

Why your knee needs to be well looked after

Most team sports pose the risk of severe injury to the anterior cruciate ligament. That's why it has become so important to understand the preventive measures and the rehabilitation

The middle-aged runners of tomorrow are often the field sport players of today. We play a wide selection of field sports in Ireland, including Gaelic football, hurling, camogie, rugby union, soccer, hockey and basketball.

All of these sports have common characteristics, such as multi-directional play, high-velocity running, periods of high-intensity play, jumping and landing, and anaerobic exercise, and they can be either contact or collision sports.

They have an associated risk of injury to the knee joint. For example, in Gaelic football and hurling, approximately 9pc of all injuries are to the knee joint, and approximately 1.5pc of all injuries are to the Anterior Cruciate Ligament (ACL).

Interestingly, females injure their knees more often than males playing these types of sports. As a side note, the rate of ACL injury in Australian football is approximately 1.8pc of total injuries, higher than Gaelic football or hurling. This ligament basically stops the shin moving apart from the upper thigh bone.

At the GAA Medical Conference last year, I spoke about preventive programmes which can limit these severe injuries. Also speaking was Per Renstrom, an internationally known expert on anterior cruciates. He talked at length about how many factors were involved in this injury but of the reduction in incidence due to proper prevention programmes.

Dennis Collins, an orthopaedic surgeon from Santry Sports, explored the differences he finds between the knee



/// **PHYSIO** ///
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cartilage of patients in their 40s who had played multi-directional sports, as opposed to those who did not.

Those who had played multi-directional sports in general had more wear and tear. I found this particularly interesting because I am not just interested in getting a player

back to sport following a severe injury.

I try to get them to understand how to manage their knee and lifestyle for years going forward, to limit pain recurrence and the need for intervention in the future.

We see a wide variety of knee complaints in my clinic, some relating to the knee itself only, which is the large hinge joint, and others to the patello-femoral joint (kneecap). This week, I am going to stick to the big hinge. In particular, problems here in the 40s and 50s are difficult to stop.

In clinic, the largest group of patients belong to the field-sport population with acute new injuries.

If a patient presents with a swollen knee together with a history of buckling, then the probability of an ACL injury is high. The swelling will go with time, but the knee will buckle in the majority of these patients when they return to field sports.

This ongoing buckling will require the reconstruction of the ACL to recreate stability in the knee. Without doing this surgery, the knee will buckle when placed under the stress of field sports.

The repeated trauma to the joint will lead to bony bruising, which in turn will lead to osteoarthritis. This group of

4 TIPS FOR THOSE IN THEIR 40S

- 1/** Keep the weight off. Cross train. Too much running on a damaged or ageing knee is plain illogical.
- 2/** If you injured your knee 20 years ago and it feels fine, then don't be fooled. It is still ageing, and the cartilage is wearing. Protect it by keeping the weight off and getting good advice on rehab, particularly during the off-season from running.
- 3/** Good hip function combined with good lower-back function and sensible training can

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patients who need to get back to high-level sport and who buckle without surgery are called non-copers, and surgery is required.

Thereafter, specialised rehab is required, not alone to get the patient back to sport, but to stop the injury recurring. This is why all of our patients who have suffered ACL injury spend months rehabilitating their knees.

When we finish, I insist that all of our patients do an extra warm-up before sport participation to minimise the risk of recurrence. We spend months on this with patients in our rehab centre in Medfit.

Occasionally, a player can cope with this injury. I remember when I was physio with Dublin senior footballers there was one player in the four years I was there who was able to play without an intact ACL.

The decision to try and rehab these players often depends on the time of the season that the injury is sustained and the levels of other damage to the knee that can occur at the time of injury.

Other components of this injury include cartilage damage, medial ligament disruption, and normally a significant bony bruise. These are all injuries in their own right and need attention.

Watching the Dublin-Kilkenny hurling game a few weeks ago, there were at least five players on view who have recovered from ACL surgery.

There are many factors affecting return to full high-intensity sport. These include confidence, full fitness, and, of course, optimal strength and conditioning. The athlete is only concerned with speed of recovery but it is essential to address known weaknesses that can influence the cause of original injury or predispose the athlete to a recurrent injury.

Injuring this ligament once is bad enough but any risk of suffering a recurrence needs to be minimised.

Similarly, if this is what happened to you 20 or 30 years ago, the same rules apply. This is very important as the ACL does not heal. It leaves the knee unstable and at risk of buckling or hypermobility. These lead to ongoing damage in the articular cartilage, and onto osteoarthritis and pain.

The patients who hurt their knees and have now retired from competitive field sports do not generally need to have their ACL repaired. Proper management of fitness programmes and general body-weight management can reduce the load through the knee, hence ongoing maintenance exercises are an excellent idea.

These patients are the copers, who can manage without surgical repair.

For runners in their 30s and 40s, this is very relevant. A simple scenario is the ageing runner who has previously hurt his/her ACL, who now loves their running.

The old damage due to the ACL tear is leading to early ageing of the knee joint. If poorly rehabbed, invariably hip mobility and stability are not working properly, leading to more overload.

If dealing with age, poor mechanics and a previous knee-joint injury, in addition to being in any way overweight, trouble is coming.

It is generally accepted that ACL injury ages the knee by about 20 years, relevant for the runners and cyclist of tomorrow.

I have a 65-year-old patient who needs regular attention to keep his ageing knee functioning well. Five years ago, he needed a simple knee scope to clean up damaged cartilage. Since then, what is key is that he has given up running and has worked hard on cycling for fitness and weight management, taking the load off his knee.

Another patient in her early 50s, who plays regular hockey, is now getting pain on the inside of her knee joint. This is the first sign of trouble. For this lady, it is time to reduce some of her running and training to try and prolong her career in hockey.

The same applies to a 40-year-old former GAA player who now loves his triathlons. He has had a cleaning operation of his knee but still gets symptoms. His rehab has been excellent. It is time for him to think 10 years ahead and limit the running to a level that does not irritate the knee joint. He can still run but it's all about balance.

The last example is a 48-year-old who, following his first knee operation last year has now lost 1.5 stone in weight through sensible exercise. This has taken massive stress off his knee.

There is an approximately five to one ratio in terms of load reduction through your knee the lighter you are. If you lose one stone, it means that every step you take when running is now putting five stone less of load through your knee.

Simply put, field sports have a higher risk of severe knee injuries. If you played these in the past and are now running or cycling, it is still important to have the knee and hip rehabbed and working well to limit the load through the knee.

Similarly keeping fit is essential as the load through your knee is directly proportional to the volume of running and your body weight.

Next week, I will discuss the kneecap, which is a major source of problems for the runner and cyclist.

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prolong the running life of knees. Look after the whole body.

4/ When injured, get good logical advice. I recently read a piece where someone was being advised to run four to five days a week while being overweight. This may not work longer term as, although the running is great at getting off weight, the running while overweight is great at causing Achilles, lower-back and knee problems. Taking a longer-term view and running three times a week would be wiser.