Vascular Disease

Conditions & Treatments

AdventHealth

Vascular Disease Expertise That's Second-to-None

Vascular disease refers to a variety of conditions affecting the blood vessels (i.e., the arteries and veins) that make up the circulatory system. These vessels are the pathways through which blood and oxygen are pumped to essential organs like the heart, brain, kidneys and lungs, as well as the rest of the body. Your body relies on an extensive network of blood vessels to function normally. When a problem occurs anywhere along this system, the results can be painful, disabling and potentially life-threatening. We're here to help you get the answers you need, with physicians who focus on finding the right plan of care for the whole you.

*AdventHealth treats more cardiology patients than any other hospital in the country and is ranked number one in the nation in vascular-surgery volume. Physicians and team members at the AdventHealth Cardiovascular Institute are experts in the diagnosis and treatment of all kinds of arterial and venous conditions. Together, they provide the reassurance that comes with knowing that your care is being provided by the best of the best. Our program produces survival rates for abdominal aortic aneurysm that are significantly higher than the national average – often with less time spent in the hospital and fewer complications.

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Types of Vascular Disease

Venous Diseases

Venous disease can refer to multiple conditions that occur due to abnormalities within the veins. Varicose veins and spider veins are among the most common forms of venous disease and are often referred to as venous insufficiency. Symptoms with these types of veins can include tiredness, aching, throbbing and heaviness in the legs. Open, bleeding veins or varicose veins needing immediate treatment are less common. Other symptoms of chronic venous disease can include discoloration of the legs and skin ulcerations. Options for treatment include conservative, non-invasive management as well as office- based procedures such as vein injections or removal.

Peripheral Arterial Disease

Peripheral arterial disease (PAD), also known as peripheral vascular disease (PVD), is a serious but common type of vascular disorder that occurs when there is a buildup of plaque in the arteries that supply blood to any area of the body, but most commonly the legs. Peripheral arterial disease can lead to serious consequences if you develop a non-healing wound or infection. In fact, it is one of the main causes of foot and leg amputation in diabetics.

Often the first sign of PAD is claudication. This occurs when you walk and your calf becomes painful and causes you to stop and rest until the pain resolves. It can usually be treated with non-operative management including lifestyle modification with quitting smoking, watching your diet, blood pressure and cholesterol management, and an exercise program. In addition, there are specific medications that can help you walk with less discomfort. The diagnosis can be made by physical exam and non-invasive testing by ultrasound and blood pressure measurements. If invasive treatment is required, then an angiogram or catheterization can be performed wherein the disease can often be treated by balloon or stent. On some occasions, surgical bypass of the blocked arteries is necessary.

Aneurysmal Disease

Aneurysmal disease is the process by which the arteries slowly weaken over time, eventually leading to a bulge in the artery wall. Depending on the location of the aneurysm, it may simply be observed. Tests used to study aneurysms include ultrasound and CT scans. During this time, it is important to control your blood pressure since increased blood pressure against the weakened artery wall can cause it to further enlarge. Smoking is also a big risk factor for aneurysms. Aneurysms can often be repaired with stents, but sometimes surgery is required depending on their location.

Carotid Artery Disease

The carotid arteries are the major arteries in the neck that supply blood to the brain. These arteries can become blocked with plaque, which may lead to a stroke or transient ischemic event (TIA). As with other types of vascular disease, risk factors include tobacco use, high blood pressure, high cholesterol, diabetes and old age. Treatment will vary depending on if you are having symptoms of a stroke or TIA, or not having symptoms. When symptoms are present and the blockage is 50 percent or greater, surgery or stenting is usually recommended. When there are no symptoms, usually patients are observed until the blockage reaches 75 percent or greater. Testing for stenosis can be done by ultrasound or CT scan.

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What causes vascular disease?

While there are many types of peripheral artery disease, the most common is called arteriosclerosis or "hardening of the arteries." This is when plaque forms in the arteries, leading to blockages.

Causes of arteriosclerosis and vascular disease include:

- Smoking
- High blood pressure
- Diabetes
- High cholesterol
- Autoimmune conditions
- Infections
- Structural defects or trauma to a blood vessel
- Diabetes (even if it's well managed)

In addition, things that cause your blood vessels to narrow include emotional stress, certain medications, cold temperatures or even working with tools that vibrate significantly. Also, being overweight, living a sedentary lifestyle, having heart disease or a family history of vascular or heart disease, and being age 50 or greater all put you at a higher risk for developing vascular disease.

Tips for preventing vascular disease

While it's not always possible to prevent vascular disease, you can lower your risk of developing PAD in several ways. First and foremost – if you're a smoker, find a way to quit. Nicotine has a major effect on blood vessels, causing them to narrow and restrict the flow of blood. The sooner you kick the habit, the more beneficial it can be for your heart, lungs and circulatory system. Here are some additional ways to lessen your risk for vascular disease.

- Eat a healthy diet that is rich in green vegetables and lean meats.
- Practice an active lifestyle – exercise regularly and maintain the proper body weight.
- Keep your blood pressure and cholesterol levels in the right range.
- Speak to your doctor about the potential benefits of taking a daily aspirin.
- Don't smoke.
- Laugh often. A good, hard laugh can send 20 percent more blood through your body and relax your blood vessel walls.

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Learn how vascular disease is diagnosed.

Depending on your medical history and symptoms, your doctor may use a variety of methods to diagnose your vascular disease. As always, taking a thorough history and performing a physical exam is very important in determining whether you have signs or symptoms of PAD, aneurysm disease and carotid artery disease. The type of issues you are having will determine the type of non-invasive testing that should be done to help make the diagnosis.

Peripheral Artery Disease

A PAD diagnosis is often made by performing a physical exam and ankle brachial index (ABI). An ABI is done by measuring the blood pressure in the legs and comparing it to the blood pressure in the arm. Additionally, ultrasound of the arteries and a CT scan are often used for non-invasive testing. Invasive testing includes angiography or catheterization, which also allow for potential treatment of any blockages with a balloon or stent.

Carotid Artery Disease

For carotid artery disease, your physician may listen to your neck for a "swooshing" sound called a bruit. This may be a sign of a blockage. Further diagnosis is often done by ultrasound or CT scan. Occasionally an MRI is needed.

Aneurysm Disease

Depending on its location, aneurysm disease can sometimes be diagnosed through a simple physical exam. In order to study the size and potential need for repair of the aneurysm, ultrasound or CT scan may be performed.

Venous Disease

For venous disease, your doctor will discuss your symptoms while taking your medical history. A physical exam can show if there are varicose veins present. Ultrasound of the legs is the most common study and this looks for clots in the vein as well as problems with vein function. Occasionally a CT scan will be performed to look at the veins of the abdomen and pelvis.

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The Treatment Plan That's Right for You

Many vascular disorders can be treated by non-invasive means such as diet, exercise, medications and control of other risk factors such as cholesterol, blood pressure and diabetes. In addition, stopping smoking may be the most important thing you can do to help yourself. Depending on the symptoms you are experiencing, if non-invasive methods aren't successful then there are often minimally invasive procedures that can be used for treatment. Finally, open surgical procedures may be an option. Again, your vascular surgery specialist can help tailor a plan of care specifically for you.

Varicose and Spider Veins Therapy

The physicians at AdventHealth offer a variety of treatment options for vein problems. The most common procedure is called ablation. This is an office procedure in which an IV is inserted into the vein and the vein is "burned out." Other treatment options include injection therapy and removal of the veins by phlebectomy. Different materials can be used for injection depending on the size and type of vein. Phlebectomy is when a small "nick" incision is made and the vein is removed directly.

Abdominal Aortic Aneurysm Repair

When a bulge occurs in the aorta, it is called an aneurysm. This can occur in any artery but most commonly it occurs in the abdominal aorta. Left untreated, there is a risk of clots forming in the aneurysm or of it growing too large and rupturing. As the aneurysm grows, the risk of these occurring increases. Your physician will typically monitor you with regular ultrasounds or CT scans until the aneurysm reaches the size where you would benefit from a repair. Most commonly the abdominal aortic aneurysm is repaired with a stent that excludes the aneurysm. This is called EVAR (endovascular aneurysm repair). Sometimes open surgery is required to cut out the aneurysm and replace it with a graft. Again, your vascular surgeon and team at AdventHealth are well versed in these procedures. *Along with being part of one of the busiest programs in the country, they also have one of the lowest complication rates.

Arterial Bypass

Arterial bypass is used when blockages are not able to be reopened with a balloon or stent. Here, blockages within a vein or prosthetic graft are "bypassed" via surgery. This type of procedure can also be used to address certain types of aneurysms.

Endarterectomy

Endarterectomy is a procedure in which your surgeon cleans out an arterial blockage. The most common location where this is performed is in the carotid artery. There are three layers to each artery. The inner layer that contains the plaque is cleaned out directly. The middle and outermost layers of the artery are the muscle and collagen fiber wall, that are not touched during this procedure. The artery is often repaired with a patch to decrease the risk of any recurrence of the blockage.

Endovascular Therapy

Endovascular surgery refers to a group of minimally invasive techniques for treating arteries and veins. Arterial blockages are treated via catheterization, where a needle is placed into the artery and dye and X-rays are used to identify the blockage. Then a balloon and/or stent can be placed across the area and expanded to help remove the blockage. This is usually done on an outpatient basis and typically allows patients to return to normal activities within a few days.

*Source: American College of Cardiology – National Cardiovascular Data Registry, 2017

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We're designed to help patients like you.

At the AdventHealth Cardiovascular Institute, our Vascular Center of Excellence provides state-of-the-art diagnosis and treatment for the entire spectrum of vascular diseases. We offer one of the most experienced teams in the country. *In fact, we perform more vascular surgeries than any other hospital in the nation. Wherever possible, our physicians employ minimally invasive surgical techniques to promote quicker healing, minimize side effects, and reduce the time you have to spend in the hospital.

We have a dedicated team for vascular care with specialized physicians, nurses and technologists — all of whom help us to attain best-in-class results. In addition, we conduct innovative research and clinical trials in pursuit of new methods for treating aneurysms, carotid disease and refractory hypertension. More of our patients successfully recover from aortic aneurysms versus the national average, so you can be confident that your care is being provided by outstanding specialists as part of a one-of-a-kind program here in Central Florida.

Our specialists work together to deliver truly comprehensive medicine, from prevention and diagnosis to the latest advancements in vascular disease treatment and management. Our focus is on delivering whole-person care that doesn't just address the symptoms of your disease — but helps you live life to the fullest.

Take charge of your vascular care.

Let's talk in person. For more information or for a physician referral, please call 833-281-2546.

This guide is provided to the general public to disseminate health-related information. The information is not intended to be used for diagnosing or prescribing. Please consult your physician before undertaking any form of medical treatment and/or adopting any exercise program or dietary guidelines.

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ATENCIÓN: si habla español, tiene a su disposición servicios gratuitos de asistencia lingüística. Llame al número siguiente.

*Based on 2013 Medpar data