

## Meniscus Transplant

### **Phase 1 – Maximum Protection**

#### **Weeks 0 to 6**

- Brace – 0-90 degrees for 6 weeks
  - Recommend locking brace in extension for sleep
- No weight bearing with use of two crutches for 6 weeks
- Limit knee flexion to 90 degrees for 3 weeks
- Allow 90-120 degrees of knee flexion between 3 to 6 weeks

#### Goals:

- Reduce pain and inflammation
- Full knee extension

#### Exercise Progression:

- Emphasize patellofemoral mobilizations
- Passive/active knee range of motion with 90 degrees flexion limit
- Quadriceps setting emphasize VMO function
- Multi-plane straight leg raises
- Open chain hip strengthening
- Gait training

### **Phase 2 – Progressive Stretching and Early Strengthening**

#### **Weeks 6 to 8**

- Brace – open 0-90 degrees for ambulation
- Continue using two crutches, with gradual progression of weight bearing
  - Increase to full weight bearing over the next 2 weeks

#### Exercise Progression:

- Gradual progression to full knee flexion
- Continue to emphasize patella mobility
- Begin bilateral closed kinetic chain strengthening limited range initially
- Step-up progression
- Begin stationary bike with light resistance initially
- Gait training – normalize gait pattern

### **Phase 3 – Strengthening and Proprioception**

#### **Weeks 8 to 12**

Goals:

- Full knee range of motion

Exercise Progression:

- Avoid rotational movements for 14 weeks
- Advance stationary biking program (increase intensity)
- Introduce treadmill walking and elliptical trainer
- Begin unilateral closed kinetic chain program
- Gym strengthening progression (leg press above 90 degrees, hamstring curls, etc.)

### **Phase 4 – Advanced Strengthening and Plyometric Drills**

#### **Weeks 12 to 16**

- Follow-up examination with the physician

Goals:

- Pass return to sport function test at >90% (involved vs uninvolved limb) by 16 weeks

Exercise Progression:

- Plyometric drills from bilateral to unilateral at 12 weeks
- Linear running progression at 12 weeks
- Progress to lateral and rotational stresses at 14 weeks
- Multi-directional drills at 14 to 16 weeks

### **Phase 5 – Return to Sport**

#### **Weeks 16 to 20**

Exercise Progression:

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

Criteria for return to play:

- Follow-up examination with the physician
- Pass return to sport function test at >90% (involved vs uninvolved limb)
- Display symmetry and confidence in high-speed cutting, multi-plane plyometric drills, sprinting, and decelerating

Anticipated return to sport:

- 4-6 months for contact and non-contact athletes