

Center for Limb Salvage



 **ROPER**
ST. FRANCIS
HEART & VASCULAR CENTER

CENTER FOR LIMB SALVAGE



The state of South Carolina is fourth in the prevalence of diabetes. Diabetes combined with vascular disease can result in amputation. The rate of amputation for people with diabetes is 10 times higher than for people without diabetes.

Roper St. Francis Heart & Vascular Center is proud to offer your patients suffering from lower extremity claudication and the more serious condition of critical limb ischemia, a comprehensive center dedicated to limb salvage. The goal of the Center is to improve limb salvage rates and reduce mortality associated lower extremity peripheral arterial disease (PAD). A team of highly-trained physicians and staff to minimize visits for testing and treatment by working with state-of-the-art technology to provide diagnostic testing, including a comprehensive cardiac evaluation, and an individualized plan of care for revascularization and follow-up limb care all in one convenient location.



WHAT IS CRITICAL LIMB ISCHEMIA

Critical Limb Ischemia (CLI) differs from intermittent claudication in that most frequently two or more levels of the distal arterial tree are compromised by hemodynamically significant stenosis or occlusion. Approximately five percent of patients with intermittent claudication will require revascularization for life-style limiting symptoms or progression to CLI. Chronic CLI is associated with a one-year mortality rate greater than 20%. Nearly half of these patients will require revascularization for limb salvage and among those with unreconstructable disease, 40% will require amputation within six-months of initial diagnosis.

MINIMALLY-INVASIVE TREATMENTS



We have a comprehensive medical staff of board certified vascular surgeons and interventional radiologists offering the latest in surgical and endovascular revascularization techniques including:

Endovascular: Minimally invasive endovascular therapy is often an option in the care of CLI. We have the full complement of endovascular treatments available. The treatment recommended depends on the location and severity of the blockages

Angioplasty: A tiny balloon is inserted through a puncture in the groin. The balloon is inflated one or more times, using a saline solution, to open the artery.

Cutting balloon: A balloon imbedded with micro-blades is used to dilate the diseased area. The blades cut the surface of the plaque, reducing the force necessary to dilate the vessel.

Stents: Metal mesh tubes that provide scaffolding are left in place after an artery has been opened using a balloon angioplasty.

Balloon-expanded: A balloon is used to expand the stent. These stents are stronger but less flexible.

Self-expanding: Compressed stents are delivered to the diseased site. They expand upon release and are more flexible.

Laser atherectomy: Small bits of plaque are vaporized by the tip of a laser probe.

Directional atherectomy: A catheter with a rotating cutting blade is used to physically remove plaque from the artery, opening the flow channel.

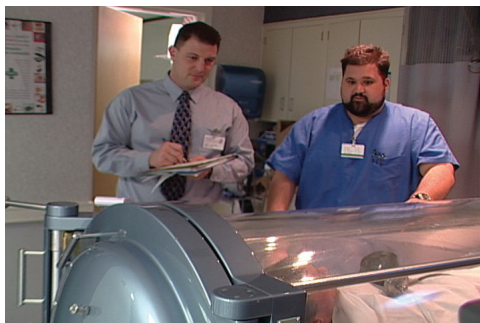
SURGERY

Peripheral bypass surgery is highly successful for saving limbs for people with blockage in the thigh, knees and legs. The limb salvage surgery approach is nearly 90% successful in saving the limb.

NORMATEC PUMP

With the Normatec Pump, multi-cell inflatable boots (or sleeves) are placed around the legs (or arms) and rhythmically inflated and deflated to carefully prescribed pressures. Stagnant fluid in the affected limb is promptly mobilized via the patented Peristaltic Pulse pneumatic waveform.

It is used as an adjunct to other treatment options, including surgery, oral and/or topical medications and compression stockings and bandaging. Patients with venous insufficiency, chronic wounds or ulcers, and lymphedema are welcomed patients for this therapy. It is simple and easy even for the elderly. We are the only Center in the southeast offering this therapy.



HYPERBARIC OXYGEN THERAPY

Hyperbaric oxygen (HBO) is a therapy where the patient breathes 100% oxygen at pressure greater than normal atmospheric (sea level) pressure. When wounds fail to respond to traditional medical and surgical management they are the most frequent entity treated with HBO therapy.

These wounds usually develop with multiple local and systemic factors contributing to impairment of tissue repair. These include diabetic foot ulcers, non-healing traumatic wounds and peripheral vascular insufficiency ulcers. Transcutaneous oxygen tension assessment of the involved extremity may help to identify the appropriate candidates for HBO by documenting low oxygen tension in the area of the ulcer.

Our Center has a board certified hyperbaric medicine physician and the only hyperbaric center in South Carolina to be accredited with distinction.

WOUND CARE

Our wound care program provides patients with the latest in administered therapies by certified wound care specialists including:

Wound V.A.C.® uses controlled negative pressure (vacuum) to promote wound healing. Clinical studies demonstrate that the V.A.C.® system helps remove infectious materials and other fluids from the wound.

Apligraf® artificial grafts consist of living cells, proteins and skin healing substances. Apligraf® is not another ointment or dressing. It is designed as a 'living' skin patch that replicates the healing function of healthy human skin.

Silver impregnated dressings incorporate both a silver-based antimicrobial agent to kill infection causing microbes in the dressing and Active Fluid Management™ that transfers drainage away from the wound without wound bed disturbance.

Patients who may benefit from this therapy may include:

- Chronic stage III or IV pressure ulcers
- Neuropathic ulcers
- Venous or arterial insufficiency ulcers
- Chronic ulcers of mixed etiology present for at least 30 days
- Dehisced wounds or wounds with exposed orthopedic hardware or bone
- Acute wounds
- Poststernotomy mediastinitis

ACCREDITED VASCULAR LAB

Our Center's accredited vascular laboratory offers all forms of venous, arterial and oxygen testing. Intersocietal Commission for the Accreditation of Vascular Labs (ICAVL) accreditation is recognized as certification that the Vascular Laboratory meets established standards of quality in vascular testing, meeting or exceeding the nationally-recognized standards of quality. Trained and credentialed vascular technologists, using state-of-the-art ultrasound imaging and noninvasive vascular testing systems, do vascular testing at our Center. The Roper Vascular Laboratory is the only accredited lab in the Lowcountry offering transcutaneous oxygen measurements and laser Doppler flow to assess poor circulation. Testing facilities are located within our patient treatment area to allow patients to receive testing, see a physician and obtain a treatment plan in one comprehensive visit.



THE REFERRING PHYSICIAN'S ROLE

Our Limb Salvage specialists believe in partnering with the patients referring physicians. We are meticulous about keeping the referring physician informed about screenings and diagnosis. We also invite the referring physicians to attend our Vascular Conference when their patient's case is being presented for discussion.

CLINICAL TRIALS

Roper St. Francis Heart & Vascular Center has been selected as one of six sites to participate in a national trial to treat patients with Critical Limb Ischemia (CLI) – becoming the first medical facility in the south to perform a procedure that aims to protect diseased limbs from amputation.

The trial tests the effectiveness of a new procedure that uses stem cells from a patient's own bone marrow to treat (CLI), a late-stage form of Peripheral Arterial Disease (PAD). This unique system extracts stem cells from the patient's bone marrow and concentrates them. The stem cell concentrate is then injected into damaged legs where the cells create new blood vessels and facilitate healing. The entire procedure takes approximately one hour with patients likely to see results in four to six weeks.

LIFESTYLE COUNSELING

Lifestyle changes are critical to limb salvage success. With this understanding, our Center offers comprehensive counseling in:

- Diabetes
- Nutrition
- Exercise
- Smoking cessation