

The VEU™

The Vascular & Endovascular Update

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Acute Limb Ischemia: How 50 Years Without Doctor Visit Results In Near Amputation

Eugene Tanquilut, D.O., “worked a miracle” to save leg, function

Fifty years is a lifetime. In 1967, fifty years ago, Thurgood Marshall became the first African-American Supreme Court Justice, gasoline was 29 cents a gallon and 50,000 people showed up for a music festival in Monterey. Now, those babies conceived during the Summer of Love are planning for retirement. Fifty years is a long time.

Fifty years is also a long time to go without seeing a doctor, but that’s exactly what Ray Meininger did. The New Lenox resident hadn’t been to the doctor since he was 17 years old - fifty years ago. “I wasn’t a fan of doctoring,” he said. “I’m an old fart and I don’t make friends easily. No matter what happened to me, I would not go see a doctor.”

That all changed in January. Meininger, who smoked about three packs of cigarettes a day for years, stopped smoking because he just couldn’t breathe. “My god, it was terrible. The pain was incredible,” he said. But still, “I considered death before going to the hospital.” His wife Joan, 57, called their daughter Dawn Meininger, who is a paramedic for

Chicago’s Fire Department. “She took my blood pressure and it was 285 over something - yeah, kinda scary.”

Dawn Meininger convinced Meininger to get to Silver Cross Hospital, and he actually agreed. “The last thing I remember is being told I had pneumonia - and then I woke up three days later with my leg all cut up.”

Those three days were busy for everyone else. Meininger was intubated;

a plastic tube was inserted into his throat to help open his airway so he

could get sufficient oxygen into his lungs and body. As he slept in the hospital with antibiotics being administered via IV, Joan Meininger noticed his leg was ice cold. “It was like meat from a freezer,” she said.

Joan Meininger called his cold leg to the attention of a physician, who seemed to brush off her concerns. “My wife didn’t let it go,” said Meininger. “It seemed

to be getting worse to her, so she told the nurses about it and they agreed it was a concern - that something was wrong.” A second physician recommended immediate amputation.

“That’s when they called in Dr. T,” said Meininger. The Silver Cross nursing staff wanted to give this 67-year-old every chance before amputation, so they called Eugene Tanquilut, D.O., board-certified and fellowship-trained vascular and endovascular surgeon.

Dr. Tanquilut recalls, “I received the call for Ray’s cold leg, folded the cover back and said “oh, my god, we need to be in surgery now” to save his leg.”

A “cold leg” is an emergent situation. It can happen when a blood clot from elsewhere in the body breaks off and suddenly blocks blood flow in the artery of a leg. Symptoms include severe pain and decreased muscle and sensory function to the foot and/or the leg. The leg will also become cold and pale.

Cold leg can also result, as Meininger’s did, from Peripheral Arterial Disease (PAD). PAD is a

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narrowing of the arteries in the limbs, caused by atherosclerosis, the build-up of plaque in your arteries, which reduces blood flow. Meininger's cold leg formed due to the plaque blocking his artery, slowing and pooling blood flow, and allowing a clot to form.

Meininger's heavy and decades-long smoking habit was a major factor contributing to his development of PAD. Other risk factors for PAD are obesity, diabetes, high blood pressure and high cholesterol. After age 50, the risk of PAD increases for everyone. Symptoms include pain when walking that eases when resting, numbness or weakness, loss of hair on legs and toes, and wounds that won't heal.

Dr. Tanquilut told Joan that Meininger's chances of a full recovery depended upon how long his leg had been cold and without blood flow, where the clots were and other factors that might occur or become obvious during surgery. "He didn't give Joan any false hope, he didn't take the easy way out," says Meininger. "He said he would work on the clots and hope for a miracle."



Meininger was taken to surgery for a thrombectomy, the evacuation of the blood clot. Dr. Tanquilut made a small incision in Meininger's groin and removed the clot using a balloon and catheter.

"Due to the severe swelling that developed after Ray's blood flow was restored, I suspected he would develop acute compartment syndrome," said Dr. Tanquilut. "He did, and the surgery quickly became more complicated."

Compartment syndrome happens when muscles become severely swollen, resulting in a decrease in blood supply to the limb. If not properly treated quickly, the patient can experience permanent damage to the muscles and nerves, losing the function in the affected arm or leg. In severe cases, amputation may be required.

Dr. Tanquilut quickly switched gears to perform a fasciotomy, only treatment for acute compartment syndrome. "I made two long incisions on each side of Ray's lower leg, opening the skin and the fascia below, to relieve the internal pressure of the muscles. After a fasciotomy, the muscles swell outward, instead of pressing the artery closed and damaging nerves."

Dr. Tanquilut says, "I knew he had a viable leg, but I still wasn't sure how much function he would be able to regain."

Meininger wasn't happy when he woke up from surgery, but then he met Dr. Tanquilut - and quickly completely reversed his opinion about doctors. "Whenever he came to check in on me, he always took time to sit down, really say 'hello', ask me 'what's happening' - he knew more about me in a few days than most of my family does," Meininger said. "It's remarkable. He came in as my doctor but became my friend so fast."

Dr. Tanquilut also communicated with everyone with understanding.

"He spoke to Dawn in medical terms that she would understand, and then he explained to us in layman's terms," said Meininger. "He really earned our respect because he deserves it. He has no airs - he calls me Ray and I call him Dr. T. He doesn't come at you like he's superior. He doesn't have a sense of arrogance at all."

Meininger had a "huge hole" in his leg after the surgery, plus the opening in his groin from the original balloon insertion. Both took longer than expected to heal, so he spent a month at Silver Cross Hospital recovering. He was discharged with a 24/7 wound VAC (vacuum assisted closure) device, which decreases air pressure on the wound itself, gently removes fluid and bacteria from the wound and helps pull the wound closed. Meininger was then visited at home by Silver Cross After Care medical professionals, whom he also compliments. After the wound VAC therapy was complete, he began making weekly wound care visits to Dr. Tanquilut and the Vascular Specialists team.

Danielle Roach, Nurse Practitioner with Vascular Specialists had just started working with Dr. Tanquilut when Meininger became a patient. "Ray was in a wheelchair when I first met him. Because of the severity of the compartment syndrome and his fasciotomy, we thought it would take about a year before Ray would know if he would regain full use of his leg. But after about three and a half months, Ray was already out of the chair and using a walker. Then he walked in with the walker, pushed it away and said, 'Look at me.' He was walking without assistance."

At the weekly appointments, Roach checks and cleans Meininger's wound, performing debridements to remove dead tissue. She applies EpiFix, a thin,

paper-like dehydrated amniotic membrane allograft, to his wound to encourage his body to heal itself. “EpiFix is a synthetic skin. It contains a variety of proteins and other growth factors, so when it’s applied, it’s basically a signal to the body, saying “Hey, get up here and heal this,” said Roach.

Meininger says, “Dr. T and Danielle are so conscious of my pain level as they work with my leg. Danielle will always say, “I’ll stop if it’s uncomfortable,” but she also watches my face to make sure I’m okay. She is my angel.”

Roach acknowledges that Meininger is a great patient. “He does everything he’s supposed to do and nothing that he isn’t. I’m proud that he’s not smoking. By the end of the summer, Ray was 100% healed.”

Meininger hasn’t smoked a single cigarette since he entered the hospital in January, and is very careful to avoid second-hand smoke too. He also takes blood pressure medication and blood thinners. “My leg was always a little bit colder, but I really didn’t give it a real thought - I’d just throw on another blanket. I really learned that you have to listen to your own body.”

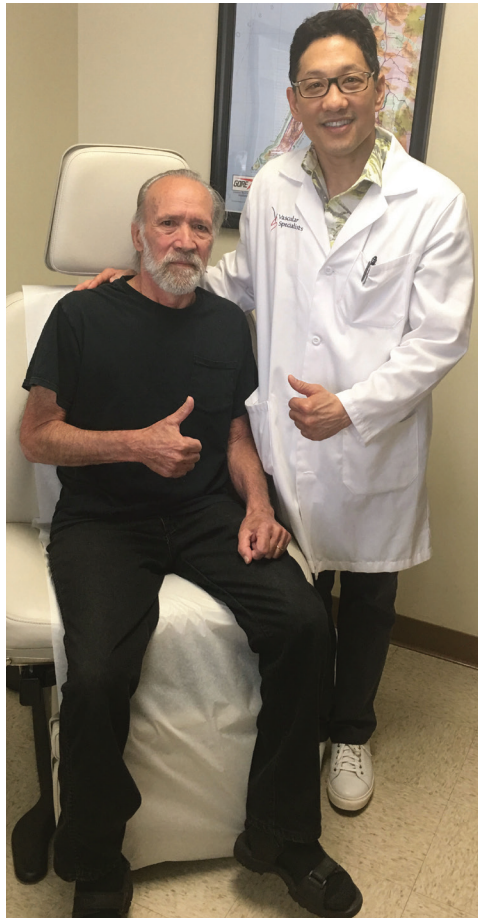
The wound is Meininger’s leg is now completely healed. He considers going through all this as making up for going 50 years without seeing a doctor. “I was a couple of days away from being dead - everything was shutting down. You know, there’s a difference between a doctor and a doctor with a heart. Dr. T saved my leg. He didn’t just chop it off without thinking about it. I don’t speak highly of many people, but nobody can begin to compare to him. He’s not just a phenomenal doctor, but he is an amazing everyday person.”

“Even though I’m not seeing Dr. T at every appointment, he still

looks in every appointment,” says Meininger. “He says hello, shakes my hand, greets my wife. It’s amazing. He is just as interested in me and my motorcycle as he is about the condition of my leg. If you want a doctor to be a friend, this is the guy. He hires qualified people with the same attitude he has; they all consider you family.”

“Dr. T’s staff is amazing. We are all on a first-name basis. I didn’t even know what “after care” was but I know Dr. T., Danielle and the nurses are still taking care of me. He is my doctor now, forever. There is no feeling of “it’s all over”.

“I know the recovery is some of me, but the person who really did the work really deserves the credit and that’s Dr. T.,” Meininger says thoughtfully. “I don’t believe in miracles, at least in the sense that everyone talks about. I believe that people work miracles - and Dr. T certainly worked a miracle on me.”



Acute Limb Ischaemia occurs when blood flow to a limb suddenly decreases, usually due to an embolism or thrombosis. ACI will result in amputation if the limb is not treated within 6 hours. ACI patients are also at a higher risk for death.

Signs of Acute Limb Ischaemia or *The Six P’s*

- **Pain**

may be constant or occurring when the limb is moved, and is not always present in ALI

- **Pallor**

“Marble-like” followed by a light blue or purple color that blanches with pressure.

- **Paralysis**

may indicate irreversible ACI

- **Pulseless**

helpful in determining the location of the occlusion within the limb.

- **Paraesthesia**

or anaesthesia, partial or total loss of sensation in the limb

- **Poikilothermia**

Perishing cold, not always reliable as limb takes on ambient temperature

**Join LEA-UP,
Lower Extremity
Amputation and Ulcer
Prevention!**

Contact Julie Cardenas Rivera
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or text to 219-314-1644
to be notified of
date, time and location.

LEA-UP meets quarterly to learn from experts in the fields of podiatry, infectious disease, primary care, nephrology, vascular surgery and more.

Award-winning and recognized as a Vitals Top 10 Doctor and a Patient's Choice Doctor, **Dr. Eugene Tanquilut** is board-certified in both vascular and endovascular surgery. He earned Vascular and Endovascular Fellowships at Cleveland Clinic.

Dr. Tanquilut and the physicians at Vascular Specialists have gained exceptional knowledge and experience through advanced education and decades of practice.

They have participated in numerous research studies, have published papers and are widely-requested speakers.

Vascular Specialists is a complete vascular practice. Best of all, Dr. Tanquilut and our medical professionals approach each patient as a member of the family, with empathy, altruism and honesty.



**Want to learn more about
avoiding amputations
and saving your patients'
limbs and quality of life?**

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Inside: Symptoms of Acute Limb Ischemia and patient Ray Meininger.

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