Suture-tape augmentation of anterior cruciate ligament reconstruction: a randomised controlled trial

ACTRN12621001162808

Status	RECRUITING
Sponsor	Western Health - Sunshine Hospital
Enrollment	66 participants

Plain Language Summary

Tearing the anterior cruciate ligament (ACL) — a key stabilising ligament in the knee — is a common and serious sports injury. ACL reconstruction surgery has a high success rate, but a notable proportion of patients re-tear their graft or have a loose knee even after surgery, particularly during the early months of return to sport. A newer technique threads a strong suture-tape alongside the graft to reinforce it, potentially reducing looseness and failure risk — but there is little solid evidence comparing it to standard surgery.

This trial randomly assigns patients to receive either standard ACL reconstruction or ACL reconstruction with suture-tape augmentation. Knee looseness, patient-reported outcomes, return to sport rates, and complications will be measured at 3 months, 12 months, and 2 years.

You may be eligible if you are 18 or older, on the waiting list for ACL reconstruction at a participating hospital, and have not had a previous ACL reconstruction on the same knee. People with grade 2–3 collateral ligament injuries, posterior cruciate ligament injury requiring surgery, or inflammatory arthritis are not eligible.

Key Eligibility Criteria

Inclusion (1)

- Participants will be included if they are; waitlisted for ACLR with either of the associated investigators (S.T or L.B). Waitlisting is based on MRI imaging, clinical examination in keeping with a ruptured anterior cruciate ligament and the appropriate lifestyle indication for surgical reconstruction of the ligament, are able to give informed consent and to participate fully in the interventions and follow-up procedures. Adult patients aged 18 and over where ACLR technique will not be modified due to the presence of open physes. Patients with concomitant meniscal and/or osteochondral pathology can be included.

Exclusion (1)

- Participants will be excluded on the basis of the following;The participant has had a previous ACL reconstruction on the ipsilateral knee, participant has had a previous ACL injury on the non operative knee, is of an developmental age where the presence of open physes would otherwise alter the surgical technique utilised, has grade 2 or 3 medial collateral ligament (MCL)/lateral collateral ligament (LCL) injury, associated posterior cruciate ligament (PCL)/ posterolateral corner (PLC) injury that requires surgical intervention, has inflammatory arthritis, is pregnant, has an articular cartilage defect requiring treatment that would alter the post-operative rehabilitation protocol and timelines, has a meniscal injury requiring treatment that would alter the post-operative rehabilitation protocol and timelines (i.e meniscal root or bucket handle tear repair), has an ACL re-rupture risk significant enough to warrant the addition of an osteotomising procedure or lateral extraarticular tenodesis.

Locations (3 total)

Western Hospital - Footscray - Footscray, VIC, Australia
Sunshine Hospital - St Albans, VIC, Australia
Williamstown Hospital - Williamstown, VIC, Australia