

Walk like new with an ankle replacement

John Pantesco loves fishing the backwaters of the Keys and working part time in the paint department at Home Depot. But when the 80-year-old's arthritic right ankle became so painful he could barely walk, he thought he might be confined to a sedentary lifestyle. Today, though, he's back doing what he loves, thanks to a new prosthetic ankle.

"I worked three days a week," Mr. Pantesco said. "Before the surgery, I could make it through the first day with painkillers. Day two was rough. By the third day it was nearly unbearable. I have a high pain tolerance, but this was bone rubbing on bone."

Ankle cartilage is a quarter-inch shock-absorber between the bones that allows the joint to move smoothly. Those with arthritis, like Mr. Pantesco, have little to no cartilage left. As the cartilage deteriorates, the three bones in the ankle—the end of the tibia (shinbone), the fibula (the smaller bone in the lower leg) and the talus (the bone that sits on top of the heel and fits into the socket formed by the tibia and the fibula)—grind together, often causing severe pain.

For years, orthopedic doctors have searched for the best solution to the problem. Ankle fusion, in which the bones are permanently joined together, was one answer. Ankle replacement was another.

"Unfortunately, when you fuse the bones, you lose motion. For some patients, that's not acceptable," said Thomas San Giovanni, M.D., an orthopedic surgeon at Doctors Hospital. "And the earlier implants, from the 1970s or so, were flawed in terms of design and the materials used to stabilize them. Eventually, the orthopedic community basically abandoned the practice of ankle replacement."

For patients with ankle injuries, osteoarthritis or other types of arthritis, this meant fusion or temporary pain control measures such as cortisone shots, anti-inflammatory



Thomas San Giovanni, M.D., checks John Pantesco's range of motion after his ankle surgery.

medications and bracing. That changed when a new generation of replacement was recently approved by the FDA.

"The particular prosthesis I use has a more anatomical design than the previous ones," Dr. San Giovanni said. "The alignment is better and the surgeon removes less bone. The implant has a special coating that allows the bone to grow into it so cement is not needed."

Dr. San Giovanni, who completed a Foot & Ankle Fellowship at Harvard Med-

ical School, said the new replacement has longevity, something the older prosthetics lacked. "The newer devices have been used in Europe and are looking strong in the 15-year follow-up studies."

The procedure involves making a vertical incision at the front of the ankle and cutting or shaving the bones so the prosthesis will fit properly. Generally, patients are hospitalized for a couple of days and remain in a cast and off their feet for about a month. Physical therapy ranges from six weeks to three months with the patient in a walking boot or brace.

Not every patient is a candidate for ankle replacement, or arthroplasty. The procedure is best for older patients, not younger adults who want to continue high-impact sports. Those who have severe deformity with considerable bone loss should also consider other options. Finally, people who are significantly overweight are discouraged from having the surgery because the ankle joint is smaller than most other joints and receives more force, about four times the body weight, with every step.

"The replacement is best for someone who is active, who likes to golf, swim and bicycle, but not necessarily for a runner or someone who is still putting a great deal of stress on the joint," Dr. San Giovanni said.

"I'm walking with little to no pain now. I'm lucky that I can get back to my life knowing that my ankle replacement will probably outlast me," Mr. Pantesco joked.

—Adrienne Sylvester



The artificial ankle joint is shown in this view from the back of the left leg. The top piece of the prosthesis fits into the tibia, or shin bone. The lower piece fits into the bone that sits on top of the heel, the talus. The foot relies on the new joint to flex and extend.