



ACL (Anterior Cruciate Ligament) Repair

Summary

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Facts

- The ACL is a ligament inside the knee joint, it makes an “x” inside the knee along with the posterior cruciate ligament (PCL). The primary role of the ACL is to prevent back and forth motion of the knee.
- Within the United States annually, about 100,000 to 200,00 individuals rupture their ACL.
- The female athlete has a two to as many as eight times more likelihood of an ACL tear.
- Most individuals who tear their ACL require surgery to return to sports
- Rehab is lengthy, typically will take from six months to a year to return back to sports.

Types of Surgery

- Allograft versus autograft. An allograft ACL comes from another organ donor. This typically features a stronger graft to start, is less painful, but has a higher rate of rejection due to incorporating in the body slowly.
- The most common reason for failure of the allograft is premature return to sports.
- Autograft takes a part of your own body, commonly the hamstring or patellar tendon to replace the torn ligament.
- The risk of rejection of an autograft is nearly zero because it comes from your own body.
- Typically the allograft has a higher rate of recovery, but sometimes can lead to more soreness initially.
- The patellar graft is now the gold standard for ACL repair.

Early Rehab

- Focuses on early weight bearing, swelling reduction, and mobility.
- PT is necessary to ensure safe and appropriate return to activities. Surgeons typically have guidelines in place to establish how recovery should proceed.
- Early in rehab, the primary focus is to improve range of motion of the knee. Regaining the knee’s ability to fully straighten is critical. This allows for healthy growth of the ACL as well as improves the ability to fully bear weight and strengthen around the knee. Bending the knee is important as well, surgeon’s will typically have guidelines for how motion should advance. Flexing the knee usually takes longer to occur than extending, but the faster one can fully range his or her knee, the better the outcome.
- Swelling reduction techniques are very important to reduce pain and inflammation. Post-surgery, one can expect a swollen knee due to the inflammatory response of the body. Early icing and elevation constantly throughout the day can lead to dramatic changes in swelling. Standing and walking too much early on can cause an increase in swelling. Without swelling reduction techniques, one could delay the recovery time for ACL repair.

-More surgeon's nowadays are pushing for patients to bear weight day one. Patient's are use a knee immobilizer (brace) to prevent any bending of the knee during weight bearing. Crutches are typically used to walk but are usually discontinued once the knee is stable enough for independent weight bearing.

-Prehab is a term for performing physical therapy before the date of surgery. Best evidence suggests that prehab leads to more successful and quicker recovery times. Ask your physician if prehab is recommended before your surgery. It could make all the difference in a successful recovery.

Late Rehab/Return to Sports

-After approximately three to five months of progressive strengthening and return to normal motion, patients may begin to participate in return to sports like exercise.

-This entirely depends on the surgeon's protocol, but most will be within this range of time.

-It is crucial to practice agility training in athletes as this will serve as a foundation for returning to sports.

-Evidence suggests that individuals who participate in agility and sports training before returning to sports have a lower risk of reinjury.

-Exercises include but are not limited to jumping for distance, single leg hopping, shuffling side to side, lateral quick hops, t-drills, ladder drills, jogging, sprinting, backpedaling, and treadmill training. Exercises should be tailored on the individual and his or her recovery needs.

-Return to sports criteria should include a general assessment of strength in comparison to the other healthy knee. Sports testing can be performed to "grade" the knee in strength. Other methods include measuring the distance of hopping, stepping forwards, stepping down, and length of running and time taken to run. It is highly recommended that patients pass return to sports testing before returning to sports.

-Despite all return to sports testing, time is needed to recover and allow for proper healing of the tissue. Return to sports usually occurs within six to 12 months but should be discussed with the physician and physical therapist to ensure a safe and confident return back.

