

# Quadriceps Tendon ACL Reconstruction with IT Band Tenodesis for the High-risk Athlete



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# Anatomy

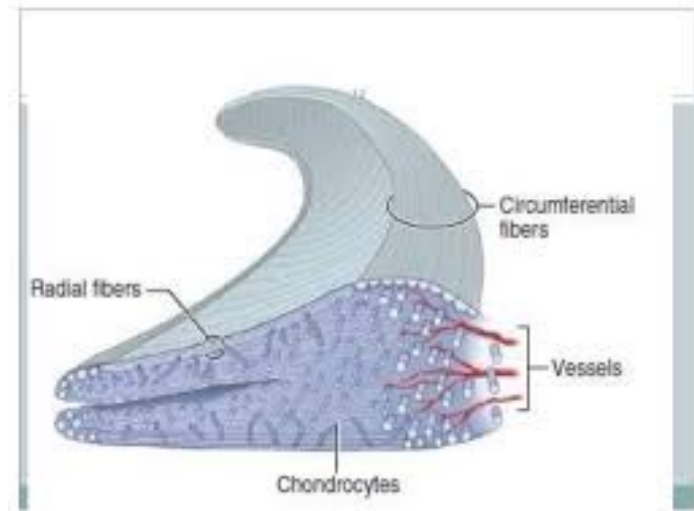
## ACL

- Prevents shin bone (tibia) from sliding out in front of the thigh bone (femur)
- Provides stability



## Meniscus

- Function
  - Stability
  - Shock Absorption
  - Protect cartilage



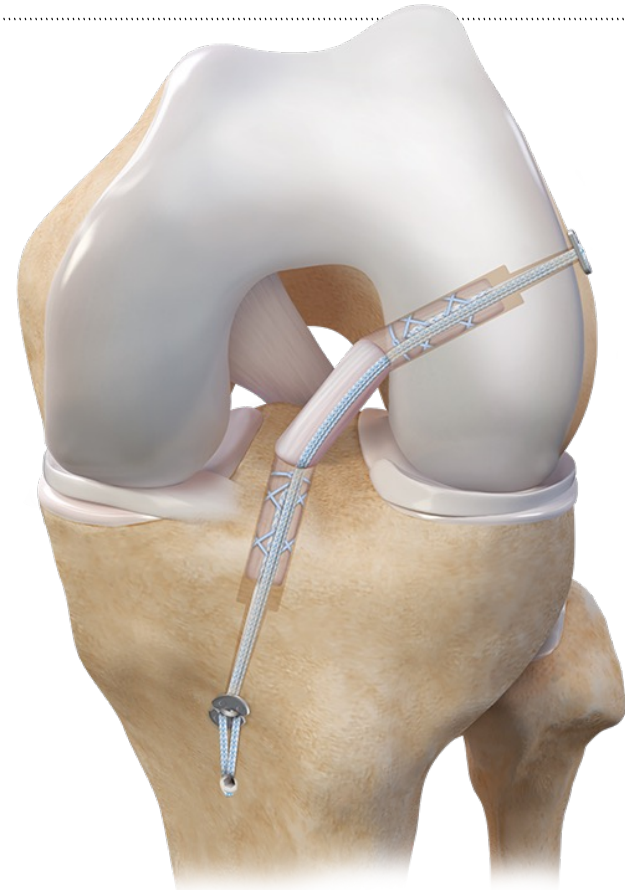
# What happens if no surgery?

- Poor healing potential
  - Will not heal without surgery
- Persistent **instability/giving way**
- *Increased* **meniscus tears**
- *Increased* **arthritis**
- **Poor** long-term **function**
- **Decreased** return to sport



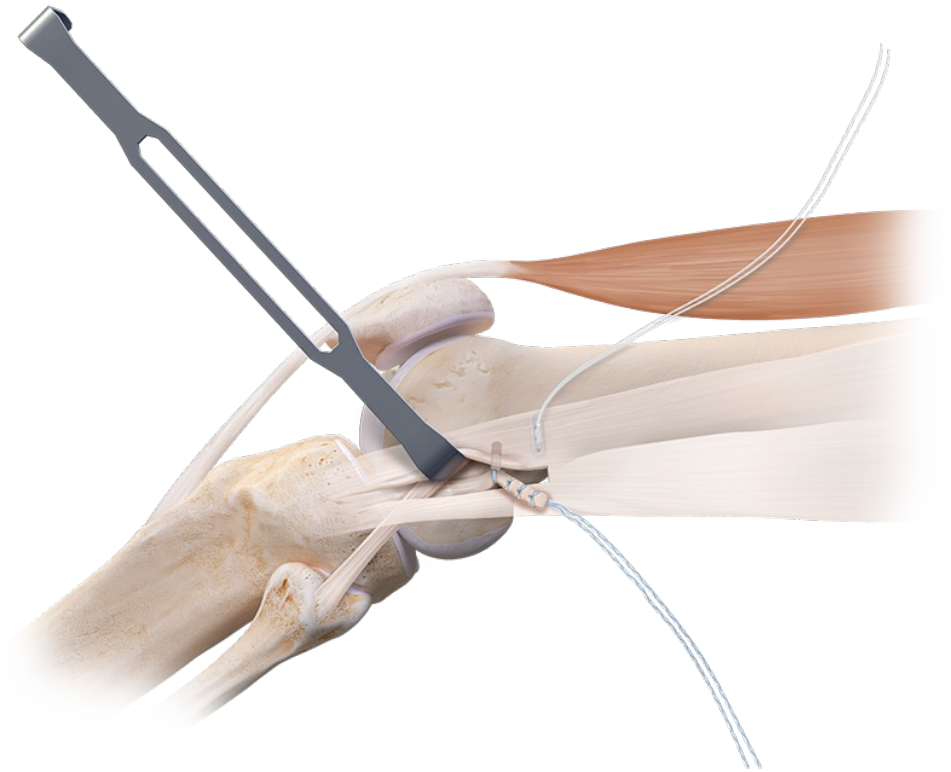
# ACL Reconstruction (Replacement)

- **Outpatient** surgery (go home same day)
- **General anesthesia** (asleep the whole surgery and won't feel anything)
- **Arthroscopic** surgery with small incisions
- Torn ligament is removed and replaced with a tissue **graft**
  - **Autograft** (patient's own tissue)



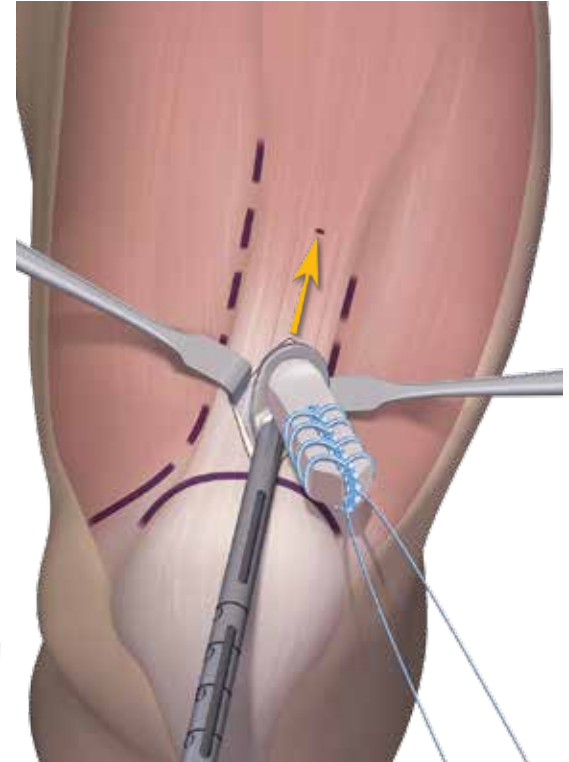
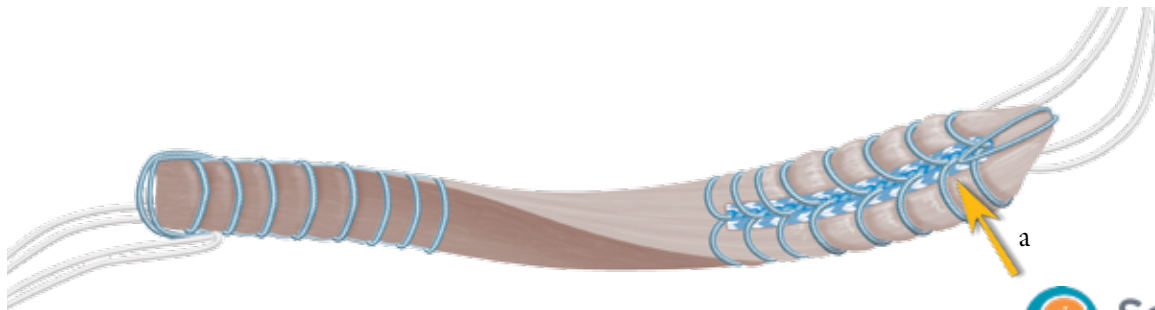
# IT Band Tenodesis

- Additional procedure on outer (lateral) part of knee
- Provides extra stability
- Lowers risk of re-tear in high-risk athletes

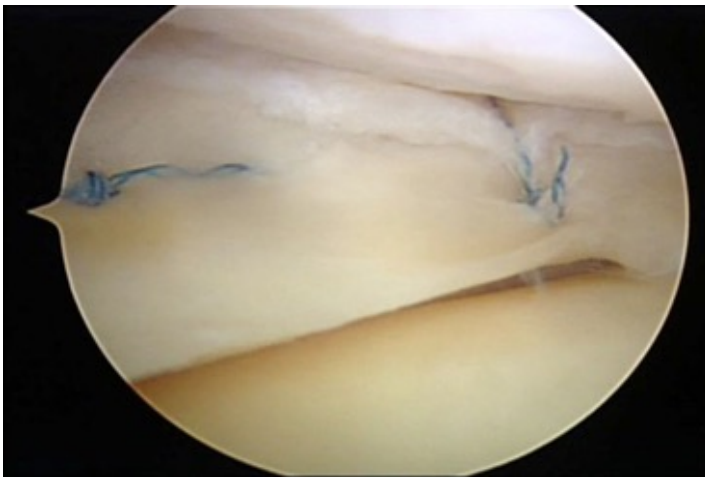
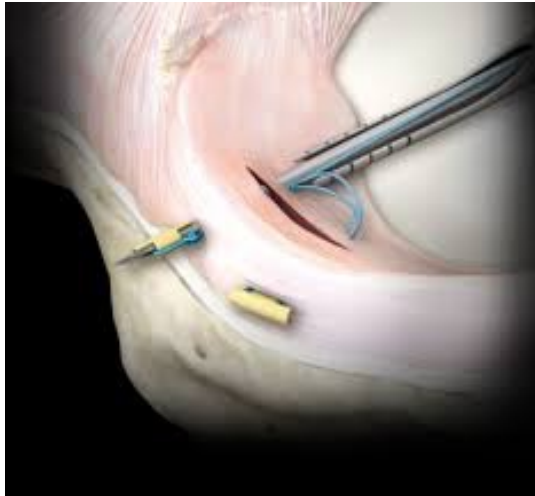


# My Preferred Graft- Quadriceps Tendon Autograft

- Minimal acute postoperative pain
- Does NOT affect strength
- Similar stability, patient satisfaction, and patient-reported outcomes to other grafts
- Similar failure rates compared to Patellar Tendon grafts
- More cosmetic, less pain, no fracture risk
- Lower failure rates compared to Hamstring grafts



# Meniscus Repair vs Partial Meniscectomy (Trim)



# Complications and Considerations\*

- Anesthesia
- Bleeding
- Nerve injury
- Infection (<1%)
  - Rare joint infection can require hospitalization, IV antibiotics, multiple surgeries, removal of the graft.
- Stiffness (<5%)
- Growth disturbance (<2%)
  - If open growth plates
- Normal for knee to feel “not normal”, “loose”, “different”
  - Pain-free clicking/popping
- Negative financial and career implications

**\* Averages in Adolescent Population**



# Re-injury and Return to Sport\*

- **Graft rupture (13%)**
  - 50% decrease for every month after 6 months
  - 7x more likely to tear before 9 months
  - Passing Return-to-sport test significantly reduces risk
  - After 2 years, risk returns to normal
- **Return to pre-injury level of sport (80%)**
  - Fear of re-injury is most common reason for not returning
- **Other side (*Contralateral*) ACL injury (14%)**
  - ? Due to compensation
- **Meniscus Repair Failure (15%)**

\* Averages in Adolescent Population

# Rehabilitation and Return to Sports

- **Typically full weight-bearing right after surgery**
  - Can change depending on meniscus repair (e.g. toe-touch or non-weightbearing)
- **Physical therapy (PT) starts 3-7 days after surgery**
  - Frequency (~1-2 x per week) dictated by the PT team, insurance, etc.
- **Knee brace and crutches for 2-6 weeks**
- **Running at 4 months**
- **Rehab Progress Assessment at 6 months**
  - Criteria to begin *return to sport phase* of rehab
- **Return to sport test at 9 months (minimum)**
  - Strict criteria for return to sport *clearance*
  - **Decrease risk of re-tear and contralateral ACL injury**

# Mental Health and Psychological Considerations

- Recovery after surgery can be stressful and **emotionally challenging**
- How you respond throughout the recovery process can impact your mood, adherence to rehab, and return to play/sport
- **Common complaints** (these feelings are **normal**):
  - Anxiety and/or Depression
  - Frustration
  - Fear of pain
  - Social isolation
  - Low motivation for rehab
  - Don't want to return to sports
- **Let us know how you're feeling throughout the recovery process**
- **We are here to help!**