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Tired, achy legs: Surgeon uses radiofrequency to treat painful vein condition

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On airplanes, Karlyne Arbuckle's legs felt so thick and sore she could hardly stand it. She'd put them in her husband's lap to get comfortable, and she prowled the plane cabin as much as she could. She'd lie awake at night because her legs were throbbing, driving sleep away. At the end of almost any day, they were painfully enlarged.

She was suffering from superficial venous reflux disease. Three weeks ago, Utah surgeon Dr. Peter Jensen used radiofrequency — one of several treatment options — to quell it in an hourlong outpatient procedure.

Veins have a tough job. They're supposed to get oxygen-depleted blood uphill against gravity without a pump to where it can be oxygenated and start its journey again — a process helped immeasurably by valves that keep the blood from flowing backward. The shallow vein system isn't designed to handle the load. Unlike the deep-vein system, it doesn't have the support of muscles and other tissue. It also has fewer valves. And when the valves don't work well, backflow can occur, the results ranging from unsightly varicose veins to severely painful legs and even ulcerations.

Some patients seek treatment for varicose veins. But many patients don't have prominent varices. Instead, they have achiness, heaviness, fatigue, swelling. Their shoes may fit differently because of sporadic swelling. That's what drove Shannon Trujillo, 37, to seek care. She had varicose veins, but said she'd have lived with that. It was the achy, tired legs that drove her.

When venous reflux is suspected, a "careful" ultrasound scan is needed to see what's going on, Jensen said. Ultrasound reveals the vein function, patency and anatomy.

Treatment options for venous reflux cover a range, starting with comfort measures like compression hose and elevating your feet. For a surgical fix, the mainstay has long been vein stripping, where a knot is tied in one end of the greater saphenous vein, then the whole vein is withdrawn through a hole near the ankle and removed. A few years ago, catheter-based therapies including laser and radio frequency were introduced. Jensen of Utah Vein Specialists offers radiofrequency to collapse the offending vein without removing it. He uses laser, as well sometimes, but likes radio-frequency as gentler, using less heat.

Jensen, by training a cardiothoracic and vascular surgeon, calls the greater saphenous vein the "mighty Mississippi of shallow blood return." But not all of Arbuckle's blood was making the trip, so he treated her with a procedure called VNUS Closure, doing each leg a week apart.

He threaded a catheter through the vein under local anesthetic and placed it where the deep and superficial veins meet, watching it all under ultrasound. Once he was in the right place, he used the catheter to deliver radiofrequency to heat and collapse the great saphenous vein. As the catheter's withdrawn, it shrinks the collagen, which contracts the vessel, and destroys the lining so that it seals and scars shut. It then remains behind where it becomes, over time, undetectable from other tissue.

Throughout the procedure, Arbuckle was awake. That's important, Jensen said, because an unconscious patient can't tell you if you're moving too fast or heating tissue too much, which can cause pain. If an alert patient says it's hot, the physician can improve the insulation, created by a diluted anesthetic fluid that's injected in the area around the vein so the heat produced by the radiofrequency doesn't injure surrounding

tissue. That also minimizes pain later. Most patients, post-procedure, need only over-the-counter, non-steroidal agents like Ibuprofen or Tylenol.

When the vein is collapsed, the blood naturally redirects to healthy veins. There's a chance that, down the road, a similar problem will occur elsewhere.

After, Arbuckle was given compression hose and scheduled for follow-up and a procedure on her second leg. Jensen told her it's hard to predict how her body will react as it heals. "Some people feel great and are hanging Christmas lights. For others, there's a little pulling and tugging; it may feel like a pulled muscle."

Three weeks out from the procedure on her first leg, Arbuckle said she was still recuperating, but feeling better. She's still wearing her compression stockings "and once in a while, I can feel it." If she doesn't wear the stockings, she feels it more, something Jensen warned her might happen for a while. But when earlier this week she left them off for a day, she was pleasantly surprised to find that while it hurt a little, her legs weren't swollen.

"Hopefully, by summer it will be all better," she said, adding she cannot yet do heavy exercise, but that, too, is coming.

Three months out from having the procedure on her first leg and two out from the second leg, Trujillo recently took a run in the mountains with her dog. "I can't believe the difference," she said.

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