Dr. Tyler Kent
Tylerkentmd.com

Post-Operative Guidelines and Frequently Asked Questions for Tibial Tubercle Osteotomy

This document will help you plan for your post-operative recovery course following surgery. Please read and retain this information for future reference. Many of the questions you may have later can be answered by referring to this information.

Post-Op Brace: A hinged knee brace should be worn for 6 weeks after surgery. The brace is to be worn at all times, and remains locked in extension (knee straight) for ambulation and sleep for 4 weeks. See the PT protocol for more instructions.

Crutches:
You cannot put all your weight on your leg until 4-6 weeks after surgery. Crutches should be used until adequate balance and stability have been achieved. Plan to use them for the first 5-6 weeks.

Wound Care: Keep the site clean and dry as it heals*. You may remove the outer bandages and gauze 2 days (48 hrs) after surgery. DO NOT remove the white strips directly over your incision sites. You may shower 48 hours after unless told otherwise by Dr. Kent. Do not apply any gels or ointments to the surgical site. You do not need to re-apply any gauze over your incisions after your first shower, unless there is continued drainage.
*It is normal to have small amounts of bloody drainage on the dressing especially the first 24-36hrs. You may develop swelling and bruising that extends up your thigh and down to your leg and perhaps even to your ankle and foot over the first week after surgery. Do not be alarmed. This too is normal, and it is due to gravity pulling the bruising and swelling downward. Notify the office if you have any of the following: steadily increasing drainage on the dressing, pus-like or foul smelling drainage from any of the incisions, elevated temperature above 101° Fahrenheit, breathing difficulties, pain in your calf when you flex your foot up and down that is unrelieved by rest or elevation, or swelling in your calf, foot, or ankle.

Pain Medication: Prescriptions will be electronically sent to your pharmacy a few days prior to your surgery. Please pick up all prescriptions BEFORE your surgery day if possible. You will receive two medications: one narcotic pain medicine (oxycodone or hydrocodone), and Ondansetron for nausea. You may also take Tylenol, and an anti-inflammatory medicine such as Ibuprofen or Aleve. Please note that narcotics will make you constipated, so a stool softener or laxative may be needed. Start taking your pain medication as soon as you start to feel pain or when you feel the nerve block or local anesthetic wearing off. After that you will use the pain medication ONLY as needed. It is normal for pain to be worse at night. You should avoid taking pain medications on an empty stomach, as it will make you nauseous. Use the Tylenol and anti-inflammatory daily, as directed, to reduce the swelling and pain after surgery. Take all medication as directed. Please call the office ASAP for a refill when your supply is low.

PLEASE DO NOT DRIVE WHILE TAKING THE PRESCRIPTION PAIN MEDICATION!

Pain medication may make you constipated. Below are a few solutions to try in this order: Also, if you are prone to constipation try these below.

A. Decrease the amount of pain medication if you aren't having pain.
B. Drink lots of fluids such as water.
C. Drink prune juice and/or eat dried prunes
D. Take Colace – an over-the-counter stool softener

E. Take Senokot – an over-the-counter laxative
If those don't work then:
F. Take Miralax – another over-the-counter stronger laxative. Dosage as directed 2 x day
If they don't work call the office or if you have any questions on this please call us.

Elevate your leg: Keep your leg elevated to decrease swelling, which will then in turn decrease your pain. You should elevate the foot of your bed by putting a couple of pillows between your mattress and box spring or place a stack of blankets/pillows under your leg to keep it elevated and supported above the level of your heart. You may sleep on your side with a pillow between your legs if you wish. The swelling will make it more difficult to bend your knee. As the swelling goes down your motion will become easier.

Cold Therapy: You will receive a cold therapy device on the day of surgery or the next day. You will be able to use this device beginning the day of surgery. Use the unit for 20 - 30 minutes at a time, 4-6 times or more per day to manage swelling and pain. Frequent cold therapy is encouraged as often as possible during the first few post-operative weeks.

Follow-up Appointments: Follow-up Appointments: 14 days, 6 weeks, 3 months, 6 months, 9 months, and 12 months.
Please plan ahead to arrive on time.

Physical Therapy**: You should have received a physical therapy prescription at your office visit prior to surgery. Begin physical therapy within the first week after your surgery. Consider taking pain medication 30-45 mins prior to physical therapy so that your pain is well-controlled and you can maximize the visit. PT typically is necessary 1-2 times weekly for 4-6 months post-operatively.
**These guidelines may be adjusted by Dr. Kent as you progress. Typical clearance for full activity occurs at the 9-month mark.

Hardware Removal:
You don't have to have the screws removed, however, if you would like to, the procedure is done after the osteotomy is well-healed, typically around the one year mark. This is a simple same-day procedure done in the OR. Dr. Kent makes a small incision using the same healed incision from the first surgery. You should avoid running/high impact activity for a few weeks afterwards but have no range of motion restriction and crutches are to be used as needed.

Driving: If you had surgery on your left knee, you may drive when pain is controlled and you are no longer taking narcotic pain medications (usually around 1-2 weeks). If you had surgery on your right knee, you cannot drive until you are able begin bearing weight in the brace (usually around four weeks). Dr. Kent does not recommend that you drive while wearing the brace.

Frequently Asked Questions: TTO Surgery

1. What is the tibial tubercle?
The tibial tubercle is a large bony prominence on the front of the tibia to which the patellar tendon attaches. As the quadriceps muscles contract, they pull against the patellar tendon and tibial tubercle to extend (straighten) the knee.

2. What is an osteotomy and why is it done?

Osteotomy literally means the cutting of bone. Sometimes during musculoskeletal formation, the tibial tubercle can become misaligned. Tibial tubercle misalignment is typically not something which occurs as a result of trauma. If the tibial tubercle is misaligned, it can cause the patella to dislocate laterally, or painfully rub against the lateral femur. If this occurs, the only remedy is to cut the tibial tubercle, and place it in a position of correct alignment.

3. What is done during tibial tubercle osteotomy (TTO) and/or MPFL surgery?

During TTO surgery, the tubercle is measured and cut in such a way to allow for movement of the tubercle without detaching the patellar tendon. Careful measurements are completed prior to surgery, and alignment tools are used during surgery to ensure correct alignment. Once the new bone is placed in the correct position, it is held in place with metal screws.

Often times it is necessary to reconstruct the MPFL during the same surgery due to tearing of the ligament as a result of patellar dislocation. A cadaver ligament is used to recreate the MPFL because once the native ligament tears, it is too weak to be used again. Two holes are drilled in the medial side of the patella, and the ends of the cadaver ligament are anchored into the holes. The ligament is then tunneled through the soft tissues of the knee to the medial side of the femur. A hole is then made in the femur, and the remaining end of the ligament is anchored inside it. Xray is used to ensure that the holes are in the correct position, and the knee is taken through a range of motion to ensure proper tensioning of the ligament.

4. What are the risks of TTO/MPFL surgery?

The biggest risks of TTO surgery are incorrect positioning of the osteotomy, fracture of the osteotomy or tibia, and failure of the osteotomy to heal. The biggest risks of MPFL surgery are over- or under-tensioning of the ligament, or continued dislocation of the patella. The best way to mitigate these risks is by following all post operative instructions, attending physical therapy, and committing to regular independent work-outs.

While very uncommon, infections do occur and are typically associated with poor wound healing. As such, we recommend keeping these wounds dry for at least 7-10 days after surgery. Please do not use ointments or other compounds on these wounds until instructed to do so by the staff. Nicotine interferes with wound healing, so discontinuing smoking or vaping 2 weeks prior and 3 months following surgery is recommended.

Blood clots (DVT, deep vein thrombosis) occur rarely following all types of surgery. Your best bet in decreasing likelihood of a clot is to GET UP and MOVING following surgery. Moving your feet and ankles, ambulating, ranging your knee, etc. all contribute to keeping the blood in your legs circulating. This in turn helps to prevent clotting. If you feel pain in your calf area or note swelling there – immediately notify the office staff. A quick and painless test (ultrasound) can be arranged to see if you have a DVT. Again, these issues are rare, but if you do experience a clot, you will need to take a blood thinner until the clot disappears.

There are many nerves around the knee. Fortunately, the majority of these nerves do NOT exist in the surgical field during a typical procedure. Nevertheless, though very uncommon, temporary nerve dysfunction (muscle weakness, tingling, numbness) can occur following these procedures. These injuries are typically transient.

5. How long do I need to do PT for TTO/MPFL surgery? How long is recovery?

Approximately 20-24 weeks. Full recovery is about 6-9 months.