

All you need to know about arthroscopic ACL reconstruction

The importance of ACL (anterior cruciate ligament) has been well accepted for the knee function and maintenance of biomechanics of the knee. An untreated ACL tear can lead to recurrent giving away episodes, conscious walking/mobility, inability to run/long strides, damage to meniscus (leading to locking) and articular damage (leading to locking) and early osteoarthritis of the knee).

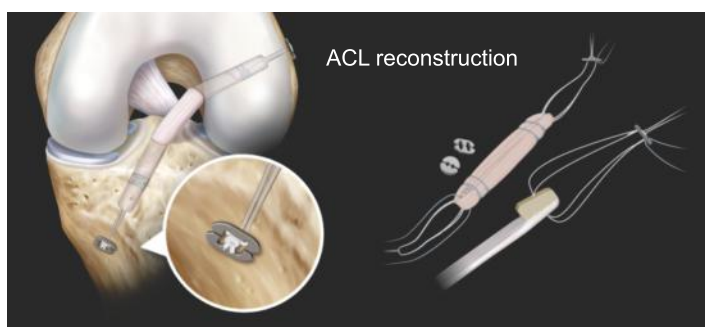
ACL reconstruction is the procedure of choice for an active patient with the recent advent in the technique using double tight rope and minimal drilling of bone, pain has been minimum while recovery and rehab have been faster. Patients are being discharged within 24-48 hours of surgery and return to work in 3-4 weeks. Most of them functionally and actively get back to sport in six to nine months.

Like in case of any surgery, this one also entails one to five percent of 'less satisfied' or 'considered' failed ACL surgeries, which can be graft related (very rare) and non-graft related (common but can be rectified).

Decreased movement/stiffness: Could result from lack of exercise or fibrosis within the joint (arthrofibrosis). It can be treated with vigorous physio protocol for an extended period. It rarely needs arthroscopic debridement followed by physiotherapy.

Extensor mechanism dysfunction or extension of leg/inability to straighten leg: The extension of the knee is controlled by the quadriceps (this muscle), which is one of the strongest and most pampered muscle in the body. Once it is rested, it goes into weakness quickly and becomes reluctant on getting back its full power and tone. That's the reason any arthroscopy surgeon would ask to start quadriceps exercises once the anaesthesia wears off. With the physio stimulation and exercises with the ankle weights, the strength and tone can be recovered for the maximum functionality.

Arthritis: A Major cause of arthritis is neglecting the primary ACL tear and reverting to surgery after the damage



ACL reconstruction



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to meniscus and the articular cartilage injury is noted. Hence, arthroscopic surgeons focus on ensuring a stable knee that won't pain. Isolated ACL injury can be painful only in the early stages (acute phase). Once the inflammation settles down, the pain subsides but instability persists. If the surgeon intervenes at this stage, he can give the best possible results and faster rehab.

GRAFT RELATED:

- Recurrent laxity
- Trauma, leading to graft laxity
- Infection

With higher levels of activity and energy trauma, the rate of primary ACL reconstruction has increased. And with the increase in the number of primary ACL, revision ACL reconstruction has also gone up. Graft related revision reconstruction has better outcome compared to the non-graft related revision ACL reconstruction.

For trauma, graft lysis, stretch out or implant site infection (specifically tibial side), most revisions are done in a single procedure – except in case of established infection where it is done as a two-stage procedure over six to eight weeks. For the revision, graft can be taken from opposite side hamstring, same side BTB or the allograft from the tissue bank. In South India, it is available with MS Ramaiah Research Centre, Bangalore.

Depending on the primary surgery

material used tunnel/first graft size revision surgery implants can be decided. There's a need for endobutton (or) retrobutton, special kind of adjustable button system (ABS) or by using a screw supplemented with the suture disc (suture button). The pain with the revision would be much less compared to the primary one.

Rehabilitation protocol would be similar to the primary ACL reconstruction.

- Partial weight bearing mobilisation in 24-48 hrs
- Knee ROM and full weight bearing in 2-4 weeks
- Back to work in 6-8 weeks
- Back to sports in 6-8 months

The revision ACL should be done in a compliant patient, who is functionally active. It is also to be decided on his expectations and need for revision on the cause for primary failure (graft or non-graft related). The surgeon's aim is to restore the natural biomechanics by reconstruction instead of replacement, thereby ensuring stable, actively functional knee for the young and dynamic and making them free of instability.

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