

# Cartilage Repair Center

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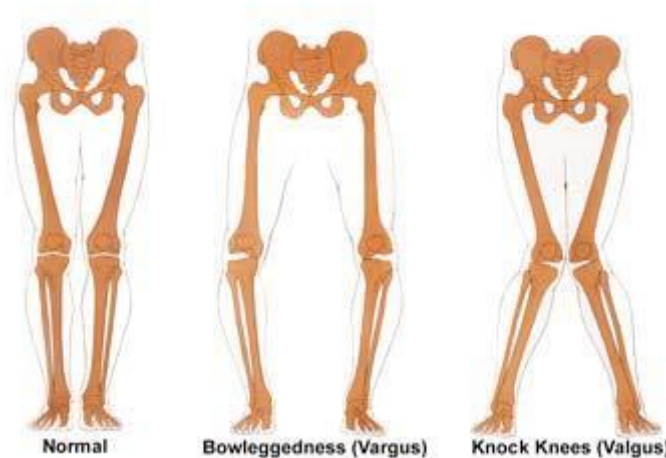
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## What is a High Tibial Osteotomy (HTO)?

A High Tibial Osteotomy is a surgical procedure used to treat isolated medial compartment osteoarthritis 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 who are also bow-legged. 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. In order 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 films to determine your alignment, and possibly an MRI. Using these studies your surgeon will be able to calculate the angle he will need to use in order to correct your malalignment. High tibial osteotomies are most commonly used to treat arthritis in active patients who are still 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 in order 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 this will be fixed in place using a plate and screws. This plate and screws acts similar to 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 of the screws are in place your surgeon will then put a material called Grafton™ and freeze dried cadaver spongy bone chips in the 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 wear this brace at all times when you are up and about. You do not have to wear your brace to sleep, while you are on the CPM machine or sitting. You will also be given crutches. You will remain touch down weight bearing for a period of 4-6 weeks, (this means that you will walk with two crutches at all times putting only the weight of your leg to the ground for balance), then progress to full body weight by 10 weeks and usually off crutches by 12-14 weeks. You will also receive a CPM machine. This is a continuous passive motion (CPM) machine that gently moves your knee through a preset range of motion (ROM). This is intended to ensure that you do not get stiff after surgery and you will be using it for 4-6 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 in order to make sure that you are comfortable and that your pain is well controlled. This time in the hospital also allows you to also meet with physical therapy and get some early exercise and crutch training. After surgery you will also 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 of our patients to help prevent blood clots following surgical intervention.

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

Immediately following surgery during your inpatient stay your pain will be controlled using IV pain medication. During your inpatient stay one of the goals of your care will be to transition you from IV pain medication to oral pain medication. This is often achieved by day one 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 commonly prescribed post-op pain medications include Oxycodone, Dilaudid, or Vicodin. Most patients will require regularly scheduled doses of pain medication (every 4-6 hours) for the first one to two weeks. Following week 2 you will begin to decrease your pain medication use to prior to physical therapy and prior to bedtime. Cold ice therapy is very effective for pain without medication side effects. Cryocuff™, Ossur™ continuous cold ice flow and Game Ready™ continuous ice flow compression therapy are all effective to increasing degrees. Most patients will not require any pain medication past week 4-6 weeks. You will need to come to the office to refill pain medication once a week. Florida State Law doesn't allow us to mail prescriptions or refill pain medication without an office visit. We are only allowed to give a week 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 one-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 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 at each post-operative 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 2 weeks for 4-6 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 6-10 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 between 6 and 10 weeks on average.

**When can I drive?** For patients undergoing right leg surgical intervention you may not return to driving until you have good leg control, usually 3-6 weeks as assessed by your therapist and surgeon. For patients undergoing left knee surgery that do not drive standard transmission vehicles you may return to driving between 2-4 weeks when you are no longer taking pain medication.

**When can I shower?** You may shower 5 days after surgery but may not submerge your incision in a pool, hot tub, bathtub for 3 more weeks.

**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 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. Non-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 1 year post operatively.

**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 to increasing degrees. However, you should refrain from using any anti-inflammatory for the three months following surgery as it can slow the healing of your bone. These anti-inflammatory medications include medications such as Advil, Aleve, Ibuprofen, Naproxen, and Celebrex.

**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.