Connecticut Orthopaedics

Megan R. Wolf, MD
Sports Medicine/Foot & Ankle

Anterior Cruciate Ligament (ACL) Reconstruction
And Posterolateral Corner (PLC) Reconstruction
Post-Operative Protocol

Phase I – Maximum Protection

Weeks 0 to 4:

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

Exercise progression

- Quadriceps setting using NMES as needed
- Multi-plane straight leg raising

Weeks 4 to 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

- Progress off crutches
- Knee flexion to 120 degrees, progress as tolerated
- Normalized gait mechanics
- Reduce inflammation
- Full knee extension
- 100° – 120° of knee flexion, progress as tolerated

Phase II – Progressive Stretching and Early Strengthening

Weeks 6 to 8:

- Wean from brace when gait normalized and quad activation is sufficient

Goals

- Progress closed chain strengthening
- Avoid open chai hamstring resisted exercise x4 months post-op
- Eliminate movement dysfunction (i.e. no dynamic valgus at the knee)

Exercise progression

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

Connecticut Orthopaedics

Megan R. Wolf, MD
Sports Medicine/Foot & Ankle

Phase III – Advanced Strengthening and Proprioception

Weeks 8 to 12:

Goals
- Progressive strengthening and endurance training

Exercise progression
- Weighted squat progression
- Lunge progression (retro, walk and split) as indicated
- Single limb stability exercises
- Outdoor biking – week 8
- Lateral lunge progression – week 8 to 10
- Shallow water pool running – week 8 to 10
- Swimming free style – week 8 to 10
- Backward elevated treadmill walking – week 8 to 10
- Basic ladder series – week 10
- Begin linear treadmill jogging – week 10-12

Phase IV – Advance Strengthening and Running Progression

Weeks 12 to 20:

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

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

Weeks 12 to 14:

Administer preliminary functional test for physician to review

Phase V – Return to Sport

Weeks 20 to 24:

Exercise progression
- Hurdle and plyo box progressions
- Sport specific field/court drills
- Non-contact drills

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