

Overcoming Vascular Disease

Your Guidebook to Conditions and
Treatments



Understanding Vascular Disease

Vascular disease refers to a variety of conditions affecting your extensive network of blood vessels (arteries and veins) that make up your circulatory system. These vessels are the pathways through which blood and oxygen travel to your heart, brain, kidneys and lungs.

When a problem occurs anywhere in this system, the results can be painful and potentially life-threatening. We're here to help you get the answers you need and the best vascular care plan for the whole you.



Types of Vascular Disease

Aneurysmal Disease

Aneurysmal disease happens when an artery weakens, creating a bulge in the artery wall. Any artery can be affected, but the most common area affected is the abdominal aorta. Depending on the aneurysm's location, it may be monitored instead of treated. Tests to study aneurysms include ultrasound and computed tomography (CT) scans. Aneurysms can often be repaired with stents, but sometimes surgery is necessary. It is important to stop smoking and control your blood pressure as pressure against the artery wall can cause more bulging.

Carotid Artery Disease

Your carotid arteries are the major arteries in your neck that supply blood to the brain. Carotid artery disease is a major cause of stroke in the United States. Risk factors include tobacco use, high blood pressure, high cholesterol, diabetes and old age. When symptoms occur and the blockage is 50% or higher, surgery or stenting is usually recommended.

Peripheral Arterial Disease

Peripheral arterial disease (PAD), also known as peripheral vascular disease (PVD), is a vascular disease that occurs when plaque builds in the arteries, usually the legs. Often, the first sign of PAD is claudication, which is pain or numbness in the calf while walking or climbing stairs. It can be treated with non-operative management,

including lifestyle changes like diet and exercise. If invasive treatment is needed, an angiogram or catheterization can be performed, and surgical bypass may be necessary.

Stroke

A stroke occurs when the flow of blood to a portion of the brain is blocked. After a few minutes without oxygen, brain cells begin to die. Another cause of stroke is sudden bleeding in the brain that damages brain cells. When brain cells die or are damaged due to stroke, symptoms occur in parts of the body controlled by those brain cells. Stroke symptoms include sudden weakness; paralysis or numbness of the face, arms or legs; trouble speaking or understanding speech and trouble seeing. A stroke is a serious medical condition that requires emergency care. It can cause lasting brain damage, disability or even death. Call 911 immediately if you think you or someone else is having a stroke.

Venous Diseases

Venous diseases are abnormalities like varicose and spider veins. Symptoms can include tiredness, aching, throbbing, heaviness in the legs, discoloration and skin ulcerations. Treatments include conservative, non-invasive management, as well as office-based procedures like vein injections or removal.

Venous Thromboembolism

Venous thromboembolism (VTE) is a disorder that includes deep vein thrombosis and pulmonary embolism. A deep vein thrombosis (DVT) occurs when a blood clot forms in a deep vein, usually in the lower leg, thigh, or pelvis. A pulmonary embolism (PE) occurs when a clot breaks loose and travels through the bloodstream to the lungs.

What Causes Vascular Disease?

Arteriosclerosis happens when plaque forms in your arteries, leading to blockages, and this condition frequently leads to vascular disease. Causes of arteriosclerosis and vascular disease include:

- Autoimmune conditions
- Being age 50 or older
- Being overweight
- Certain medications
- Cold temperatures
- Diabetes
- Emotional stress
- Heart disease or a family history of vascular or heart disease
- High blood pressure
- High cholesterol
- Infections
- Pregnancy
- Sedentary lifestyle
- Sitting or standing for long periods of time
- Smoking
- Structural defects or trauma to a blood vessel

Everyone is at risk for vascular disease. With the increase in obesity and Type II diabetes in Americans and as the population ages, vascular diseases can occur in anyone at any time; affecting men and women equally.

Preventing Vascular Disease

While it's not always possible to prevent vascular disease, you can lower your risk in several ways:

- **Don't smoke:** nicotine causes blood vessels to narrow and restrict blood flow
- **Eat healthfully:** eat lots of green vegetables and lean meats
- **Keep your blood pressure and cholesterol levels low**
- **Laugh often:** a good laugh sends blood through your body and relaxes your blood vessel walls
- **Stay active:** exercise regularly and maintain a healthy body weight
- **Talk to your doctor:** talk about the potential of taking aspirin daily



How Vascular Disease Is Diagnosed

Depending on your medical history and symptoms, your doctor may use a variety of methods to diagnose vascular disease. Reviewing your medical history and performing a physical exam to understand your symptoms is essential in determining which type of vascular disease you have and how to treat it.

Aneurysmal Disease

Depending on its location, an aneurysmal disease can sometimes be diagnosed through a simple physical exam. To study the size and potential need for repair of the aneurysm, ultrasound or CT scans may be performed.

Carotid Artery Disease

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

Peripheral Artery Disease

A PAD diagnosis often involves a physical exam and an ankle-brachial index (ABI). An ABI is done by measuring the blood pressure in the legs and comparing it to that of the arm. An ultrasound of the arteries and a CT scan may be done, too. Invasive testing includes angiography or catheterization, which allows for blockage treatment with a balloon or stent.

Venous Diseases

For venous diseases, your doctor may discuss your symptoms while taking your medical history. A physical exam can show if varicose veins are present. Ultrasound of the legs is the most common study, which identifies clots in the vein as well as problems with vein function. Occasionally, a CT scan will be done to examine the veins in your abdomen and pelvis.



Finding the Right Treatment Plan for You

Many vascular disorders can be treated through non-invasive means such as diet, exercise, medications and controlling other risk factors like your cholesterol, blood pressure and diabetes. Stopping smoking is one of the most important ways to help yourself, too.

Depending on your symptoms, surgical or minimally invasive procedures may help if non-invasive methods aren't successful. Your vascular surgery specialist can help tailor a plan of care specifically for your needs.



Treating Vascular Disease

Abdominal Aortic Aneurysm Repair

When a bulge occurs in the aorta, it is called an aneurysm. It can occur in any artery, but most commonly occurs in the abdominal aorta. Left untreated, clots could form in the aneurysm or it could grow too large and rupture. Your physician will typically monitor you with regular ultrasounds or CT scans until a repair is necessary. frequently, abdominal aortic aneurysms are repaired with a stent that excludes the aneurysm, which is called endovascular aneurysm repair (EVAR). Open surgery may be required to cut out the aneurysm and replace it with a graft.

Ablation for Varicose and Spider

Veins

The most common treatment for these veins is called ablation, which is an office procedure where an IV is inserted into the vein and the vein is cauterized and closed from the inside. 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.

Angioplasty and Stenting

ADoctors use a procedure called angioplasty to widen the carotid arteries and restore blood flow to the brain. A thin tube with a deflated balloon on the end is threaded through a blood vessel in your neck to the narrowed or blocked carotid artery. Once in place, the balloon is inflated to push the plaque outward against the wall of the artery. A stent (a small mesh tube) is then put in the artery to support the inner artery wall. The stent also helps prevent the artery from becoming narrowed or blocked again.

Arterial Bypass

An arterial bypass is used when blockages can't be reopened with a balloon or stent. In this procedure, blockages within a vein or prosthetic graft are bypassed via surgery. An arterial bypass can also treat some aneurysms.

Endarterectomy

In endarterectomy, your surgeon cleans out an arterial blockage, usually in the carotid artery. In this procedure, the inner layer of the artery that contains the plaque is cleaned out directly. The artery is often repaired with a patch to decrease the risk of any recurrence of the blockage.

Endovascular Treatment

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 identify the blockage. Then, a balloon or stent can be expanded to help remove the blockage. Endovascular therapy is usually an outpatient procedure and you can return to normal activities in a few days.



Helping You Face Vascular Disease With Confidence

Serving award-winning heart and vascular care, AdventHealth offers diagnosis and treatment for the entire spectrum of vascular diseases. Wherever possible, our physicians employ minimally invasive surgical techniques to promote quicker healing, minimize side effects and reduce time spent in the hospital.

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