MPFL Reconstruction
Dr Barton Branam

Pre-operative Rehabilitation

GOAL: Optimize medical and physical conditions to maximize likelihood of achieving operative goals. Review post-operative protocol/restrictions and address any concerns about living environment/ADL's. The patient and surgeon should have similar goals and expectations relative to the surgery and the expected outcomes.

1) Manage swelling
2) Achieve full ROM
3) Normalize quadriceps function
4) Crutch training

**At this time, the therapist should contact Dr Branam's office with any red flags/concerns

Postoperative rehabilitation

GOAL: Restore range of motion and strength, such that function is optimized to achieve surgeon and patient goals. Range of motion and strength often dictate functional outcome. Eliminate (or minimize) pain depending on clinical situation. The ranges below are indicative of differences in recovery times as determined by factors such as age, activity level, medical conditions, conditioning, and tissue quality. The intent is to rehab as aggressively as possible while allowing for proper healing of the surgically treated tissue. The patient will follow up post-operatively with Dr Branam's office at 3-5 days, 4 weeks, 2 months, 3 months and additionally as needed. Return to sport or work will be discussed at the last visit. Outside of the regularly scheduled follow up appointments with Dr. Branam, he needs to know about outlier patients i.e. those that are well ahead or behind schedule.

**If the patient is rehabbing out of town, the Athletic Trainer and/or Physical Therapist need to touch base with someone from Dr Branam's team at regular intervals. Communication is key to a successful outcome

PHASE I: Weeks 1-4

1) Immediate post-operative PT visit: educate patients on precautions, check crutches/brace for fit, review swelling and pain management, check wound
   **Focus on pain and inflammation management
2) May take down dressing and shower post-op day 3 (no soaking or submerging wound)
3) Immediate post-op pt is placed in a TROM brace and locked in full extension
   a. Brace should be on any time the patient is up but can be removed when seated or supine
4) ROM: restricted 0-90deg for the first 4 wks
   a. Emphasis on full knee extension
   b. Heel slides
   c. Seated knee flexion in chair
   d. Knee extension with heel prop

5) Quad isometrics with NMES/biofeedback progress to SLR
    a. The sooner the quad is firing and patient demonstrates good control, the sooner the patient will be able to wean from crutches and brace
6) Gait training: WBAT with brace on and locked in full extension
    a. When quad control is sufficient, begin gait training in THERAPY without the brace to teach proper heel toe gait pattern
7) Exercises/therapy activities
    a. AROM: hip and ankle
    b. Flexibility
    c. Patellar glides
    d. Toe/heel raises
    e. Mini-squats
    f. Balance and proprioception training
8) Pain, swelling and limping are guidelines to indicate the patient is doing too much and needs to back off. Teach the patient to adhere to these symptoms when progressing activities and
9) GOALS: SLR without a quad lag, ROM 0-90deg, minimal pain/effusion

PHASE II: Weeks 4-8

**Patient will typically see Dr Branam for a follow up in his office around 4 wks to check progress. At this time, Dr Branam expects the patient will be off crutches and ROM 0-90*, specifically full knee extension. At this time, typically the brace will be shortened and unlocked if progressing as expected.

1) Continue ROM/flexibility exercise to progress gentle ROM
2) Continue exercises with progressive strength and endurance training
    a. Cardio: bike, elliptical, treadmill walking
    b. CKC: heel raises, squats, leg press
        i. Quad strengthening 0-90deg until 8 wks
    c. Balance/proprioception training – progress to unstable surface
3) Establish HEP/gym program
    a. Importance of doing the exercises 5-6 days/wk and not just in PT. Assist in setting up a gym or home program so the patient can be consistent and be successful in returning to their activities prior to injury
4) GOALS: full ROM, good quad control, normal gait, no effusion

PHASE III: Weeks 8-12

1) At 2 month follow up, patient can typically transition into a Lateral J-Brace if progressing as expected in therapy
2) Continue progressive strengthening
    a. Cardio: Elliptical, Stairmaster, bike
    b. CKC: progress to unilateral
        i. Lunges, step ups forward and lateral
        ii. Unilateral eccentric leg press
    c. Balance/proprioception
    d. Endurance

PHASE IV: Weeks 12 to 4+ months

1) Patients are seen for a follow up at Dr Branam's office around 3.5 months post-op. At that time if the patient is progressing well in rehab, they may start jogging
    a. Jogging: straight line only, in a controlled environment
        i. Walk: jog interval – length and number of intervals depends on overall conditioning
    b. Gentle jumping/hopping drills to prepare for jogging
        i. 2 feet to 1 foot: work on landing
        ii. 1 foot to 2 feet: work on push off
2) Continue with CKC strength training
3) Progress into sport specific drills depending on the sport
    a. Gentle acceleration/deceleration patterns
    b. Light cutting
    c. Plyometrics
4) At this point, patient may do check in's with physical therapy as they should be doing most of the work independently
5) 4+ months: Functional eval for return to sport by the physical therapist
    a. 90% strength contralateral limb
    b. SL hop, hop cross over, triple hop

Return to functional goals: i.e. sport/work: Upon completion of proper rehab you'll be cleared to return to sport. This may require a functional evaluation by the therapist which will aid the surgeon in determining the appropriate timing. This should be consistent with the preoperative discussions, but are often variable. Please make sure you understand the process for return to sport which will almost always involves a gradual progression.