

#### **Austin Cole, MD**

# Anterior Cruciate Ligament (ACL) and Posterolateral Corner (PLC) Reconstruction

**Post-Operative Protocol** 

# Phase I — Maximum protection

#### Weeks 0-4:

- Nonweight-bearing with crutches
- Brace locked in extension for all mobility, may unlock when seated
- Avoid posterior and externally rotated tibia glides or maneuvers
- Avoid isolated hamstring exercises

# Goals

- Reduce inflammation
- o Normalize patella mobility with manual mobilizations
- Full extension
- o 90°-100° of knee flexion, progressing to full as tolerated

#### Exercise progression

- Quadriceps setting using NMES as needed
- Multiplane straight leg raising

#### Weeks 4-6:

- Begin partial weight-bearing at 4 weeks and progress to WBAT by 6 weeks
- Maintain brace use, allow brace to be unlocked with partial ROM as quad control allows Goals
  - o Progress off crutches
  - o Knee flexion to 120°, progress as tolerated
  - Normalized gait mechanics
  - Reduce inflammation
  - o Full knee extension
  - o 100°-120° of knee flexion, progress as tolerated

#### Phase II — Progressive stretching and early strengthening

#### Weeks 6-8:

- Wean from brace when gait normalized and quad activation is sufficient
  - o Progress closed chain strengthening
  - Avoid open chain hamstring resisted exercise x4 months postop
  - o Eliminate movement dysfunction (i.e. no dynamic valgus at the knee)

# Exercise progression

- o Bilateral squat progression
- o Multiplane open and closed kinetic chain hip strengthening
- Step-up and step-down progression
- Stationary biking and treadmill/outdoor walking
- o Proprioception drills
- o Increase intensity of stationary bike program, may add elevation to treadmill walking and elliptical

# Phase III — Advanced strengthening and proprioception

# Weeks 8-12:

#### Goals

o Progressive strengthening and endurance training

#### Exercise progression

- Weighted squat progression
- o Lunge progression (retro, walk and split) as indicated
- Single limb stability exercises
- Outdoor biking week 8
- Lateral lunge progression weeks 8–10
- Shallow water pool running weeks 8–10

- Swimming freestyle weeks 8–10
- Backward elevated treadmill walking weeks 8–10
- o Basic ladder series week 10
- Begin linear treadmill jogging weeks 10–12

# Phase IV — Advance strengthening and running progression Weeks 12–20:

# Goals

- o Pass preliminary functional test at >90% (involved versus uninvolved limb)
- See testing protocol

#### Exercise progression

- o 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
- o Advanced ladder series
- o Basic plyometric box progression

#### Weeks 12-14:

Administer preliminary functional test for physician to review

# Phase V — Return to sport

#### Weeks 20-24:

#### Exercise progression

- o Hurdle and plyo box progressions
- o Sport specific field/court drills
- Noncontact drills

# Criteria to be released for return to sport

- Follow-up examination with the physician
- Pass return-to-sport functional test at >90% (involved versus uninvolved limb)
- See testing protocol
- Display symmetry and confidence in high-speed cutting, multiplane plyometric drills, sprinting and decelerating