



Brian Bjerke, MD

# ACL Reconstruction

## Post-Operative Protocol

---

### Phase I – Maximum Protection (Weeks 0 to 2):

#### **Weeks 0-1:**

- Use **crutches** as needed over the first 0-2 weeks, then progress to weight bearing as tolerated without crutches.
  - The physical therapist will help decide when to wean off the crutches.
- **Brace** (knee immobilizer):
  - Wear brace at all times while ambulating.
  - The brace needs to be worn until the quadriceps function returns to normal.
  - This can often take anywhere from 2-3 weeks.
  - The physical therapist will decide once it is okay to discontinue the brace completely.
- Goals:
  - Reduce inflammation
  - Normalize patella mobility with manual mobilizations
  - Gain full extension
  - 90°-100° of knee flexion, progressing to full as tolerate
- Exercise Progression:
  - Quadriceps sets using NMES as needed
  - Multi-plane straight leg raising
  - Gait training

#### **Weeks 1-2:**

- Goals:
  - Reduce inflammation
  - Full knee extension/hyperextension
  - 100°-120° of knee flexion, progress as tolerated

### Phase II – Progressive Stretching and Early Strengthening (Weeks 2 to 6):

#### **Weeks 2-4:**

- Goals:

- Progress off crutches
- Full knee extension/hyperextension
- Knee flexion to 120°, progress as tolerated
- Normalize gait mechanics
- Normalize patellofemoral joint and scar mobility
- Exercise Progression:
  - Bilateral squat progression
  - Multi-plane open and closed kinetic chain hip strengthening
  - Step-up progression
  - Stationary biking and treadmill/outdoor walking
  - Deep water pool program when incisions healed; focus on ROM
  - Proprioception drills

#### **Weeks 4-6:**

- Goals:
  - Reduce inflammation
  - Full ROM
  - Normal gait
- Exercise Progression:
  - Leg press, hamstrings curls
  - Increase intensity of stationary bike program, may add elevation to treadmill walking and elliptical
  - Advance intensity of deep water pool program; focus on endurance training

#### **Phase III – Advanced Strengthening and Endurance Training (Weeks 6 to 12):**

##### **Weeks 6-12:**

- Goals:
  - Full knee flexion and extension with terminal stretch
  - Progressive strengthening
  - Increase muscular endurance
- Exercise Progression:
  - Weighted squat progression
  - Lunge progression (retro, walk and split) as indicated
  - Controlled movement series

##### **Overall weeks 8-10:**

- Exercise Progression:
  - Outdoor biking: week 8
  - Lateral lunge progression: week 8-10
  - Shallow water pool running: week 8-10
  - Swimming free style: week 8-10
  - Backward elevated treadmill walking: week 8-10

- Basic ladder series: week 10

#### **Phase IV – Advance Strengthening and Running progression (Weeks 12 to 28):**

##### **Weeks 12-24 (3-5.5 months):**

- Exercise Progression:
  - Progress resistance with squat and lunge strengthening program, may add leg extensions at 30° - 0° (exclude patients with patellar or trochlear groove chondral pathology)
  - Linear running progression
  - Advanced ladder series
  - Basic plyometric box progression
  - Fit functional brace

##### **Weeks 24-28 (5.5-6.5 months): Return to Sport and Functional Drills Phase**

- Exercise Progression:
  - Interval golf program
  - Advance ladder, hurdle and plyometric box progressions
  - Sport specific field/court drills with brace on
  - Non-contact drills
- Sports test and follow-up with physician:
  - Follow-up examination with the physician
  - Sports test for return to competition at 6 to 8 months

**Return to full sports participation without restrictions is anticipated at approximately 7-9 months depending on sport.**

\*Please feel free to contact Dr. Brian Bjerke's office with any questions or concerns. Dr. Bjerke's care coordinator Andria Larson is available by phone at 952-456-7095.