



# Cartilage Repair Center

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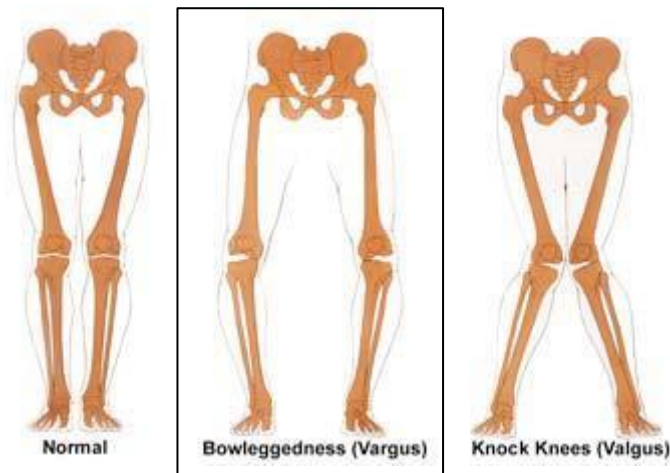
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## What is a High Tibial Osteotomy (HTO)?

A high tibial osteotomy is a surgical procedure used to treat isolated medial compartment articular cartilage damage in patients who have varus malalignment (bow-legged).

## Who is a candidate for a High Tibial Osteotomy?

High tibial osteotomies are used to treat patients who have only one area of damage within their joint and bow-legged malalignment. A high tibial osteotomy can be used alone as treatment for medial compartment osteoarthritis or to correct alignment in conjunction with a cartilage repair procedure. To determine if a high tibial osteotomy is an appropriate procedure for you, your surgeon will obtain a few different imaging studies. These studies will include regular x-rays, bone length x-rays (to determine your alignment), and possibly an MRI. Using these studies, your surgeon will be able to calculate the angle needed to correct your malalignment. High tibial osteotomies are commonly used to treat knee osteoarthritis of the medial compartment in active patients who are too young to have a joint replacement or whose activity level is such that they would damage or wear out an artificial joint prematurely. Our average patients who undergo high tibial osteotomies are ages 40-55 with isolated medial compartment osteoarthritis.



### What will happen during my surgery?

Your surgery will be performed using either a general anesthetic or a spinal anesthetic depending on your preference. The amount of correction, leg length, and age will determine the type of osteotomy performed (opening wedge, closing wedge or dome tibial osteotomy). Most commonly, an opening wedge tibial osteotomy is performed.

During your surgery, your surgeon will make a cut across the upper portion of your tibia (shin bone). The cut that is made will go almost all the way across the bone but will leave a small section of bone intact to create a hinge. Then, using x-ray guidance, your surgeon will open the hinge in your bone until your leg is straight and no longer bowed. Once the correct angle is achieved, the bone will be fixed in place using a plate and screws. This plate and screws act like a cast that you would wear if you were to break your arm. The only difference is that the plate and screws can stay in your bone forever. Once your bone is well fixed and all the screws are in place, your surgeon will then put a material called Grafton™ and freeze-dried cadaver spongy bone chips in area of the cut. Grafton™ is a bone putty that helps your bone to heal more quickly after surgery. Your surgical incision will then be closed using all “dissolving” stitches. This means that you will not have any stitches that need to come out.



### What can you expect post-operatively after a High Tibial Osteotomy?

When you awake from surgery, you will have a brace on your leg that will keep your leg straight. It will be important for you to always wear this brace when you are up and about. You do not have to wear your brace while sleeping, using the continuous passive motion machine, or sitting.

After surgery, you will also be given two crutches and a CPM (continuous passive motion) machine. You will remain touch down weight bearing for a period of 6-8 weeks. Touch down weight bearing means that you will always walk with two crutches putting only the weight of your leg to the ground for balance. Then, you will progress to full body weight by 10 weeks and usually off crutches by 12-14 weeks. A CPM machine gently moves your knee through a preset range of motion (ROM). This is intended to ensure that you do not get stiff after surgery. You will be using it for 3-8 hours per day.

Depending on your surgeon and how you are feeling, you will spend anywhere from 1-2 nights in the hospital. Do plan on spending at least one night. This is to make sure that you

are comfortable and that your pain is well controlled. This time in the hospital also allows you to meet with physical therapy and get some early exercise and crutch training.

After surgery, you will be on a baby aspirin twice daily for 3 weeks, (81 mg 2x/day x 3 weeks). This is done as a preventative measure for all our patients to help prevent blood clots following surgical intervention.

### **How will my pain be controlled after surgery?**

During your hospital stay, your pain will be controlled using IV pain medication. One of the goals of your care will be to transition you from IV pain medication to oral pain medication. This is often achieved on the first day after surgery. You will be sent home from the hospital with a prescription for oral pain medication to be filled at your local pharmacy. The most prescribed post-op pain medications include oxycodone and tramadol. Most patients will require regularly scheduled doses of pain medication for the first 1-2 weeks. Following week 2, you will begin to decrease your pain medication use to prior to physical therapy and before bedtime. Most patients will not require any pain medication past week 4-6. Cold ice therapy is also very effective for pain relief without medication side effects.

**For pain medication refills, you will need to come to the office for a face-to-face, in-person appointment. Florida State Law does not allow us to call in prescriptions or refill pain medication without an office visit. We are only allowed to give 7 days of pain medication at a time.** Be sure to follow the directions carefully. It is important to know how to obtain your pain medication refills appropriately and in a timely manner.

### **When will I follow-up with my surgeon after surgery?**

Your first post-operative visit will take place 2 to 3 weeks after your surgery. This appointment is critical for checking your incision healing and range of motion as well as to answer any questions you may have in the first few weeks following surgery. You will then follow-up 6 weeks, 12 weeks, 6 months, and one year after surgery. At 1-year post-op, you will discuss with your surgeon your return to higher level activity. After your first year, you will follow with your surgeon on a yearly basis.

## Frequently Asked Questions

**How do I get insurance approval for surgery?** Your insurance approval will be handled by your surgeon's finance office. Often, you do not need to do anything but wait for the administrative assistant to contact you to let you know you have been approved. In some instances, appeals need to be made to your insurance company for denial of services. If this is the case, the administrative assistant will contact you and instruct you on how to proceed.

**How long is my insurance approval good for?** Most insurance approvals are good for a few months from the date of approval.

**When will I start physical therapy?** You will start physical therapy beginning the day after surgery in the hospital. This will be continued once you are discharged.

**What will I do during physical therapy?** The primary goal of physical therapy is to initially increase range of motion (ROM), so that you do not get stiff following surgery. You will then begin to work on increasing strength after surgery. You will be provided with a detailed protocol of what you should and should not be doing during each postoperative phase. You will provide this to your physical therapist.

**I've heard about a CPM machine, what is this and will I use one?** A CPM machine is a continuous passive motion machine that is used following knee surgery to help patients regain range of motion. You will begin using a CPM machine 2-3 days after surgery and will continue using it for a period of 3 weeks for 3-8 hours per day. The CPM machine will be provided to you and is usually covered by your insurance.

**When do I need to wear my brace?** You will need to wear your brace anytime you are up moving around on your crutches. You will use your brace for 6-8 weeks on average. You do not need to wear your brace for CPM, sleeping, or when you are sitting.

**How long will I need to use my crutches?** Depending on how quickly your bone heals and your surgeon's preference you will need to use your crutches on average 50% body weight until the bone is healed on x-ray, usually 6-8 weeks.

**When can I shower?** You can remove the ACE wrap and gauze/ foam dressing 24 hours following surgery. Under the ACE wrap and gauze/foam dressing, you will have a large adhesive bandage covering your incision. You can shower directly on the large adhesive bandage and allow water to run over the bandage. This bandage can be removed 7 days after surgery at home. You can then shower normally with the incision uncovered. Do not submerge your operative knee in a bathtub, pool, ocean, etc., until cleared by the surgeon.

**When can I go back to work?** This will be different for each patient and depends largely on the type of work you do. Most patients who work in a sedentary position or desk work will be back to work by 3-6 weeks. Those patients who work in more labor-intensive jobs may be out of work for 3-6 months.

**When can I resume my regular activity?** Return to regular activity depends highly on each individual patient's definition of regular activity. Low impact activity, such as walking, swimming, bike riding, and elliptical trainer can all be resumed by 4-5 months. Higher demand activity, such as running and sports, will not be able to be resumed until at least 9 months to 1 year postoperatively.

**Will I need to stay in the hospital?** You may be required to spend 1-2 nights in the hospital.

**I don't like how narcotic pain medication makes me feel, can I take something else?** You may use Tylenol (acetaminophen) for pain control following surgical intervention. Ice therapy is very effective without medication side effects- PolarCare™, Ossur™ continuous cold ice flow and Game Ready™ continuous ice flow compression therapy are all effective ice therapy machines.

We do ask you to refrain from using any anti-inflammatory medications (NSAIDs) for the 3 months following surgery, as these medications can slow the healing of your bone. Common medications to avoid include Advil, Aleve, Ibuprofen, Naproxen, Celebrex, etc.

**Who do I call if I have a question prior to my appointment?** If you have questions regarding your upcoming surgery, you may call your surgeon's nurse practitioner or research assistant.