CENTER FOR VASCULAR MEDICINE™

Visit our website for a full list of locations

www.cvmus.com

**Annapolis**
**108 Forbes St., 2nd Floor**
**Annapolis, MD 21401**

**Greenbelt**
**7300 Hanover Dr., Ste. 104**
**Greenbelt, MD 20770**

**PLEASE CALL OUR OFFICE IF YOU NOTICE ANY OF THE FOLLOWING SIGNS OR SYMPTOMS:**

- Increased swelling or bleeding at the puncture site.
- Increased bruising down the leg or by the abdomen.
- Painful, cold leg or foot with or without discoloration.
- Increasing low back, abdominal, or leg pain.
- Redness, swelling and/or drainage from the puncture site with fever.
- Swollen, painful calf with or without fever.

If you have any questions regarding insurance matters, co-payments, deductibles, authorizations or referrals please contact our experienced team of billing specialists.

We also offer a *Patient Account Specialist* available to assist you Monday through Friday at **301.982.2000**

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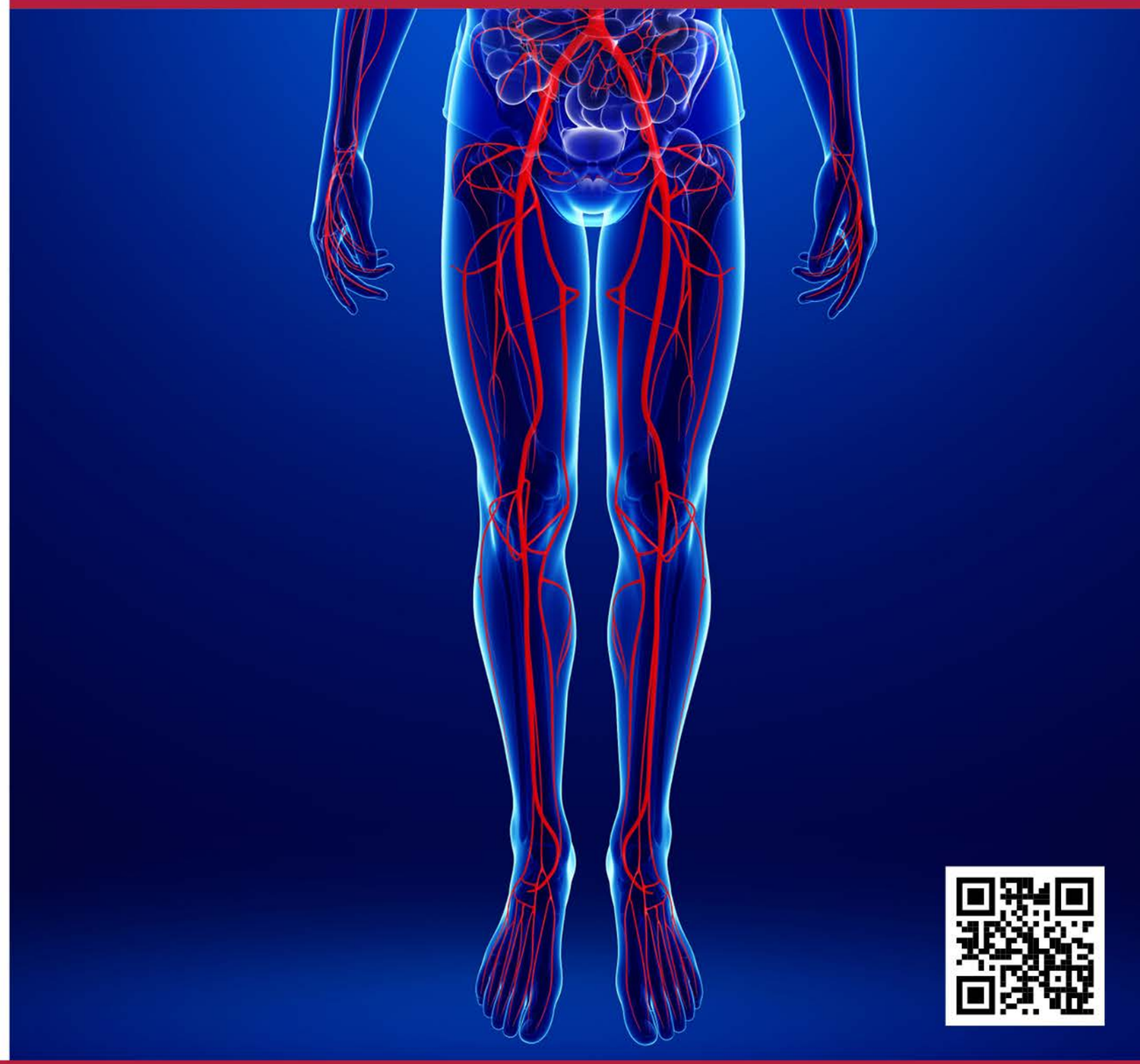
CENTER FOR VASCULAR MEDICINE™

# ANGIOGRAM



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## A MESSAGE FROM OUR FOUNDER

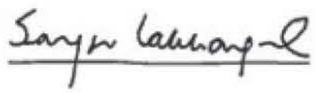
**SANJIV LAKHANPAL**
MD, FACS

At the Center for Vascular Medicine, we believe in the words of Mahatma Gandhi:

*"A customer is the most important visitor on our premises. They are not dependent on us. We are dependent on them. They are not an interruption in our work. They are the purpose of it. They are not an outsider to our business. They are a part of it. We are not doing them a favor by serving them. They are doing us a favor by giving us an opportunity to do so."*

We do our utmost to provide immediate interventional care that may provide some relief of symptoms. However, please remember that long-term follow-up is an essential component to your overall vascular health. As a result, I must emphasize that today we are entering into a partnership. For optimal results, we must both keep our promises. We promise we will treat you with intellectual integrity and dignity. We pride ourselves on offering the most advanced and patient-focused diagnostic and therapeutic modalities for the treatment of vascular disease.

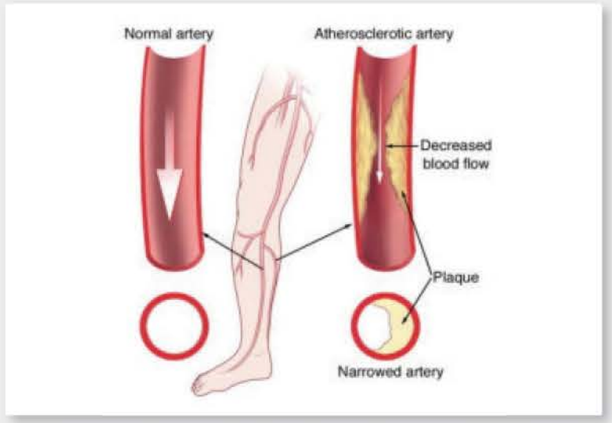
During the course of your treatments there will come a time when you may debate the need to call your doctor, PA or nurse after hours. Follow this simple rule "When in doubt, always call." Amongst other things, we promise to be always available to our patients.



## WHAT IS PERIPHERAL ARTERIAL DISEASE?

Peripheral arterial disease (PAD) is a disease in which a substance called plaque builds up in the arteries that carry blood to your head, organs, and limbs. Plaque is made up of fat, cholesterol, calcium, fibrous tissue, and other substances in the blood. PAD usually affects the arteries in the legs, but it also can affect the arteries that carry blood from your heart to your head, arms, kidneys, and stomach.

When plaque builds up and clogs the arteries, the condition is called atherosclerosis, also known as "hardening of the arteries." Over time, plaque can harden and narrow the arteries, reducing the amount of blood that can flow through them and limiting the flow of oxygen-rich blood to your organs and other parts of your body.




*A normal artery is shown on the left. The right shows an artery narrowed by atherosclerosis, causing PAD. Photo courtesy of (www.michiganmedicalreport.com)*

## RISK FACTORS

Approximately 8 million people in the United States have PAD, including 12-20 % of individuals older than age 60.

- SMOKING
- DIABETES
- RACE
- OBESITY
- HIGH BLOOD PRESSURE
- HIGH CHOLESTEROL
- OLDER THAN AGE 60
- FAMILY HISTORY

## SYMPTOMS

The classic symptom of PAD is pain in the legs with exererton relieved by resting. However, up to 40% of individuals with PAD have no leg pain.

- HAIR LOSS
- COLDNESS
- CRAMPING
- MASS
- NON-HEALING ULCERS
- DISCOLORATION
- NUMBNESS
- HEAVINESS
- DECREASE IN MUSCLE TONE

## WHAT IS AN ANGIOGRAM?

An angiogram (also called an arteriogram) is an image taken of blood vessels in an outpatient procedure done in the X-ray room. Commonly angiograms can see the arteries near the heart, lungs, brain, head and neck, legs or arms, and the aorta.

Because arteries are not normally visible in X-rays your doctor needs to make use of a special dye and camera; this is called fluoroscopy. The dye is delivered through a catheter that is guided from a blood vessel in the upper thigh all the way up to the heart. Once the catheter is in the right position, the dye is injected and it goes into the arteries. An X-ray is then taken at the precise time the dye flows through the arteries. The dye is later excreted in the urine.

## BENEFITS OF ENDOVASCULAR PROCEDURES

### MINIMALLY INVASIVE
Minimally invasive outpatient procedures require no hospital stay with a short recovery period. Most procedures allow patients to return to normal activity within a few days.

### LOWER LEVEL ANESTHESIA
Patients receive minimal anesthesia delivery under constant monitoring.

### HIGH SUCCESS RATE
There is a high success rate of endovascular procedures with relief of symptoms.

## RISKS OF ENDOVASCULAR PROCEDURES

### CATHETER-RELATES RISKS
Any procedure that involves placement of a catheter inside a blood vessel carries certain risks. These risks include damage to the blood vessel, bruising or bleeding at the puncture site, and infection. The chance of any of these events occurring is less than one percent.

### ALLERGY TO X-RAY CONTRAST MATERIAL
Patient may have an allergic reaction to the x-ray contrast material used during endovascular procedures. These episodes range from mild itching to severe reactions that can affect breathing or blood pressure. Patients having procedures are carefully monitored by a physician and a nurse during the procedure to prevent, and if necessary, treat those conditions.

### X-RAY EXPOSURE
Endovascular procedures are done under x-ray. Exposure levels usually are well below those where adverse effects on the patient or future children would be a concern.

### POTENTIAL ADVESE EFFECTS ON THE KIDNEYS
Patients with a history of poor kidney functions are at higher risk of further damage. Blood work will be drawn to help identify patients at risk and levels will be monitored accordingly. IV fluids will also be given during and after the procedure to dilute the dye and filter the dye through the kidneys. In rare cases additional medication may need to be given.

## TREATMENT OPTIONS

### ANGIOPLASTY WITH STENT PLACEMENT
A procedure using a special catheter with a balloon that can inflate to open blockages in the artery and placing one or more stents (an artificial 'tube' inserted to help restore proper blood flow) into the artery.

### LASER ATHERECTOMY
A procedure using a catheter that emits pulses of light energy that are capable of gently vaporizing plaque and other matter into tiny, microscopic particles that are smaller than a red blood cell.

### BYPASS GRAFTING
Surgery to re-route blood supply around blocked arteries in the legs.

*Image of balloon angioplasty*