

Lateral Extraarticular Tenodesis (LEAT)

Lateral extraarticular tenodesis, abbreviated to either LET or LEAT, is becoming increasingly used in the setting of anterior cruciate ligament (ACL) reconstruction. It should probably more accurately be referred to as a lateral augmentation procedure, but LET or LEAT have become commonly used terms.

Is it a new procedure?

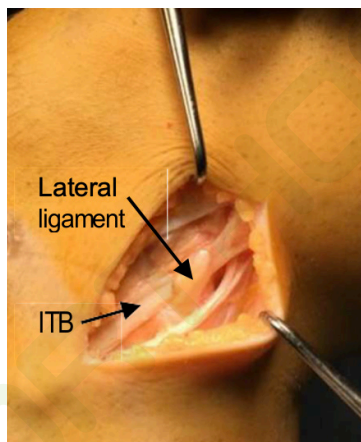
No, it actually goes back to the 1960s. It was originally developed as treatment for ACL tears. By itself, it did not do well in the long term and fell out of favour. It was subsequently combined with ACL reconstruction, but the results were variable and the combination of the two procedures also fell out of favour in the late 1980s and early 1990s in most centres. However, some surgeons have continued to use it to varying degrees, mainly in the setting of revision ACL reconstruction.

So why is it becoming more popular again?

Although ACL reconstruction is a common procedure and mostly successful, it has become recognised that some patients are at a high risk of another ACL injury. There is evidence a lateral augmentation procedure can reduce the risk of graft rupture in high risk patients having an ACL reconstruction with a hamstring tendon graft. Whether this applies for other grafts is largely unknown, although there is some preliminary evidence to say it might with quadriceps tendon grafts. Similarly, the role of a LEAT in a revision ACL reconstruction remains unclear, but LEAT is now commonly used in this setting.

What is a LEAT?

There are different procedures, but they mostly involve using a strip of the iliotibial band (ITB) on the lateral (outer) side of the knee. The principle is to redirect the strip of ITB so that it passes under the lateral ligament rather than over it. In effect, this creates a structure on the outside of the knee that is parallel to the ACL in the middle of the knee. There is also a procedure called an anterolateral ligament (ALL) reconstruction that is similar, but not quite the same as a LEAT. In an ALL reconstruction, the strip stays on the outside of the lateral ligament.



Who should have a LEAT?

This is the real challenge at the moment. We need to remember that most people don't suffer a further ACL injury after their ACL reconstruction, so it is clear that not everyone needs it. This was the experience from the 1980s. But we also know the rate of ACL injuries is going up, particularly in young people.

A lot of work has been done trying to work out who is at higher risk of further injury and some risk factors have been identified, while others are suspected but not yet clearly proven.

Established risk factors include being young (under 20) and having a family history of ACL injury. Factors such as a previous ACL reconstruction on the other side, increased laxity of the knee and returning to high-level sport all seem to increase the risk as well.

I try to make a logical decision for each person, weighing up the pros and cons. But at present we don't have enough information to be certain especially with quadriceps and patellar tendon grafts, so sometimes it just comes down to a gut feeling based on experience.

These notes have been prepared by Prof Julian Feller. They are a general overview only and do not constitute medical advice.