction rapidly while running or a fall at work.

Hyperextension of your leg causing you to land incorrectly from a jump or fall can also cause an ACL injury. Sometimes an ACL injury can be associated with a much more significant injury, such as a fracture of the tibia bone or dislocation of the knee.



Diagnosing your ACL injury

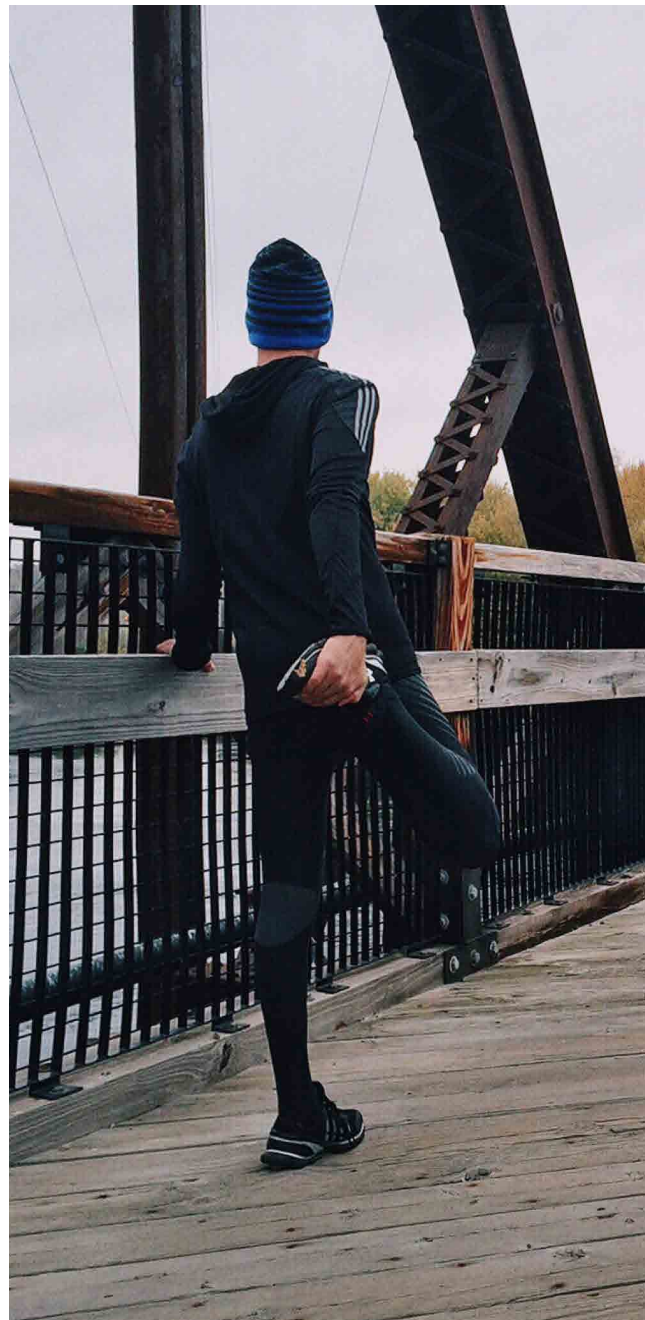
How do I know if I have an ACL injury?

If you know someone who has had an ACL injury or you have experienced one yourself, you may already know all about the popping noise that commonly occurs at the time of injury. This is often a tell-tale sign that you have injured your ACL. There is usually the presence of pain in your knee area at the time of injury, but it may not be as severe as you might expect. The knee will swell up over the first few hours following your injury, and this may cause you to lose the ability to bend your knee. You may also need crutches or support to walk due to the pain in your knee.

How will the doctor diagnose my injury?

If you are experiencing pain in your knee or if any of the above symptoms sound familiar, you should visit your doctor. He/she will review your history and perform a physical examination on your knee. During your physical examination, your doctor will stress the ligaments in your knee in several positions to test how well they are working. Comparing your injured knee with your non-injured knee will help your doctor determine if there is an injury. A physical examination immediately after your injury occurs may be challenging due to swelling, which can make it difficult to relax your knee. In these situations, and/or if your doctor suspects you do have an ACL injury, he/she will recommend that you get an MRI scan.

An MRI scan can confirm the diagnosis of an ACL injury and help to identify any other injuries in the knee. Diagnosing a complete rupture of the ACL is usually quite easy for your doctor. It can be more difficult for your doctor to identify a partial ACL injury, so in some cases he/she may recommend knee arthroscopy. This minimally invasive procedure will allow your doctor to better examine your knee using an arthroscope camera while you are completely relaxed under anaesthesia.



Treating your ACL injury



Do I need to treat my ACL injury?

In short answer, yes. You will need to undergo treatment to help your ACL rehabilitate. While the pain and swelling will likely ease on their own, an ACL injury can cause your knee to feel unstable over the long term. Walking on sand, uneven surfaces, stairs or in a sideways manner may make you feel like you can't depend on your knee for stability.

How can I treat my ACL injury?

The initial treatment of an ACL injury will usually involve a period of rest and physiotherapy. It is important to get your knee moving as close to normally as possible before surgery. The stronger your knee is before surgery, the easier your recovery will be. You may or may not need to wear a brace for your knee during this initial stage of treatment. Depending on your age, the work you perform and the sport activities you participate in, this may be the only treatment you require. In some cases, people can return to a normal level of function without surgery. However, for many cases surgery is necessary to get you back to doing the things you love again.

What you need to know about surgery for an ACL injury.

If your ACL has a complete or partial tear, you are likely to require surgery to restore the function you previously enjoyed to your knee. Your surgery is called an ACL reconstruction, but is also commonly known as a complete knee reconstruction, a term you've probably heard used in relation to professional footballers. The ACL does not repair itself and therefore needs to be replaced. Your surgeon will use a tissue called a graft to replace your ACL ligament during surgery. This is commonly taken from the hamstring tendons from the back of your leg, however your surgeon could also use your quadricep or patella tendons to create the graft.

Prior to surgery, your surgeon will discuss the graft he/she will use to take the place of your ACL. An ACL reconstruction is performed as arthroscopic or keyhole surgery under general anaesthetic.

The surgeon will make two small incisions about 1cm long each and one longer incision up to 5cm long on the front of your knee.

The surgeon will use the arthroscope camera throughout the surgery and will remove the torn ligament before reconstructing the ACL using the graft.

The operation takes between one and one-and-a-half hours and often involves an overnight stay in hospital. This is a very common surgical procedure in Australia and, thanks to advancements in technique and technologies, is less painful and involves a shorter recovery time than in the past.



Recovering from surgery

Going home after your surgery.

Most people will leave the hospital to go home on the morning after their ACL surgery. A physiotherapist (physio) will see you before you leave the hospital to help you start walking with crutches and take you through the best ways to look after your knee at home. You may need to wear a brace to further stabilise your knee as it recovers. You will be given some painkillers for use at home in the case that you need them. You will also be given instructions on what to do with any bandages or dressings that have been put on your knee at the time of surgery.



Looking after your knee at home.

There are a few important steps you can take to help support the recovery of your knee at home:

- Although you can walk on your leg, you should avoid overdoing it. Your surgeon will encourage you to rest for the first few days, so grab your favourite book or set yourself up on the couch with the latest season of your favourite show. At this stage you should always have your brace on when you walk.
- Elevate your leg and use an ice pack to help with pain and swelling. Apply the ice pack to your knee for 15 minutes and then keep it off for 15 minutes. Do this at least six times a day for the first two weeks.
- If you have bleeding from one of your wounds, apply pressure to the wound and elevate your knee. If the bleeding does not stop quickly, contact your surgeon's office.
- In rare cases, pain and swelling in your calf that does not settle with elevation could be caused by blood clots. Contact your surgeon or doctor if you experience ongoing pain that isn't relieved by elevation.

After one week at home, you should be working with your physio to start your rehabilitation. After two weeks at home, you should book in to see your surgeon for a follow-up appointment.

Get support to help you through recovery.

While you should be able to walk around with crutches and manage most of the things you need to do at home yourself, having someone available to lend a hand will put your mind at ease and make your recovery smoother.

Having someone who can provide care, particularly during the first week, will help you to better rest and look after your knee during recovery. It's also a great idea to ask a friend or family member if they can help with your shopping and meals and drive you to your appointments with the surgeon and your physio. Your ability to drive after surgery will depend which knee was injured, the type of car you drive and how you feel, so having someone available to help will take away any stress involved in getting to and from your appointments.



If you do live on your own, prepare ahead for your surgery by creating a space where you can comfortably relax and cooking and freezing meals that will get you through the first week of recovery.

The rehabilitation process

The steps involved in rehabilitating your knee.

Rehabilitation for your knee starts almost immediately after your surgery. On the day after your surgery, your physio will help you to walk again using crutches. It's a good idea to choose a physio prior to your surgery who can help you in the lead up to surgery and during your rehabilitation.

Initially, you will need to see your physio twice a week, beginning around a week after your surgery. This will become less frequent as you progress, but it's important that you begin building the strength and stability of your knee early.

Every person's rehabilitation progress is unique. Below we've provided what you could expect from the rehabilitation process, however your physio and surgeon will advise you when it is safe to introduce activities back into your lifestyle.

For the first two weeks

- Focus on resting and recovering your leg. Elevate and ice your knee regularly to help with any pain and swelling.
- Keep your brace on whenever you are walking.
- Keep caring for your wounds. They should heal in around seven to ten days following surgery.
- At the end of the two-week period your physio may supervise and support you to take your brace off and instruct you to do some gentle range of movement exercises to help strengthen your knee, such as straightening and bending your knee.



From two weeks to three months after surgery

- The goals during this period are to regain a full range of movement (being able to straighten and bend the knee), regain strength and walk normally.
- You should no longer need to use the knee brace.
- Your physio will instruct you to perform quadricep strengthening exercises against resistance.
- You should be able to start walking again at a brisk pace, swimming (excluding breaststroke-style kicking), and using an exercise bike at minimal resistance.
- Your knee will start to feel good, so you may be tempted to push your activity harder. However, your reconstructed ACL is currently at its weakest and most vulnerable, so it's important to look after yourself by not overdoing things.



Three to six months after surgery

- The goals for this period are to further improve the strength and movement gains you have already made, to regain normal knee function and to begin sport-specific strengthening exercises.
- You should be able to start jogging in a straight line (excluding sprinting and any sideways movements) and, after four months, cycling on the road against a higher resistance.



Six to 12 months after surgery

- This final period of rehabilitation is focused on restoring advanced functions to your knee and getting you back to doing the sports and activities you love.
- You should be able to start increasing your sprinting and cutting (sideways movements) and participating in sports like surfing, cricket batting and spin bowling.
- After 12 months you should be able to start playing football, soccer, basketball, netball and do fast bowling in cricket again.

Preventing a future injury



Providing ongoing maintenance and care for your knee.

Once your knee has recovered and you are back to normal activity, sport and work, it is important to continue to look after your knee. Just like your original ACL, your reconstructed ACL can rupture if you injure it in the wrong way again.

It is a good idea to continue to do the exercises that your physio has given you to keep the muscles around your knee strong and to continue to experience the best possible function from your knee.

And, importantly, enjoy doing the things you love with your reconstructed knee.



CALL DR. MACKENZIE TODAY

For a consultation or if you have any further questions about the surgery
please call **(02) 4963 3393**



Dr Stuart MacKenzie