

Inland Orthopaedic Surgery & Sports Medicine Clinic

Kyle J. Hazelwood, M.D.

MPFL RECONSTRUCTION USING HAMSTRING AUTO/SOFT TISSUE GRAFT POST-OP INSTRUCTIONS AND REHAB PROTOCOL

This protocol has been developed for the patient following Medial Patellofemoral Ligament (MPFL) reconstruction. This protocol may vary in length, aggressiveness and return to sports/activities depending on factors such as: concomitant procedures or additional injuries seen at the time of surgery, primary vs revision surgery, range of motion/swelling status, pre-operative function, rehabilitation goals and expectations.

Physical therapy should begin approximately 2 weeks following surgery. Your rehabilitation will be a supervised program by a physical therapist and a home program as directed by your therapist.

Primary goals of the procedure and rehabilitation are: 1) Prevention of continued patellar instability 2) Control joint pain and swelling 3) Regain normal knee range of motion and strength 4) Regain normal proprioception, balance, and coordination for daily activities 5) Achieve the level of pre-injury function based on the orthopaedic and patient goals.

The goal of this rehabilitation plan is to facilitate return to the pre-injury level of function. Return to activity and sports depend upon multiple factors. These factors are based on findings at the time of surgery as well the functional status of the knee. Some factors, such as graft healing are factors outside of our control. Return to sports and cutting activities is allowed after the patient achieves adequate flexibility, strength and endurance of the knee that is equal to at least approximately 90% of the other side. Generally, this occurs around 4-6 months from the time of the operation.

I. POST-OPERATIVE INSTRUCTIONS:

- a. **Take 1 tablet (325 mg) of aspirin per day**, starting the day after surgery and continuing **for 2 weeks**. This is done to decrease the risk of blood clots.
- b. Dressing may be removed 3 days after surgery but keep any the steri-strips in place. Try to keep the wound as dry as possible until follow-up.
- c. It is ok to shower after surgery, but keep the dressings and incision wrapped with saran wrap or something similar. When in the shower, do not scrub or soak the incisions. Just let soap/water run over the knee and pat dry. Do not submerge incisions in bath or pool until fully healed (4-5 weeks).
- d. If you had a **nerve block at the time of surgery, it usually wears off 12-24 hrs post-operatively**. It is normal to have some numbness in the leg the first several days after surgery as a result. **The first night after surgery take pain medication before going to bed as the nerve block will often wear off during the night.**
- e. Take the prescribed pain medications as directed. You can supplement your pain control with ice, elevation of the affected extremity and over-the-counter ibuprofen if needed, making sure to follow the dosage as recommended on the bottle. Use ice max 20 min/hour. Place a towel between skin and ice to protect skin.
- f. Decrease the frequency of your pain medicine as your symptoms allow. Generally, patients are able to be off of pain medicine around 1-2 weeks post-op.
- g. After surgery you will be partial weight-bearing on the operative extremity for 2 weeks. Use the crutches for walking at all times. You may advance to weight bearing as tolerated on the operative extremity after 2 weeks.

2500 W. A Street Suite 201, Moscow, Idaho 83843 (208) 883-2828
825 SE Bishop Blvd., Suite 120, Pullman, WA 99163 (509) 332-2828

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- h. Keep the brace locked in full extension for ambulation for 2 weeks. When sitting down, you may unlock the brace to bend the knee to a maximum of 90 degrees of flexion. Range of motion is restricted from full extension to 90 degrees of flexion for 4 weeks from surgery. After 4 weeks, begin range of motion as tolerated. You may take an occasional break from wearing the brace if you are at home and resting. Wear the brace for a total of 4 weeks.
- i. After surgery, the first few days are generally spent recovering and resting. When resting, work on calf pumps (moving your ankle up and down) several times per hour. This helps reduce swelling in the leg and decrease the chance of blood clots.
- j. Other exercises to work on 3-4 times per day, before seeing therapist include calf pumps, straight leg raises, and quad sets (contracting your thigh and holding for 10 seconds).
- k. Work on achieving full extension of the knee. The most important aspect of your rehab the first two weeks is getting the knee all the way straight.
- l. Return to driving. There is no conclusive data to guide the exact time when it is safe to return to driving. You cannot drive while still on narcotic pain medications. In general, there should be adequate range of motion of the knee, minimal pain/swelling, and enough strength in the leg to allow you to quickly brake if needed.
- m. **DO NOT PLACE PILLOWS/BLANKETS UNDERNEATH THE KNEE AFTER SURGERY.** This can cause a flexion contracture of the knee after surgery, making full extension of the knee difficult. It is ok to place pillows/blankets under the ankle for elevation.

II. Rehabilitation Protocol 0-6 Weeks Post-Op

- a. **Range of motion** goal: 0-90 by two weeks post-operatively. **Emphasize full extension of the knee**
 - i. Heel slides
 - ii. **No knee flexion > 90 degrees x 4 weeks.**
 - iii. Advance range of motion as tolerated at 4 weeks post-op.
- b. **Use crutches for walking x 2 weeks.**
 - i. You will be partial weight bearing x 2 weeks. After 2 weeks you can wean off the crutches and begin weight bearing as tolerated.
- c. **Use the brace for a total of four weeks.** The brace is locked in full extension for walking. Range of motion in the brace is restricted from 0 to 90 degrees x 4 weeks.
- d. Prone hangs
- e. Quadriceps "re-education." Isometric Quadriceps strengthening. Straight leg raises/quad sets
- f. Gentle patellar slides/mobilization
- f. Hip/Core progressive resistive exercises
- g. Gastroc-soleus stretch
- h. Start balance/proprioceptive training at 4 weeks
- i. Week 4 start stationary bike
- j. Modalities: cryotherapy, electrical stimulation, edema control, etc.

III. 6-12 Weeks Post-Op

- a. Continue exercises from earlier protocol
- b. Weight bearing as tolerated and out of brace.
- c. **Progress active knee flexion.** No range of motion restrictions.
- d. **Goal: 130 degrees knee flexion by week 8.**
- e. Hip/Core/Hamstring/Quad progressive resistive exercises
- f. Begin Squat/step program
 - i. Limit squat activities to a maximum of 45 degrees knee flexion

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- g. Week 8: Treadmill walks, elliptical exercises, and isotonic exercises, including leg presses, toe presses, and leg curls are allowed.
- h. Week 10: Light treadmill jogging.
- i. Continue closed chain quadriceps strengthening in full arc (leg press, wall slides)
- j. Continue edema control/modalities/patellar mobilization

IV. 12+ Weeks Post-Op

- a. Continue all exercises from earlier protocol
- b. Progress quadriceps isotonics
 - i. Ok for open chain exercises
- c. Isokinetic quadriceps exercises
- d. **May progress jogging program**
 - i. Progress treadmill with transition to outside running
- e. Progress proprioception
- f. Plyometric program
- g. **Initiate functional program with sport specific drills at week 16**
 - i. Begin as appropriate based off patient progress
- h. **Return to sports 4-6 months (full ROM and 90% quad strength)**