Butch Davidson can enjoy evening walks again with his wife, thanks to ankle replacement surgery.

Zimmer Trabecular Metal Ankle, with a unique and low risk outside approach that allows for minimal bone to be removed

a **New Ankle** brings a **New Outlook** on life

Total ankle replacements restore mobility, end crippling pain.

words | RICH ELLIS

C.E. "Butch" Davidson, 70 and a Salem resident, loved to dance with his wife at the Moose Lodge. In fact, it's where the two of them met. But severe arthritis in both ankles put an end to his dancing days, or so he thought.

Roanoke City resident Virginia Balserak faced a similar situation. She was an avid hiker and yoga instructor until arthritis in her ankle gradually worsened over the course of about a year and half and she could barely place any weight on the ankle.

> Their debilitating ankle injuries curtailed once active lifestyles and forced them to live in pain, despite seeking a variety of treatment options. They both found hope, and solutions, in Charles Zelen, DPM and a total ankle replacement.

Dr. Zelen, who has been practicing in the Roanoke valley for 14 years is Board certified by the American board of podiatric surgery in foot and reconstructive rearfoot and ankle surgery and practices at Foot and Ankle Associates of Southwest Virginia, with offices in Salem and Roanoke. He is also the medical director of The Professional Education and Research Institute in Roanoke, a private research organization that was established in 2005 to educate surgeons in lower extremity surgery and to perform clinical research in foot and ankle surgery and diabetic limb salvage. Dr. Zelen performed the total ankle replacement, or total ankle arthroplasty as it's formally known, on both Butch and Virginia, and has been performing similar surgeries to save, and replace ankle joints over the past decade since coming to Southwest Virginia.

Yoga instructor, Virginia Balserak, enjoys being back with her students after total ankle replacement surgery .

Butch's ankle with severe arthritis prior to replacement surgery



Total ankle replacements aren't that new. Total ankle replacements that are effective and reliable, however, are. First introduced in the 1970s, those early ankles proved unreliable over the long term, and as a result, led to a period from about the mid-1980s to approximately 1999 when physicians were reluctant to recommend the procedure to patients. All that changed in 1999 with the introduction of the Agility implant, Dr. Zelen explains. "It was a good ankle, but technology has gotten even better and now implants are expected to last greater than 10 years, with the newest generation ankles showing great promise for reliability far past the 10-year mark in greater than 90% of patients."

The procedure typically takes about two hours to complete but can take as long as three to four hours if other procedures are required at the same time. Presently, all total ankle

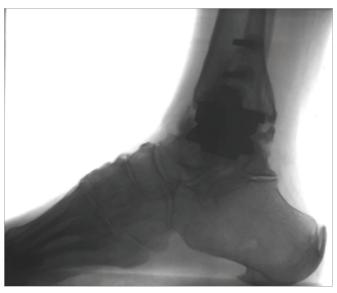


Butch after his first successful year with his total ankle

replacements are performed through a long incision on the front of the leg. The implant is constructed of titanium, cobalt-chromium and a highly durable plastic polymer, similar in most cases to a total knee or hip, Dr. Zelen explains. Most are coated so that the bone will grow into them and cement is used to help keep the replacement in place. The recovery period typically requires the patient to wait approximately six weeks before any weight is placed on the ankle.

"What's unique is that with arthritis of the ankle, this procedure allows you to regain and maintain motion of the ankle joint," Dr. Zelen explains, "allowing you to walk normally again. Most people with arthritic ankles will have a limited ability to walk and may have a limp."

That was certainly the case with Butch. He had his left ankle replaced in 2001 and the right ankle in 2004.



Butch after 10 years of success with his total ankle

"The arthritis was very, very painful," Butch explains. "My wife liked to walk and get a little exercise as much as possible and I tried to walk with her and my neighbor and unfortunately I'd get about halfway and my darn ankle would just lock up on me. And you talk about pain – I thought I was going to have to get my wife to walk to the house and get the vehicle to come and get me."

Because of the arthritis, the cartilage in Butch's ankle was completely gone. Prior to his first ankle replacement surgery, Butch had been receiving steroid shots in the ankle frequently in an attempt to alleviate the pain and restore some mobility. Several physicians who evaluated Butch recommended an ankle fusion as his only option, but that would have left him with limited mobility. Instead, he turned to Dr. Zelen, who recommended the ankle replacement. "The arthritis is either from prior trauma – someone injuring their ankle – or simply degenerative arthritis from someone aging," Dr. Zelen explains. "It's very debilitating because the ankle joint is a small joint and you're placing all of your body weight through it, so when arthritis occurs across that joint, it can cause extreme pain and limited motion."

While Butch's arthritis was degenerative in nature and occurred slowly during his long tenure at GE, Virginia believes hers resulted from a traumatic injury.

"The ankle was totally eaten away with osteoarthritis," Virginia explains. "The only thing I can figure out is that about 10 years before the replacement, I had fallen on a hike and gotten my ankle stuck between two rocks. It was a real bad sprain, it swelled and I took care of it but I never went to the doctor or hospital. The swelling went away and I continued my life. Dr. Zelen believes that original injury may actually have been a fracture." She chose Dr. Zelen to perform her ankle replacement as she felt most comfortable with him and her research showed he had the most experience in the Roanoke Valley with this procedure.

In the year prior to her ankle replacement surgery in 2009, Virginia could place barely any weight on the ankle and tried a number of remedies, including a chiropractor, acupuncture, massage therapy, ankle braces and support

footwear, all to no avail. She wasn't alone in her suffering as ankle surgery is somewhat common simply because of the injury's prevalence.

"Ankle arthritis is a common condition, especially in the industrial worker, the athlete, or someone who has had an ankle injury in the past," Dr. Zelen explains. "All efforts are made to save the ankle, including anti-inflammatories, shots, braces and even arthroscopy to clean out the joint . But, if all else fails, the procedure that's done eight times out of ten is a fusion – in other words, you put bolts across the ankle as many patients may not be a candidate for replacement . Fusion or bolting the ankle together is a very debilitating procedure that leaves the patient with a limp in many cases."

A total ankle replacement, at least for Butch and Virginia, was a better alternative. Virginia is back to hiking, swimming and yoga, both as an instructor and student. Butch, meanwhile, said he gets around great and has no regrets whatsoever about choosing the surgery – twice.

While total ankle replacements are becoming more popular in the U.S., Dr. Zelen cautions that not every patient is a candidate. "You can't have had an infection in that area. Morbidly obese people wear out the replacement faster than others, and it's also not recommended in unstable diabetics, smokers, or patients with peripheral vascular disease."



At top: Virginia's ankle before surgery Bottom image: Virginia's ankle x-rays after nearly 4 successful years



Charles Zelen, DPM is a Podiatric Surgeon at Foot and Ankle Associates of Southwest Virginia.

Interestingly, the younger a patient is, the more likely a physician will recommend against a total ankle replacement.

"Younger patients may want to look for other alternatives, because the implant will have to be replaced in time," Dr. Zelen explains. "The average age for implantation is around 50 years old, however I've performed the procedure in patients in their 90s as well as in patients as young as 40."

The two most popular implants on the market today are the Tornier Salto-Talaris,

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- pruning
- leaf/grass blowing

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- weed/debris removal
- small tree removal

outdoor painting

pressure washing

- deck/porch staining
 miscellaneous*
 - ^omiscellaneous services include: basement clean-out, moving items to storage buildings, cleaning out sbeds or other buildings, taking large amounts of garbage to the dump, etc.



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and the STAR, both of which tout a greater than 90% success rate at 10 years. Just recently, Zimmer came out with the Trabecular Metal Total Ankle that has a lower-risk incision on the outside of the ankle and minimal bone removal to save as much normal bone as possible for the patient. Dr. Zelen is one of the few surgeons trained on the Zimmer implant, and in clinical practice currently uses each of the implants, choosing the one that best matches his patients' needs.

On the medical horizon are more implants for patients whose original implants have worn out and need to be replaced. Currently there is only one implant that is used commonly for these "revisions" – the INBONE from Wright Medical Technology, Inc.

"There's no reason to suffer with chronic ankle pain and discomfort. Ankle replacements are getting better and more popular and it's definitely something a person with arthritis in their ankle should consider," Dr. Zelen says – a statement with which both Virginia and Butch would wholeheartedly agree.

Dr. Zelen welcomes those with arthritis to the ankle to come in for a consultation and see if ankle replacement surgery is the best option for them. His local office number is 540-344-FOOT (3668).