

# ENDOCOR

PIONEERING INNOVATION FOR LIFE™



## **PATIENT INFORMATION GUIDE**

Understanding Peripheral Vascular Disease and how  
ENDOCOR can help you?



## TABLE OF CONTENTS

Section	Page
PVD Definition .....	5
Symptoms of Peripheral Vascular Disease .....	6
Diagnosis .....	8
Know Your Treatment .....	9
Medications .....	10
Angioplasty and surgery .....	11
Supervised exercise program .....	11
How can ENDOCOR help you? .....	12

## INTRODUCTION

You have an important role to play in order to ensure that your procedure will be successful.

Thoroughly read this booklet, cooperate with your physician and follow through with your responsibilities as part of the patient/ medical team.

**ENDOCOR**  
PIONEERING INNOVATION FOR LIFE™

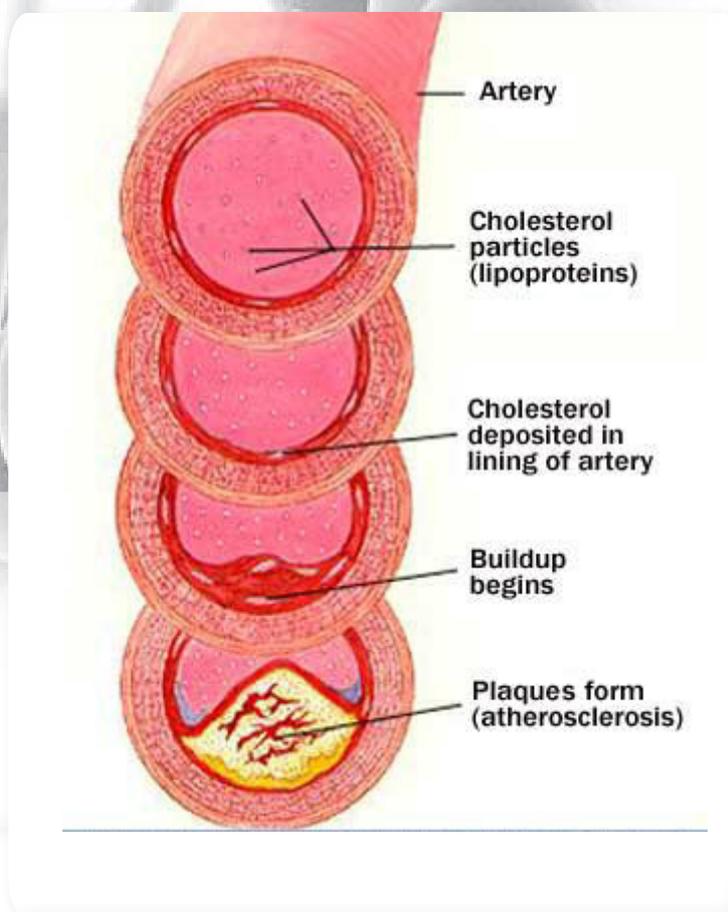
# PERIPHERAL VASCULAR DISEASE (PVD)

## Definition

peripheral vascular disease (PVD), also known as Peripheral artery disease (PAD) and peripheral arterial occlusive disease (PAOD), refers to diseases that are caused by obstructions in the large peripheral arteries that carry blood to the legs, feet, arms, stomach, kidneys and head.

These obstructions can be caused by fatty deposits that build up in the inner linings of the artery walls (called atherosclerosis), inflammation that leads to a narrowing of the artery (called stenosis), or a blood clot that either forms within the blood vessel (called thrombus) or migrates from one part of the body to another and causes a blockage (called an embolism). These obstructions limit blood flow and do not allow supply to keep up with your body's demands.

This condition may be reducing blood flow to your heart and brain, as well as your legs.



## WHAT ARE SYMPTOMS OF PERIPHERAL VASCULAR DISEASE?

While many people with peripheral artery disease have mild or no symptoms, some people have leg pain when walking (intermittent claudication).

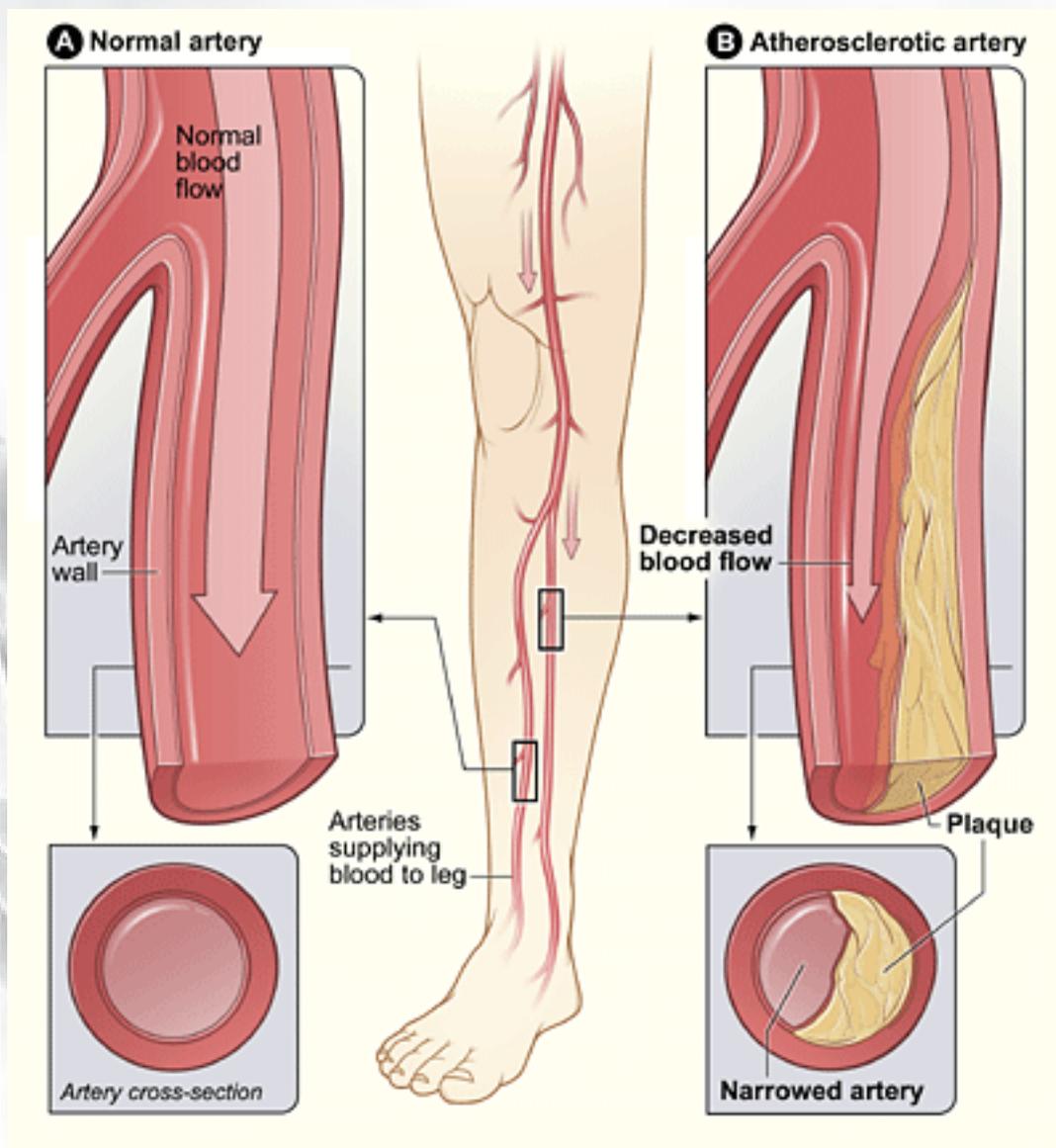
Intermittent claudication symptoms include muscle pain or cramping in your legs or arms that's triggered by activity, such as walking, but disappears after a few minutes of rest. The location of the pain depends on the location of the clogged or narrowed artery. Calf pain is most common.

The severity of intermittent claudication varies widely, from mild discomfort to debilitating pain. Severe intermittent claudication can make it hard for you to walk or do other types of physical activity.

Peripheral artery disease symptoms include:

- Painful cramping in your hip, thigh or calf muscles after activity, such as walking or climbing stairs (intermittent claudication)
- Leg numbness or weakness
- Coldness in your lower leg or foot, especially when compared with the other leg
- Sores on your toes, feet or legs that won't heal
- A change in the color of your legs
- Hair loss or slower hair growth on your feet and legs
- Slower growth of your toenails
- Shiny skin on your legs
- No pulse or a weak pulse in your legs or feet
- Erectile dysfunction in men

# NORMAL AND ATHEROSCLEROTIC ARTERY

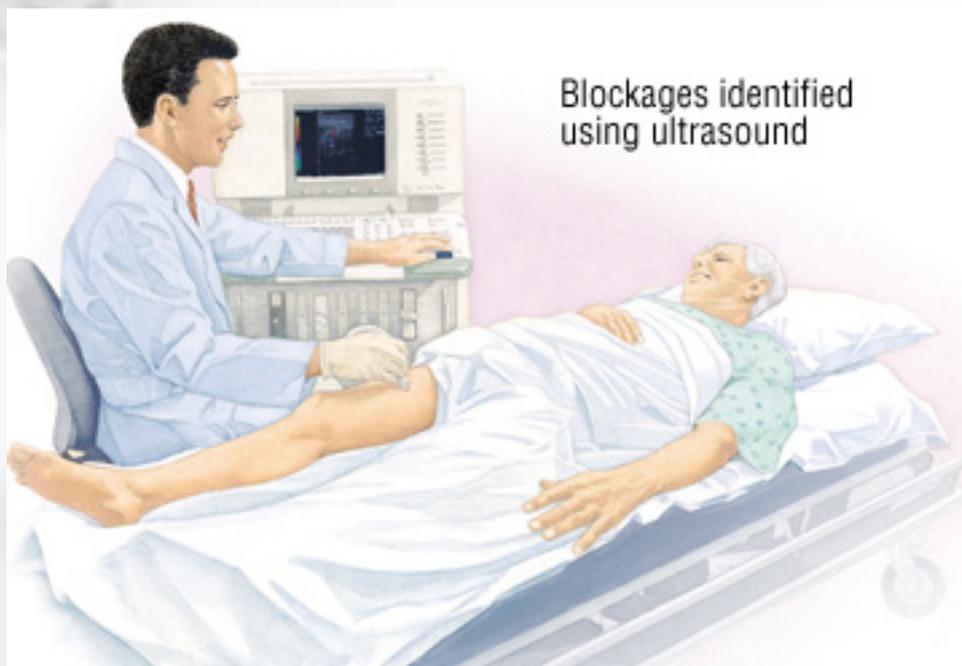


If peripheral artery disease progresses, pain may even occur when you're at rest or when you're lying down (ischemic rest pain). It may be intense enough to disrupt sleep. Hanging your legs over the edge of your bed or walking around your room may temporarily relieve the pain.

## HOW IS PERIPHERAL VASCULAR DISEASE DIAGNOSED?

Some of the tests your doctor may rely on to diagnose peripheral artery disease are:

- Physical exam. Your doctor may find signs of PAD during a physical examination, such as a weak or absent pulse below a narrowed area of your artery, whooshing sounds (bruits) over your arteries that can be heard with a stethoscope, evidence of poor wound healing in the area where your blood flow is restricted, and decreased blood pressure in your affected limb.
- Ankle-brachial index (ABI). This is a common test used to diagnose PAD. It compares the blood pressure in your ankle with the blood pressure in your arm. To get a blood pressure reading, your doctor uses a regular blood pressure cuff and a special ultrasound device to evaluate blood pressure and flow. You may walk on a treadmill and have readings taken before and immediately after exercising to capture the severity of the narrowed arteries during walking.



- Ultrasound. Special ultrasound imaging techniques, such as Doppler ultrasound, can help your doctor evaluate blood flow through your blood vessels and identify blocked or narrowed arteries.
- Angiography. By injecting a dye (contrast material) into your blood vessels, this test allows your doctor to view blood flow through your arteries as it happens. Your doctor is able to trace the flow of the contrast material using imaging techniques such as X-ray imaging or procedures called magnetic resonance angiography (MRA) or computerized tomography angiography (CTA). Catheter angiography is a more invasive procedure that involves guiding a catheter through an artery in your groin to the affected area and injecting the dye that way. Although invasive, this type of angiography allows for simultaneous diagnosis and treatment — finding the narrowed area of a blood vessel and then widening it with an angioplasty procedure or administering medication to improve blood flow.
- Blood tests. A sample of your blood can be used to measure your cholesterol and triglycerides and to check for diabetes.

## KNOW YOUR TREATMENT

Treatment for peripheral artery disease has two major goals. The first is to manage symptoms, such as leg pain, so that you can resume physical activities. The second is to stop the progression of atherosclerosis throughout your body to reduce your risk of heart attack and stroke.

You may be able to accomplish these goals with lifestyle changes. If you smoke, quitting is the single most important thing you can do to reduce your risk of complications.

If lifestyle changes are not enough, you need additional medical treatment. Your doctor may prescribe medicine to prevent blood clots, lower blood pressure and cholesterol, and control pain and other symptoms.

## MEDICATIONS

- Cholesterol-lowering medications. You may take a cholesterol-lowering drug called a statin to reduce your risk factor of heart attack and stroke. The goal for people who have peripheral artery disease is to reduce low-density lipoprotein (LDL) cholesterol, the "bad" cholesterol, to less than 100 milligrams per deciliter (mg/dL), or 2.6 millimoles per liter (mmol/L). The goal is even lower if you have additional major risk factors for heart attack and stroke, especially diabetes or continued smoking.
- High blood pressure medications. If you also have high blood pressure, your doctor may prescribe medications to lower it. The goal of this therapy is to reduce your systolic blood pressure (the top number of the two numbers) to 140 millimeters of mercury (mm Hg) or lower and your diastolic blood pressure (the bottom number) to 90 mm Hg or lower. If you have diabetes, your blood pressure target is under 130/80 mm Hg.
- Medication to control blood sugar. If you also have diabetes, it becomes even more important to control your blood sugar (glucose) levels. Talk with your doctor about what your blood sugar goals are and what steps you need to take to achieve these goals.
- Medications to prevent blood clots. Because peripheral artery disease is related to reduced blood flow to your limbs, it's important to reduce your risk of blood clots. A blood clot can completely block an already narrowed blood vessel and cause tissue death. Your doctor may prescribe daily aspirin therapy or another medication that helps prevent blood clots, such as clopidogrel (Plavix).
- Symptom-relief medications. The drug cilostazol (Pletal) increases blood flow to the limbs both by preventing blood clots and by widening the blood vessels. It specifically helps the symptom of claudication, leg pain, for people who have peripheral artery disease. Common side effects of this medication include headache and diarrhea. An alternative to cilostazol is pentoxifylline (Trental); however, it's generally less effective. But, side effects are rare with this medication.

## ANGIOPLASTY AND SURGERY

In some cases, angioplasty or surgery may be necessary to treat peripheral artery disease that's causing intermittent claudication:

- **Angioplasty.** In this procedure, a small hollow tube (catheter) is threaded through a blood vessel to the affected artery. There, a small balloon on the tip of the catheter is inflated to reopen the artery and flatten the blockage into the artery wall, while at the same time stretching the artery open to increase blood flow. Your doctor may also insert a mesh framework called a stent in the artery to help keep it open. This is the same procedure doctors use to open heart arteries.
- **Bypass surgery.** Your doctor may create a graft bypass using a vessel from another part of your body or a blood vessel made of synthetic fabric. This technique allows blood to flow around — or bypass — the blocked or narrowed artery.
- **Thrombolytic therapy.** If you have a blood clot blocking an artery, your doctor may inject a clot-dissolving drug into your artery at the point of the clot to break it up.

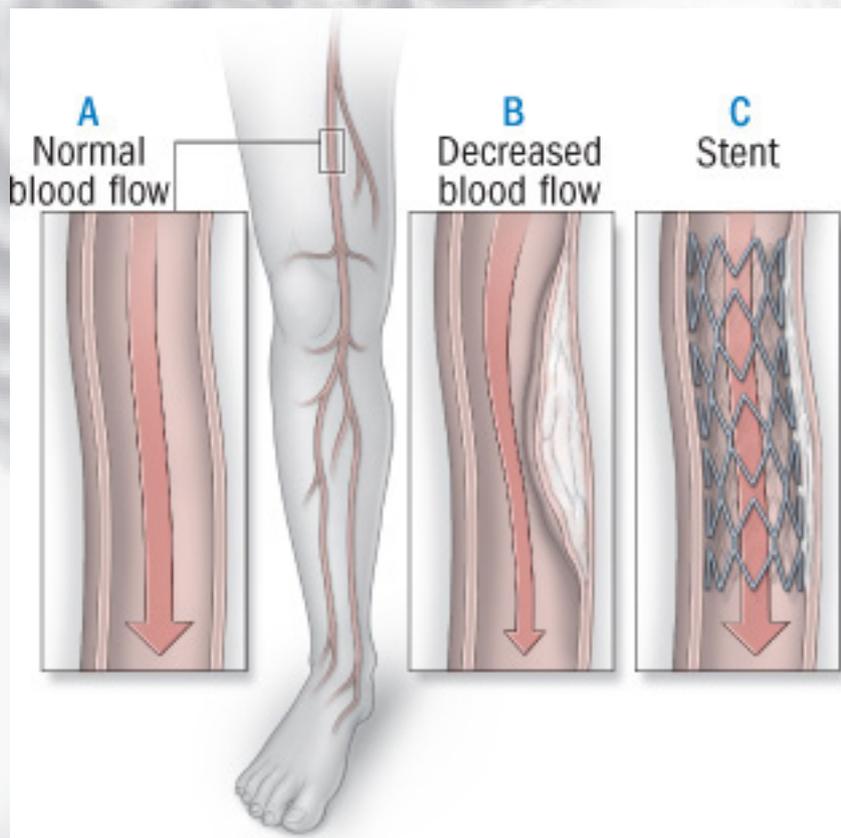
## SUPERVISED EXERCISE PROGRAM

In addition to medications or surgery, your doctor may prescribe a supervised exercise training program to increase the distance you can walk pain-free. Regular exercise improves symptoms of PAD by a number of methods, including helping your body use oxygen more efficiently.

## HOW CAN ENDOCOR HELP YOU?

Peripheral Artery Stenting is one common treatment option for treating Peripheral Arterial Disease (PAD). In cases where balloon angioplasty has achieved suboptimal results, a physician may determine that placing a DISCOVERY™ stent can further improve the vessel lumen to increase blood flow.

The DISCOVERY™ Self-expanding peripheral stent is introduced into a blood vessel with a standard introducer system and delivered to the lesion with the aid of a guidewire. The DISCOVERY™ stent is constrained within an inner catheter which, once the stent is in proper position, is pulled back and the DISCOVERY™ stent is deployed. The DISCOVERY™ self-expanding stent exerts constant outward radial force until they reach their pre-set diameter. This is intended to force plaque against the arterial wall and improve blood flow.



Once proper stent placement has been confirmed, the stent delivery catheter, guidewire, and introducer sheath are removed, and the entry site is closed either with manual pressure or a percutaneous closure device.



For more patient information, please visit  
[www.endocor.com](http://www.endocor.com)

**ENDOCOR**  
PIONEERING INNOVATION FOR LIFE™

Esplanade 41  
20354 Hamburg  
Germany

Phone: +49 40 819 89 186  
Fax: +49 40 572 47 570  
E-Mail: [info@endocor.com](mailto:info@endocor.com)