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## INTRODUCTION

Great toe joint replacement surgery is an elective outpatient procedure indicated for end-stage first metatarsal phalangeal joint pain. Hallux limitus or hallux rigidus are conditions characterized by an inability to bend the great toe joint (propulsive phase of gait) without chronic pain and inflammation. Great (big) toe joint replacement can offer dramatic improvement for individuals suffering from painful arthritis and lack of mobility as a result of a number of medical and orthopedic conditions. These conditions are caused by a long list of entities that predisposes or causes damage to the first metatarsal phalangeal joint cartilage and surrounding bone and joint capsule.

Most articles written about hallux limitus and rigidus implicate a congenitally long or short first metatarsal bone as well as a severely elevated first metatarsal, a condition called elevatus of the first ray. Of course, some of the more common conditions which cause this are untreated pronation causing hypermobility of the first ray and jamming of the first metatarsal phalangeal joint, untreated long-standing bunions, and of course trauma to the first metatarsal phalangeal joint. By replacing affected bone and cartilage with an artificial joint, surgeons can reduce foot pain and discomfort and enable patients to resume regular activities. In many cases, the new generation of prosthetics outlasts natural bone and on average lasts for 10 years or more.

## CAUSES OF TOE JOINT PROBLEMS

Problems related to the big toe joint can result from a number of foot conditions and injuries. Conditions associated with toe joint pain and immobility include arthritis, gout, untreated bunions and various congenital foot disorders. Great toe joint problems can also occur after an injury or trauma to the foot.

One of the most common big toe joint conditions is hallux limitus, which is a loss of motion in the big toe. Crucial to both movement and balance, the great toe should demonstrate a normal range of upward motion of 50 to 90 degrees. Individuals with hallux limitus experience limited mobility in the big toe and pain when walking or performing other activities involving the feet. Over time, hallux limitus can lead to arthritis, when the cartilage covering the bones begins to erode. Patients may also notice worsening pain ranging in intensity from a deep ache to a sharp, shooting sensation.

For many patients, toe joint replacement surgery is the only option to alleviate pain and increase range of motion. Surgery is indicated when pain is chronic in nature and unresponsive to conservative alternatives including motion-control running shoes, great toe joint injection therapy, orthokinetic wedge orthotic devices and physical therapy. When great toe joint motion is minimal and there are severe arthritic changes to the joint, this condition is referred to as hallux rigidus.

## GREAT TOE JOINT REPLACEMENT SURGERY

Great toe joint replacement surgery is an elective procedure that offers improved mobility and relief from pain for people with severe big toe joint problems.

**“improved mobility and relief from pain”**

Typically, the procedure targets the structure at the base of the big toe, known as the first metatarsal phalangeal joint.



BEFORE



AFTER

During a toe joint replacement, the surgeon creates a small incision to determine the extent of the bone and cartilage damage. For less serious toe joint cases, the surgeon will remove only part of the joint, replacing the damaged segment with a metal prosthetic. However, for severe cases, it may be necessary to remove and replace the entire toe joint. Replacing the entire joint adds longevity to the prosthetic joint and reduces the likelihood of the patient undergoing additional surgeries in the future.

After undergoing great toe joint replacement, most patients will be able to walk immediately with the aid of a supportive boot known as a cam walker for the first 2-3 weeks while the internally sutured soft tissue structures and skin are healing. It's crucial that patients utilize the boot whenever they bear weight in order to protect the foot and preserve the integrity of the surgical result.



Some patients also require crutches for a period of time after undergoing the procedure. The average surgical patient will return to regular athletic motion-control shoes in approximately 3-4 weeks after surgical correction. Return to regular high-impact exercise occurs at the 12-week mark for the average surgical patient.

## LONG-TERM RECOVERY

Great toe joint replacement is generally considered to be a successful means of treating hallux limitus/rigidus and other conditions affecting the big toe. In fact, many surgeons report that the new generation of prosthetic joints offers patients improved mobility and reduced pain for upwards of ten years or more. While most patients feel no difference when walking on the artificial joint compared to their uninjured foot, some individuals may require physical

therapy to improve post-operative range of motion and become accustomed to the new prosthetic joint.

## CONCLUSION

For patients suffering from great toe joint pain, lack of pain-free range of motion and end stage bunions, great toe joint replacement offers effective relief. Due to advances in surgical techniques and higher-quality prosthetics, there is a reduced likelihood that individuals will require additional surgeries. Toe joint replacement helps preserve motion and gets patients back to the activities they once enjoyed without requiring traditional fusion surgery.

If your patient is suffering from great toe joint pain, or limited motion in the foot, feel free to contact Tower Foot & Ankle Surgery for questions or a consultation. You may also email Dr. Jamshidinia with questions at [DrJ@LAfootdoc.com](mailto:DrJ@LAfootdoc.com).

- KAMRAN JAMSHIDINIA, DPM, FACFAS



Tower Foot & Ankle Surgery is a premier provider of foot and ankle treatments and procedures in Los Angeles. Located in the ultra-modern Century City Medical Plaza, we offer state-of-the-art therapeutic and cosmetic procedures performed by leading podiatrists. A board-certified foot and ankle surgeon with over 12

years of experience, Dr. Kamran Jamshidinia has performed thousands of successful podiatric procedures and has the most comprehensive before and after gallery anywhere on the web. Dr. Jam specializes in cosmetic foot surgery, minimally invasive hammertoe repair, cosmetic approach bunion correction, and foot trauma as well as total joint replacement for end-stage arthritic great toe joint. A podiatric physician with special emphasis on cosmetic foot treatments and laser procedures, Dr. Ronny Alfandari performs expert aesthetic foot surgeries and in-office procedures, minimally invasive hammertoe repair, bunion correction and achilles tendon treatments and surgery, various sports medicine treatments for athletes, and laser treatments for toenail fungus.

At Tower Foot & Ankle Surgery, our surgeons are committed to helping patients achieve a pain-free return to activities with little to no downtime after most procedures. If you have a patient in need of consultation or if you have podiatric questions regarding your patient's complaint, our physicians are available to assist you. You may contact us directly at 310.247.WALK.