**ACL Repair Rehabilitation Protocol**

**Phase I – Maximum Protection (Weeks 0-2):**

**Week 0-1:**

* Brace locked at 0-0 for 6 weeks
* Brace at all times when not exercising, for six weeks
* Ice and modalities to reduce pain and inflammation
* Non WTB for first 2 weeks

### Range of Motion

 - Begin aggressive patellar mobility

 - Emphasize full extension

 - ROM 0-0 for 1st week

### Exercises

- Quadriceps setting, focusing on VMO

 - Multi-plane straight leg raising

- Blood Flow Restriction to maintain muscle mass & activate quad

 - Gait training

**Weeks 1-2:**

* Continue with program outlined above:

### Range of Motion

 - Full knee extension/hyperextension

 - ROM 0-90 deg Passive only

**Phase II – Progressive Stretching & Early Strengthening (Weeks 2-6):**

**Weeks 2-4:**

* Toe touch PWB for 4 weeks
* Continue with modalities to control inflammation

### Range of Motion

 **-** Full knee extension/hyperextension

 - Knee flexion to 120°, progress as tolerated

### Exercises

 - Continue with phase I exercise

 - Bilateral closed kinetic chain squatting

 - Multi-plane open and closed kinetic chain hip strengthening

- Blood Flow Restriction to maintain muscle mass & activate quad

 - Step-up progression

**Weeks 4-6:**

### Range of Motion

* Full knee flexion and extension

### Exercises

 - Advance strengthening program progressing to unilateral as tolerated

- start stationary bike program, + slowly and increase intensity

 - Advance intensity of pool program; focus on strengthening

**Phase III – Adv Strengthening & Proprioception Phase (Weeks 6-10):**

**Weeks 6 to 10:**

### Range of Motion

 - Brace 0/90 deg, for next 2 weeks then d/c brace

 - Advance to Full knee flexion and extension with terminal stretch

### Exercises

- Advance intensity of cardiovascular program; no running

- add treadmill walk at week 8

- Stationary biking

- Pool program when incisions healed; focus on ROM

- Increase intensity of closed kinetic chain exercises

 - Advance proprioception drills at week 8

 - Initiate gym strengthening progressing from bilateral to unilateral as tolerated Leg press, squats, partial lunges, hamstring curls, ab/adduction, calf raises

 - Begin multi-directional functional cord work; no carioca

- May begin a pool running program at week 12

**Phase IV – Advance Strengthening and Plyometric Drill Phase (Weeks 10 to 16):**

**Weeks 10 to16:**

* Brace d/c week 10
* Implement a full gym strengthening program; including leg extensions at 30° - 0°, progressing to full range as PF arthrokinematics normalize
* Begin straight plane running
* Begin non-aggressive plyometric drills

**Phase V – Return to Sport and Functional Drills Phase (Weeks 16-20):**

**Weeks 16-20:**

* Continue with aggressive lower extremity strengthening, cardiovascular training, and flexibility
* Implement sport specific drills; multiplane
* Advance plyometric drills from bilateral to unilateral as tolerated
* Blood Flow Restriction Therapy to build muscle mass
* Follow-up examination with the physician
* Brace fitting for functional knee brace if desired
* Sports test for return to competition (Vail Sport Cord Test)