ORTHOPAEDICS AND SPORTS MEDICINE INNOVATIONS AND ADVANCEMENTS

Outpatient and Minimally Invasive Surgeries (MIS) Bring Relief to Foot and Ankle Patients

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Orthopaedic surgeons at Stanford Health Care are setting the pace for innovations in foot and ankle care. David Oji, MD, orthopaedic surgeon, is one of the specialists at the forefront. He performed the first outpatient total ankle replacement at Stanford Health Care, as well as one of the first minimally invasive bunion surgeries.

TOTAL ANKLE REPLACEMENT: OUTPATIENT PROCEDURE OFFERS KEY BENEFITS

Arthritis of the ankle is the most common etiology for outpatient total ankle replacement, however, there are other indications. The ideal patient for the surgery is a relatively healthy person aged 60 to 70. Evidence of neuropathy, infection, peripheral vascular disease, avascular necrosis of the talus, and Charcot arthropathy are the main contraindications.

“As I see it, the advantages of total ankle replacement over traditional fusion surgery are two-fold,” says Dr. Oji. “First, it’s a shorter recovery period. Second, the implant allows for more natural feeling and movement.”

Total ankle replacement procedure

Dr. Oji plans the surgery by obtaining a CT scan of the mechanics of the ankle along the transverse and vertical axes. He uses the scan to create a 3D-printed alignment guide for the surgical procedure.

While the patient is under general anesthesia, Dr. Oji uses the guide to make the necessary cuts in the tibia and talus. He then inserts a metal implant with a polyethylene spacer. He uses fluoroscopy X-rays to make sure the implants are placed properly.

In the case of an arthritic ankle with rotational deformity, Dr. Oji will balance the ligaments on the inside and outside of the ankle depending on the type of deformity. He may also need to shift the heel bone if there is extreme deformity. Another surgery that is done frequently with an ankle replacement is a percutaneous Achilles lengthening.

Recovery from total ankle replacement

Patients are in a splint for two weeks, with a nerve catheter for pain relief. They can wean into a walking boot and begin partial weight-bearing activity after two weeks. Full weight

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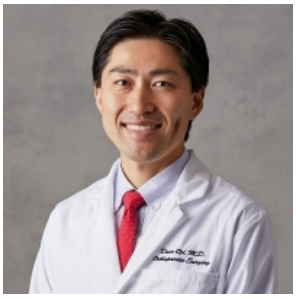
DAVID OJI, MD



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bearing is allowed by four weeks. By week six, most are ready to come out of the boot and start physical therapy for range of motion, strength, and balance.

“Because the bones are not fused in place (as with a traditional surgery), patients can easily return to their previous gait,” says Dr. Oji. “I caution my patients against high impact activities, like running, which can shorten the longevity of the implant."

Studies show that up to 25% of patients may need a second procedure over 15 – 20 years. The primary cause is bone spurs or a bone cyst, both of which surgeons can remove without replacing the implant. However, because the procedure retains bone stock on the tibia and talus, it may be possible to do a revision surgery if needed.

BUNIONS: MINIMALLY INVASIVE SURGERY OFFERS LESS PAIN AND FASTER RECOVERY

Bunions take a long time to develop and get progressively worse. Doctors opt for surgery only when pain is debilitating or if the second or third toes are also affected. Surgeons avoid operating solely based on the appearance of the toe because of the risks involved, such as nerve irritation or infection.

Traditionally, surgeons removed the entire bump where the bunion was located. But this had a very high failure rate and is no longer recommended. Another traditional approach was surgically treating the bunion through a large open incision. Although clinically these surgeries have good results, it can be very painful and take months to recover.

Dr. Oji prefers to offer minimally invasive bunion surgery to patients who qualify. It results in less pain, faster healing, and earlier return to activities with the similar clinical outcomes of open bunion surgeries.

What to expect with minimally invasive bunion surgery

With the patient under mild sedation, Dr. Oji begins the procedure with a small percutaneous incision. He uses a burr to cut the first metatarsal. He shifts the first metatarsal over, screws it in place, and inserts another screw into the proximal phalanx of the big toe.

For mild bunions, he will instead use a plate to push the metatarsal over and screw the plate in place. He typically does not use a tourniquet unless he is working on other deformities (such as hammertoe) at the same time.

Recovering from bunion surgery

“Patients leave in a soft dressing and can start putting pressure on the heel right away,” says Dr. Oji. “After four weeks, they can start putting pressure on the front of the foot and begin to walk more naturally.”

Swelling will decrease by week six or seven, at which time patients can wear a loose shoe or sandal. Within a few more weeks, most are able to walk and stand for hours at a time.

Surgeons reserve physical therapy to improve balance, posture, and ankle strength for those patients deconditioned from pain.

ONGOING INNOVATION IN FOOT AND ANKLE SURGERY

Dr. Oji also has expertise in minimally invasive and open surgery for hind foot deformities, such as cavus foot and flat feet. As a team physician for Stanford Athletics, he explores the latest treatments for foot and ankle orthopaedic sports injuries. “We have free reign to

think in different ways at Stanford Health Care," he says. "We want innovation that improves patient care."

Referring foot and ankle patients to Stanford Health Care

Learn more about Foot and Ankle Services and our patient care innovations. To make a patient referral, please call **1-866-742-4811**, Monday – Friday, 8:30 a.m. – 5 p.m.

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