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Physical Therapy Protocol
Tibial Tubercle Osteotomy +/- Medial Patellofemoral
Ligament Reconstruction

This is a general guideline. Certain patients may require extra attention to certain areas of their body or portions of the protocol. Always listen to your therapist, a protocol never replaces their good clinical judgement. Do not attempt to increase weight, perform a new exercise, or increase your range of motion without their direction.

Weeks 0-2

- A well-padded post-operative dressing will be placed in the operating room. Keep this clean and dry until removed by PT/OT at your first appointment.
- You will likely see a Prineo/Dermabond clear mesh dressing adhered to your skin. Leave this in place. You may shower with this dressing on.
- Crutches will be provided and are to be used for the first six weeks. You will be partial weightbearing for the first six weeks.
- A hinged knee brace will be placed in the operating room. This should be locked in extension for the first week post-operatively. After 1 week, your brace parameters will be increased to 30 degrees of flexion. Then, you will follow a 30-60-90 protocol advancing 30 degrees every two weeks. Brace may be unlocked during therapy and CPM sessions. Brace must be locked in full extension when ambulating/crutching. Brace can be removed for showering. The brace flexion parameter will increase at the same rate as your CPM. Brace parameters will be increased by your surgeon/PA/PT.
- Quad sets/ankle pumps/straight leg raises in brace – 20 repetitions of each, 10 times a day, starting the day after surgery.
- Continuous passive motion (CPM) machine begins 1 week after surgery when brace is first unlocked to 30 degrees. Perform for 3 hours daily, beginning at 0-30 degrees of flexion. Increase flexion 30 degrees every 2 weeks. Continue CPM use until 4-6 weeks postop. Brace is not required during CPM sessions.
- PT/OT ~ 3-5 days postoperatively
 - Removal of postoperative dressing
 - Reaffirming correct performance of SLRs, quad sets, ankle pumps, prone hangs, heel props, hamstring isometrics
 - Patellar mobilization
 - Edema control via compression, manual mobilization and cold therapy.
- Formal therapy to occur once per week, with patient performing routine on own daily.

FIRST POST-OPERATIVE APPOINTMENT ~ 10-14 days after surgery

- Motion/incision check, X-rays, suture removal.

2-6 WEEKS POST-OP - Scar mobilization techniques may be initiated by PT/OT.

- **50% weight-bearing to the surgical leg beginning 4 weeks postop.**
- Flexion parameter increasing as above.
- Brace remains locked in extension while ambulating.
- Gluteals/abduction/adduction

6 -12 WEEKS POST-OP –2nd postop visit

- **X-rays to ensure early incorporation of osteotomy**
- **Begin weaning off crutches.**
 - Goal to progress to FULL weight bearing with no limp and no crutches BY WEEK 8
- **Unlock BRACE flexion when ambulating. Discontinue BY WEEK 8** once full motion obtained with PT.
- Physical Therapy visits may increase to 2 or 3 formal visits weekly during this period.
 - Continue previous exercises
 - ADD:
 - Quad sets, partial wall sits, stationary bike
 - Bilateral closed chain strengthening, less than body weight
 - Supine unilateral leg press - high reps, continue open chain knee extension between 0-45 degrees of flexion
 - Pool program if available
 - AVOID SQUATS, WALL SLIDES, LUNGES, FULL ARC KNEE EXTENSIONS

12 WEEKS POST-OP – 3rd postoperative visit, X-rays

- Normalized walking stride
- Advance unilateral and bilateral closed chain exercises
 - Concentric/eccentric control, biking, elliptical, treadmill walker, progress balance/proprioception, hamstring strength.

16 WEEKS POST-OP

- Backward and forward walking on treadmill, advance single leg strength if radiographic union, light plyometrics

5-6 MONTHS POST-OP – 4th Postoperative visit – X-rays looking for union at osteotomy site.

- Advance strength training_Progressive running/agility_Tolerate longer walking distances. Sport specific exercises.

9-12 MONTHS POST-OP

- Functional progression tests to be based on patient progression. Must be performed pain free. Side to side testing to be performed at this time based on return to play goals and the demands of the patient. Strength must be >90% of the non-surgical side.
- It may take 12 months or more to return to full function for those with high demand employment, or athletic activities.

Further follow-up to be scheduled based on patient progress, and clearance needed to return to full activity.