

Trauma & Orthopaedic Directorate

ACL INJURY and CONSEQUENCES

How is the ACL injured?

The most common way in which the ligament is torn is during sport. In the UK the 2 most common sports are football and netball.

Often the individual is twisting at speed. Patients usually report that they tried to change direction and the knee gave way often with a popping noise. The knee suddenly swells and usually the individual is unable to play on. This results in severe pain.

It is usually dramatic enough such that patients present to their local A & E department where they are assessed. 99% of the time there will be nothing to see on x-rays. Sadly patients are usually reassured that they have simply sprained their knee and told to report to their GP if things don't settle.

The knee then usually settles down such that within a few weeks the patient can walk relatively normally but the knee doesn't feel quite right. By 6-12 weeks the knee is beginning to feel stronger and often an attempt is made to get back to sport. The knee invariably gives way and is unstable. Straight line running is usually possible but the knee feels unstable if the patient tries to change direction. Twisting and turning is usually not possible or difficult.

What are the consequences of having a torn ACL?

Damage at the time of the injury

At the time of the initial injury it is very common for other structures to be damaged as the knee gives way. The most commonly injured structures are the **menisci** or meniscal cartilages. These structures are the shock absorbers that sit between the end of the thigh bone and the top of the shin bone. 70% of patients who tear their ACL will damage one or both of these structures.

At the time of the injury the joint surfaces are bashed together and this results in “bruising” to the joint surfaces and the underlying bone. The joint surface may be significantly damaged at the time of the injury resulting in a chondral (joint surface cartilage) or osteochondral (joint surface and underlying bone) lesion.

When the ACL tears other ligaments may also be damaged. The most common area to damage is the “postero-lateral corner.” This is an area that includes the outer or lateral ligament and the capsule on the outer side of the knee.

Damage that occurs after the initial injury or secondary damage

Once the ACL has been torn the knee is at risk of further episodes of instability and giving way. Each time the knee gives way the important structures inside the knee, namely the joint surface cartilage and shock absorbing menisci, may sustain further damage. The initial giving way results in

severe pain. The subsequent smaller episodes of instability are less painful and usually cause minimal symptoms.

If an individual remains active with an unstable knee following an ACL rupture then it is possible to severely damage the knee quite rapidly over a short period of time.

It is for this reason that this injury is now treated aggressively with surgical reconstruction at the earliest opportunity.

When is the best time to get my ACL fixed?

The ideal timing is when the knee has settled down and there is minimal swelling with good movement. On average it takes 4-6 weeks from the time of the injury for the knee to settle.