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## High Tibial Osteotomy Discharge Instructions

### What is the recovery period like?

- Brace
  - o You will wear a long brace on your leg, known as a Hinged knee brace, and use crutches. You will wear it day and night, locked straight for 6 weeks. After your 6 week post-op visit, your provider will inform you how to unlock the brace and possibly transition into a smaller brace.
    - After 2 weeks and while resting, it is ok to remove brace and bend the knee to 90°. However, brace must be worn while sleeping, standing, or ambulating.
  - o You may be fitted for a smaller brace at 6 weeks, transition to its use typically around 8-10 weeks, and continue its use until you have regained quadriceps strength. This will be determined by your Physical Therapist and typically occurs around the 3-5 month mark.
- Weight bearing precautions
  - o Immediately after surgery you will have crutches with the brace locked straight. You will not be able to put any weight on the surgical leg for the first 6 weeks.
  - o At the 6 week post-op visit, you will have x-rays to assess bony healing. As long as the x-rays show adequate healing, you will be allowed to begin bearing weight. This is a slow and gradual process and takes about 2 weeks to get back to full weight bearing. The first day, you will take on about 20 percent of your body weight and stay at this weight for 2 days. As long as you do not experience pain, you may increase your weight-bearing load by about 20 percent every 2 days, until full weight bearing status is achieved. Continue to use the crutches for another 2-3 days before discontinuing use. If pain is ever experienced during this process, return to the previous pain-free weight.
- Super Vitamins
  - o Since bone is cut and repositioned during the surgery, the bone now has to heal, much like after any broken bone. To ensure the best environment for the bone to recovery, you should begin the following vitamin supplementation following surgery for 6 months:
    - 4,000 international units of over the counter vitamin D2 once daily
    - 1,000mg Calcium once daily

### How will my pain be managed?

- Cryotherapy to prevent post-op swelling and inflammation
  - o The ice machine may be covered by insurance, depending on your insurance plan. Many patients have highly recommended paying out of pocket for the machine as it significantly helped their progress.
    - This machine will be delivered to you during your hospital stay.
- Pain Medication. See POST-OP PAIN MANAGEMENT handout for details regarding medications.

## When will I start Physical Therapy?

- Physical Therapy
  - o The first 6 weeks after surgery, you will do home exercises, no formal PT sessions.
    - Quad sets : 3 sets performed three times a daily.
      - Sit or lie on your back with leg straight. Tighten your quadriceps muscle on the front of the thigh. Hold for 3 seconds, relax. Repeat x 10.
    - Heel pumps: 3 sets preformed three times daily.
      - Sit or lie on your back with leg straight. Bend your foot up and down at your ankle joint, pumping the foot. Complete 10 pumps.
    - Straight Leg Raises: 3 sets preformed three times daily.
      - Lie on your back with leg straight, flat on the bed. Start by tightening your quads. Then lift your leg off the bed until your heel isn't touching it anymore. Lower your leg down. Repeat as tolerated, work up to 10.
      - This is an advanced exercise, start after your first post-op appointment.
  - o At 6 weeks you will start formal PT. You will go 2x/week for 6-9 months.
    - Dedication and attendance to your sessions are critical to your recovery.
  - o Return to Play Assessment
    - At approximately 9-10 months post-operatively you will undergo a functional sports assessment where a physical therapist puts you through a battery of sports specific tests to evaluate your progress in therapy. If there are any areas that need improvement a specific program will be designed to help correct these deficiencies.
- Driving
  - o You may not drive while taking pain medication. In addition, if it is your right knee that had surgery, you will not be able to drive for approximately 6 weeks after surgery or until the brace is removed.

## Will I be able to remove the screws?

You don't have to remove the screws, however, if you would like to, the procedure is done after the osteotomy is completely, typically around the 10-12 month mark. This is a simple same-day procedure done in the OR. The surgeon makes a small incision using the same healed incision from the first surgery. They then pack the hole where the screw was located. After the removal of hardware procedure, you may have to modify some activity with physical therapy. There is an increased risk of fracture until the hole fills in with new bone, this typically takes about 6 weeks.

## \*\*\*\*IF YOU HAD CARTILAGE REPAIR IN ADDITION TO HTO:

- Contact the office with questions or concerns. However, these surgeries usually do not change the above protocols.
- You may require follow-up MRIs at 3 months, 12 months, and 24 months after surgery.

## INSTRUCTIONS FOR IMMEDIATELY AFTER SURGERY:

- Activity
  - o Apply ice to your knee but keep the bandages dry
  - o Elevate your leg on 2-3 pillows or rolled up towels placed under the **heel** so that the heel is elevated higher than your knee. This will help reduce swelling and achieve full extension of the knee. **Avoid pillows under the knee.**
  - o For the first 1-2 weeks after surgery, the **most important goal is to regain the ability to fully straighten the knee.** It is much more important initially than being able to bend the knee.

- Follow the CPM and weight bearing precaution guidelines above.
- Start your home exercise program
- Bandage and Incision Care
  - Under your brace is an ace wrap- leave this ace wrap on for the first 2-3 days. You may then remove the ace wrap. You will have a layer of bandaging under the ace wrap. You can remove this dressing.
  - You will notice that the incision sites will have suture buried underneath the skin. Please cover this area with a bandage. You may see two strands of clear suture material. These will be removed at your first post op visit. Please leave rectangular steri-strips in place until your first post op visit.
  - You may re-apply the ace wrap as this helps to decrease swelling.
  - Do not apply creams, ointments, or lotions to your incisions.
- Showering
  - You may shower after you have removed the ace wrap.
  - **Do not get the incision or brace wet**, however, you must wear the brace when standing. You may use a plastic bag to cover the bandaging and brace so that this does not get wet. You should use a shower chair, or if you have a bathtub-shower, you can sit in the tub. If you take a bath, keep the leg out of the bath. The leg should not be submerged.
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- Showering
  - You may shower after you have removed the ace wrap. Although the bandaids are waterproof, you should wrap the leg in saran wrap to provide an extra waterproof layer.
  - You must wear the brace and be seated in the shower.
  - **Do not get the incision or brace wet**, however, you must wear the brace when standing. You should use a shower chair, or if you have a bathtub-shower, you can sit in the tub. If you take a bath, keep the leg out of the bath. The leg should not be submerged.
- Pain Management
  - See POST-OP PAIN MANAGEMENT handout. Around 2-3 weeks out, you should only be taking the pain medication at night and after strenuous activity as needed.
- Normal sensations after surgery
  - Pain
  - Swelling and warmth up to 2 weeks
  - Small amounts of bloody drainage for first few days
  - Numbness around the incision area
  - Bruising
  - Low grade temperature less than 101.0 for up to a week after surgery.
  - Small amount of redness to the area where the sutures insert in the skin
- **IF ANY OF THE FOLLOWING OCCUR, CONTACT THE OFFICE IMMEDIATELY**
  - Calf pain or ankle swelling in either leg
  - Change is noted to your incision (i.e. increased redness or drainage)
  - Temperature greater than 101.0
  - Fever, chills, nausea, vomiting or diarrhea
  - Sutures become loose or fall out and incision becomes open
  - Drainage becomes yellow, puss like or foul smelling
  - Increased pain unrelieved by medication or measures mentioned above.
- Post-op visit
  - Please ensure that you have a post-op visit scheduled for 10-14 days after surgery. Please arrive 30-45 minutes prior to your appointment time to obtain X-rays.

## **PAIN MANAGEMENT**

- **ORAL PAIN MEDICATIONS**

- Tylenol 500 mg
  - Start by taking one tablet every four to six hours when you arrive home after surgery so you have some medication on board when the block wears off. You should take this on a regular schedule for the first few days after surgery
- Naproxen 500 mg
  - Take 1 tablet twice per day to help with pain and inflammation. You will take this for 2 weeks.
- Tramadol 50 mg
  - This is a non-narcotic pain medication. You can take this medication every 4-6 hours as needed for moderate level pain (4-7).
- Oxycodone 5 mg
  - This is a narcotic medication. You may take one tablet every 4-6 hours as needed for severe level pain (8-10) if the Tylenol and Tramadol medication does not control your pain.

**SIDE EFFECTS OF THESE MEDICATIONS INCLUDE DROWSINESS AND CONSTIPATION. YOU SHOULD NOT DRIVE OR DRINK ALCOHOL WHILE TAKING THESE PAIN MEDICATIONS.**

- **OTHER MEDICATIONS**

- Aspirin 81mg
  - This medication is used to prevent blood clots. It should be taken twice a day for 6 weeks.
- Zofran 4mg
  - This is a nausea medication that is only taken if you feel nauseous.
- Pantoprazole/Omeprazole 40mg
  - This medication is to protect your stomach while you are on the Naproxen
- Colace 100mg
  - This medication is for post-operative constipation.
  - Take this medication twice daily as needed for constipation.

- **ICE MACHINE**

- Recommend using **1 hour on, 1 hour off for the first 2 days after surgery** *while awake*
- Do not place pad directly on skin – make sure there is a barrier such as a t-shirt or towel
- After the first 2 days you may use the ice machine as needed for comfort
- If you did not opt for the ice machine, you may use ice packs on the surgical area for 20-30 minutes every 1-2 hours