

# From Varicose Veins to Abdominal Aortic Aneurysms - We've Got You Covered

**W**hen problems with the circulatory system arise primary care physicians often refer patients to a vascular surgeon, who can help with everything from simple cosmetic treatment for small spider veins to serious, life-threatening conditions such as aortic aneurysms in the chest or abdomen.

Merrimack Valley Hospital and Holy Family Hospital provide comprehensive care for all vascular issues with Board Certified Vascular Surgeons Arthur Gonsalves, MD; Walter Kwass, MD; and Gary Pare, MD. And St. Elizabeth's Medical Center in Boston has partnered with our hospitals to provide state of the art services for medically complex patients in need of tertiary level monitoring and care through Board Certified Vascular Surgeons Frank Pomposelli, Jr., MD, Nikhil Kansal, MD and Scott Prushik, M.D.

## **Q. What is the circulatory system?**

**A.** The circulatory system consists of arteries and veins that carry blood throughout the body.

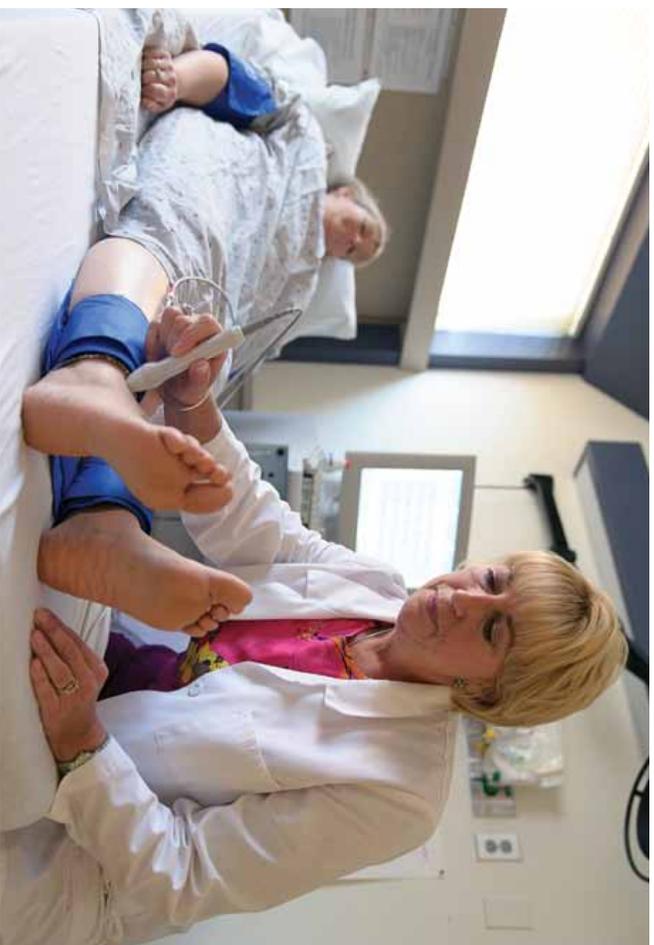
Arteries carry oxygen and nutrients from the heart to the rest of the body. Veins carry oxygen-depleted blood and waste to the lungs where blood is re-oxygenated and returned to the heart.

## **Q. What conditions do vascular surgeons treat?**

**A.** Everything from varicose veins to blood clots to blocked carotid arteries in the neck, to abdominal aneurysms to narrowing in the leg arteries.

## **Q. What are varicose veins?**

**A.** They are bulging, swollen veins seen just under the skin, most commonly in legs. They are caused by damaged valves within veins, which cause blood to pool. This can lead to phlebitis or blood clots, as well as ulcers or open sores in the legs. They are no longer treated by surgical vein stripping; these can be treated with radiofrequency ablation or a laser with minimal recovery time.



With the help of a vascular lab, Technician Tammy Dingman prepares to check pulses in a patient's arms and legs to help determine the level of blood flow.

## **Q. What is an aneurysm?**

**A.** Aneurysms are abnormal bulges caused from weakened blood vessel walls. Aortic aneurysms develop in the main blood vessel in the chest and abdomen. If an aneurysm bursts it is life threatening and can be fatal. The majority of abdominal aortic aneurysms (AAA) are treated without opening the abdomen, resulting in a shortened overnight hospital stay and faster recovery.

## **Q. What is the most common circulatory problem in arteries?**

**A.** Peripheral arterial disease (PAD), a condition in which blood flow through arteries becomes partially or completely blocked. This is usually caused by atherosclerosis, a gradual build-up of fatty plaque which narrows and weakens arteries.

## **Q. How do I know if I have peripheral arterial disease?**

**A.** Only about half of the people with peripheral artery disease have symptoms which may include pain in the calf or thigh on walking, pain in the foot at night, and open sores on the foot or leg which do not heal promptly

## **Q. Is this associated with other conditions?**

**A.** Peripheral arteries of the legs are most often affected, but also affected are arteries of the kidneys, other abdominal organs, carotid arteries in the neck and occasionally arteries in the chest and arms.

## **Q. Who is most at risk?**

**A.** Men are slightly more at risk than women, but it is more common in smokers and people with diabetes and high cholesterol.

## VNUS Closure – a Minimally Invasive Solution to Varicose Veins

**Patients are usually walking the same day and back to their normal routine within 24 hours**

If you're opting to wear long pants due to embarrassment about varicose veins, a minimally invasive procedure called VNUS closure can help.

Varicose veins are large, raised, swollen blood vessels that twist and turn. The two veins in the legs which most often become varicose veins are the great and small saphenous veins. The small saphenous vein runs behind the knee and great saphenous vein runs up the inner thigh. Both are superficial veins, meaning they are close to the surface of the skin.

It is estimated that 30 to 60 percent of adults have varicose veins. People tend to develop them as they age. They are found more often in women, and the causes range from heredity, obesity and injury to work related conditions.

Arteries carry oxygenated blood away from the center of the body. Veins, which carry the blood back, have valves inside them that help push blood against the force of gravity. When valves fail, blood pools in the veins causing them to bulge.

Some people with varicose veins don't report pain or discomfort, and for them no treatment is necessary - unless for cosmetic reasons, they prefer to have the veins removed. Others suffer with discomfort and pain described as aching, cramping, tiredness, restlessness, burning, throbbing, tingling, and heaviness in the legs.

To reduce discomfort it's often helpful to elevate legs while sitting, eat a healthier diet, exercise to lose weight, reduce sodium intake to minimize water retention and swelling, and wear support hose to reduce bulging and swelling.

But for those who find little or no relief from such changes, there is VNUS closure - a minimally invasive treatment for varicose veins that uses radiofrequency heat to permanently seal the vein shut.

VNUS closure directs radiofrequency energy through a thin catheter inserted through a small incision in the vein. When heated, the vein produces scar tissue, which blocks the flow of blood and seals the vein. VNUS closure is done in a hospital, but sometimes in an office setting.

Closing the vein can actually enhance circulation: Blood is meant to go through deep veins, so circulation can actually be improved by sealing these veins and redirecting the blood where it is meant to go.

VNUS closure offers a much more gentle method of treatment than procedures from the past. Patients are usually walking the same day and back to their normal routine within 24 hours.

### Q. Why is diabetes a risk factor?

A. High blood sugar can damage blood vessels, making them narrow and weak. Also, people with diabetes frequently have high blood pressure and elevated blood fats, which accelerates development of plaque.

### Q. How do I know my symptoms are from peripheral vascular disease?

A. It is suspected largely by risk factors. If the patient is young, healthy, active, and doesn't smoke, peripheral artery disease may not be a primary concern. But if the patient is older than 50, smokes, has diabetes, is inactive, and has a family history of high cholesterol and atherosclerosis, peripheral vascular disease will be more likely.

### Q. How is it treated?

A. Treatment depends on the underlying cause, severity and overall health. It is important to eliminate or reduce risk factors: quit smoking, start moving, eat nutritious foods, and follow your doctor's orders to control weight, blood pressure, blood sugar levels and cholesterol. In many cases, peripheral artery disease can be treated successfully by medical management. Certain medications may also be helpful.

### Q. And if that doesn't help?

A. There are interventional procedures such as angioplasty, where a balloon catheter is inserted into the affected artery and inflated to help push plaque aside and widen the artery for better blood flow. A stent can also be inserted to hold arteries open for severe blockages, or arteries that begin to close up following angioplasty. Bypass surgery is also an option for blood vessels that are extensively blocked.

### Q. How is it detected?

A. The absence of a pulse in the legs or the arms will require a workup to rule out peripheral artery disease. It can include comparing blood pressure in legs and arms at rest and with exercise. To help locate blockages, ultrasound, angiography, or CAT scan testing are often used.

For more information on vascular care at Merrimack Valley and Holy Family Hospitals visit [www.steward.org/cardiac-and-vascular](http://www.steward.org/cardiac-and-vascular)

## Vascular Surgeon Profiles



### Walter Kwass, MD

#### Vascular Surgeon

**Certification:** American Board of Surgery-Vascular Surgery  
**Medical School:** New York University School of Medicine

**Medical Director, Wound Care and Hyperbaric Center  
Merrimack Valley Hospital**

140 Lincoln Ave.  
Haverhill, MA 01830  
Phone: 978.420.1405  
Fax: 978.420.1010



### Arthur Gonsalves, MD

#### Vascular Surgeon

**Certification:** American Board of Surgery  
**Medical School:** Tufts University School of Medicine

**Vascular & Vein Associates**  
380 Merrimack St., Suite 3C  
Methuen, MA 01844  
Phone: 978.837-3317  
Fax: 978.837-3318



### Gary Pare, MD

#### Vascular Surgeon

**Certification:** American Board of Surgery  
**Medical School:** Tufts University School of Medicine

**Vascular & Vein Associates**  
380 Merrimack St., Suite 3C  
Methuen, MA 01844  
Phone: 978.837-3317  
Fax: 978.837-3318

If you think you may have symptoms of vascular disease, please visit [www.steward.org](http://www.steward.org) and click on Doctor-Finder to reach Walter Kwass, MD, Arthur (Chip) Gonsalves, MD, or Gary Pare, MD.