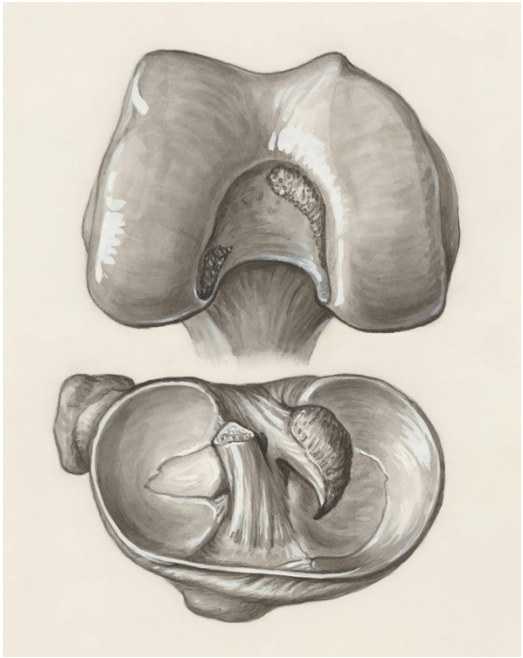
Dr. Anton Lambers

Orthopaedic Surgeon
Bright, VIC

ACL Rupture



An ACL rupture is a tear in the anterior cruciate ligament (ACL), one of the primary ligaments stabilising the knee. The ACL stretches diagonally across the knee, connecting the femur (thigh bone) to the tibia (shin bone), helping to control the forward movement of the tibia relative to the femur. ACL ruptures are common injuries, especially among athletes, and typically occur during activities that involve quick changes in direction, pivoting, or jumping.

What causes an ACL rupture?

ACL ruptures often occur during sports and activities that involve sudden stops, sharp pivots, or jumping, such as soccer, basketball, skiing, and football. Common causes include:

- Sudden directional changes or "cutting" with the foot planted
- Landing awkwardly from a jump
- Quickly decelerating while moving
- Direct impacts to the knee, such as those in a football tackle

In cases of severe trauma, the ACL may be rupture. Female athletes, in particular, face a higher risk of ACL injuries due to anatomical and hormonal factors.

What symptoms would I notice?

Symptoms of an ACL rupture are often immediate and intense, including:

- A loud pop or tearing sensation in the knee at the time of injury
- Rapid and significant swelling within hours
- Severe pain that makes it difficult to continue activity
- A feeling of instability or giving way when weight is put on the knee
- Limited range of motion, especially in flexing and extending the knee

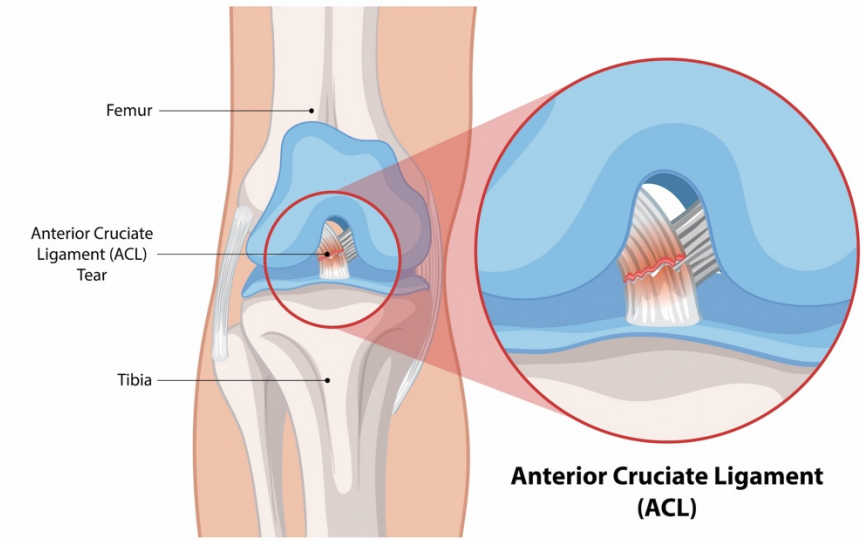
If these symptoms are present and persist, or you experience instability or difficulty bearing weight, we recommend that you seek medical attention.

How is an ACL rupture diagnosed?

Your first step will be to see a GP who will take a complete medical history and conduct a physical examination. Imaging, such as:

- X-rays to rule out bone injuries or fractures
- MRI scans to visualise the ACL and assess the extent of soft tissue damage (which cannot be detected on an X-ray)

These diagnostic steps help confirm the rupture and determine the appropriate treatment pathway.



Front of Right Knee

Treatment for an ACL rupture

A conservative (non-surgical) option is considered as a first port of call, with surgery recommended in some cases:

Non-operative treatments

Non-operative treatments are suitable for older patients who don't participate in pivot-heavy sports or activities. These treatments include:

- Physical therapy to strengthen knee muscles, improving stability and function
- Structured rehabilitation exercises to maintain range of motion and flexibility
- Supportive devices like braces for added stability during recovery

These treatments may be effective for patients who do not experience persistent knee instability. However, surgery remains an option if instability continues after rehabilitation.

Operative treatments

For younger patients or those engaged in sports with frequent directional changes, surgical treatment may be recommended:

- An ACL reconstruction is the primary surgical option, involving a graft (often from the patient's hamstring, patellar tendon, or quadriceps tendon) to replace the torn ligament.
- LEAT (Lateral Extra-Articular Tenodesis) may be performed alongside reconstruction for added stability, especially in patients with a higher risk of instability and under 25 years old.
- In cases where both the MCL and ACL are injured, the MCL is typically treated in a brace or splint first, with ACL reconstruction following once range of motion is restored.

Managing ACL ruptures with Dr Lambers

Dr Lambers always emphasises conservative management when suitable, with a clear pathway to surgical intervention if non-operative treatments fail to achieve the desired stability. If your GP refers you to Dr Lambers, he will work with you to ensure you regain full knee function and confidence in your movement.