Peripheral Artery Disease (PAD)

The Vascular Surgery team at the University of Michigan is dedicated to providing exceptional patient care for **Peripheral Artery Disease** in the U-M Cardiovascular Center (CVC), our new state-of-the-art clinical building. Our surgeons are part of the Multidisciplinary Peripheral Arterial Disease Program at the University of Michigan Cardiovascular Center. This program brings together a strong team of experts from Interventional Cardiology, Interventional Radiology, Cardiovascular Medicine, Vascular Medicine, and Vascular Surgery all in one location. Few other centers in the nation offer this coordinated level of care.

Make an appointment, contact us, or visit the Peripheral Arterial Disease Program page for more information.

**What is Peripheral Artery Disease?**

Peripheral Artery Disease (PAD) describes a condition or set of conditions caused by the blockage or narrowing of the body's large peripheral arteries. Lack of proper blood flow to the legs is very common in this condition, with many patients experiencing leg pain with walking (claudication), which occurs as a result of the lack of oxygen to the muscle tissue. In some patients the vascular system may compensate for the reduced blood flow by forming alternative routes, called collateral vessels, which bypass the affected vasculature.
In others, collateral vessels may not be sufficient resulting in foot pain at rest and non-healing sores on the feet.

### Conditions and Treatments

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peripheral Artery Disease (also known as peripheral arterial disease, PAD, occlusive disease, peripheral vascular occlusive disease, PVOD, peripheral vascular disease, PVD, peripheral artery occlusive disease, PAOD, claudication, intermittent claudication, occlusive disease)</td>
<td>Balloon Angioplasty/Stenting Bypass Grafting Cryoplasty Percutaneous Atherectomy Laser Atherectomy Medical Therapy Structured Walking Program</td>
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### What are the symptoms of Peripheral Artery Disease (PAD)?

Symptoms of PAD include:
- Persistent or intermittent leg pain (claudication) or cramping when walking
- Numbness or loss of sensation in the affected limb
- Sores that heal slowly or fail to heal
- Differences between limbs in relation to color and/or warmth
- Decreased rate of hair and nail growth on the impacted limb
- Foot pain at rest

### What causes Peripheral Artery Disease?

Over time, smoking, poor diet, and inactivity, in conjunction with diseases such as hypertension and diabetes, cause the vein walls to become rigid and narrow. Risk factors for PAD include:
- Diabetes
- High cholesterol
- Hypertension
How is it diagnosed?
If PAD is suspected, your health care provider will perform a non-invasive test referred to as an ankle brachial pressure index (ABI). The ABI measures the difference between the systolic blood pressure in your arms and the systolic pressure in your ankles. Based on the result of this test, an ultrasound may be ordered to determine the extent of the blockage. Angiography, an x-ray dye procedure, or a Computed Tomography Angiography Scan (CTA) may also be used to more precisely define the exact location of the blockage if a procedure is indicated.

How is Peripheral Artery Disease treated?
The treatments for PAD focus primarily on risk factor reduction in conjunction with medical therapies. Surgical options are reserved for those patients who have the most severe symptoms and complications.

Risk Factor Reduction Steps:
- Stop smoking
- Walk 30 minutes, 4 to 5 times a week, stopping as needed
- Consideration of a daily baby aspirin regimen, a cholesterol-lowering statin medication (e.g. Lipitor™, Zocor™, etc...), and an ACE inhibitor for blood pressure control is also recommended, if appropriate.
- Consideration Beta-Blocker medications may be recommended.
- Consideration of Cilostozol™, a medication specifically designed to treat claudication symptoms.

In the event the disease reduces blood flow to such an extent that prevents a wound or sore from healing, or if pain occurs at rest, surgical intervention may be indicated including:
- Balloon angioplasty, with or without stent placement
- Bypass Grafting
- Cryoplasty
• Percutaneous Atherectomy
• Laser Atherectomy

What can I do to prevent Peripheral Artery Disease?
Because PAD most commonly results from atherosclerosis or hardening of the arteries, you can reduce your risk for developing the condition by following these guidelines:
• Don't smoke
• If you have diabetes, see your health care provider regularly and follow all diet and medication instructions
• Lower your blood pressure if it is high
• Eat foods low in fat and cholesterol
• Lose weight if you are overweight
• Exercise regularly according to your health care provider's recommendations
• Try to reduce stress in your life

Disclaimer: This document is for informational purposes only and is not intended to take the place of the care and attention of your personal physician or other professional medical services. Talk with your doctor if you have Questions about individual health concerns or specific treatment options.

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