

**Peripheral Arterial Disease (P.A.D)**

**Peripheral Arterial Disease** refers to the obstruction of large arteries and occurs when 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. Over time, plaque can harden and narrow the arteries, limiting the flow of oxygen-rich blood to organs and other parts of the body.

Peripheral arterial disease usually affects the legs, but also can affect the arteries that carry blood from your heart to your head, arms, kidneys, and stomach.

Other symptoms of advanced peripheral arterial disease may include:

- A burning or aching pain in the feet and toes while resting, especially at night while lying flat
- Cool skin in the feet
- Redness or other colour changes in the skin
- Increased occurrence of infection
- Toe and foot sores that do not heal
- Leg ulcers or wounds that won't heal or are slow to heal
- Weak or absent pulses in the legs or feet

**Diagnosis**

Most of the procedures used in the diagnosis of peripheral arterial disease are **non-invasive** and can be done in a doctor's office or in a hospital on an outpatient basis.

A doctor or nurse assesses each pulse, including those at the armpits, elbows, wrists, groin, and ankles and those behind the knees. The pulse in arteries beyond the blockage may be weak or absent. Doctors examine the skin of the limbs, noting the colour and temperature and pressing gently to see how quickly returns colour after pressure is removed. These observations can help doctors determine whether circulation is adequate.

**Doppler ultrasonography** can be used to directly measure blood flow and can confirm the diagnosis of occlusive peripheral arterial disease. The procedure can accurately detect narrowing or blockage of blood vessels. Color Doppler is useful because it shows different rates of blood flow in different colors.

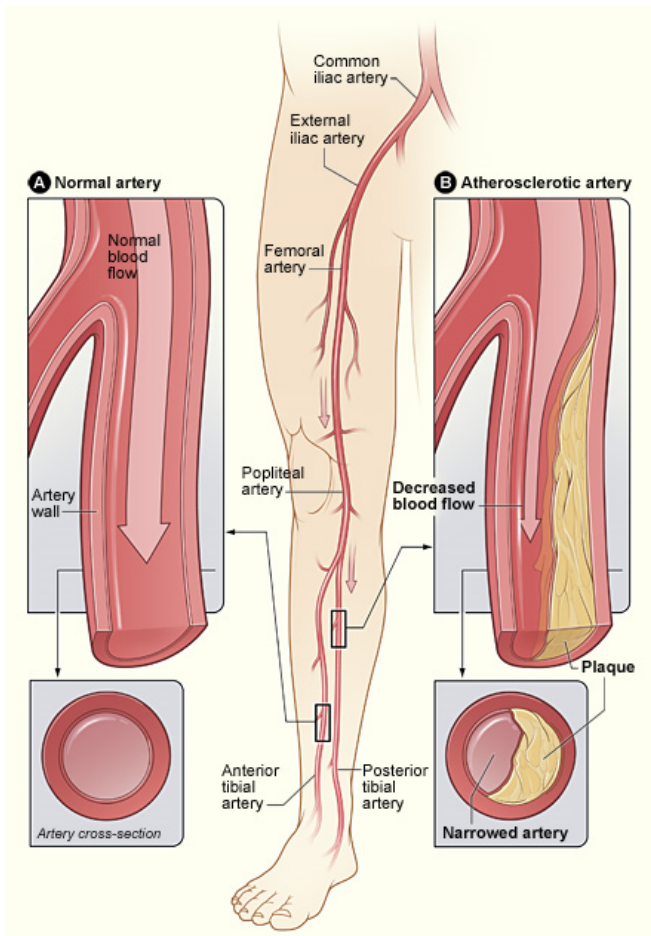
**Endovascular WA** uses angiography as a diagnostic and treatment tool for **Peripheral Arterial Disease**.

**Treatment Options**

**Endovascular WA** offers patients suffering from peripheral arterial disease effective treatment using angioplasty and/or stenting.

If a blockage of a blood vessel is detected during an angiography procedure, this can be treated during the same procedure using a number of methods. Angioplasty may be done to relieve symptoms and thus postpone or avoid surgery.

Angioplasty uses a special catheter with a small deflated balloon at one end. Under x-ray guidance, the catheter is passed to the site of the blocked vessel. The balloon is then inflated to open up the vessel pushing the atherosclerotic plaque to the sides of the vessel walls, effectively unblocking the artery. The balloon can then be deflated and the catheter removed.



**Symptoms**

The first noticeable symptom of **peripheral arterial disease** may be intermittent claudication - this refers to leg discomfort, pain or cramping that develops with activity, is relieved with rest, and recurs upon resuming activity.

The pain is often noticed in the calf, but may also be felt in the buttocks or thighs. Intermittent claudication symptoms may also include numbness, weakness, heaviness or fatigue in the leg muscles when walking that are relieved at rest.

The pain can be severe enough to interfere with normal walking. The cyclical pain is caused by reduced blood flow to the leg muscles and goes away at rest because the muscles require less blood flow.

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There is usually a good success rate, as defined by the blood vessel remaining patent following angioplasty. This depends on the size and complexity of the stenosis, the skill of the operator and the location of the stenosis.

Complications occur in 2-3% of patients, but are usually minor and the same as the risks of angiography.

#### *When is a stent required?*

Sometimes a stent is used after angioplasty to prevent the vessel from narrowing again. A stent is a small metal mesh that is designed to support the vessel walls mechanically.

The stent sits on top of a deflated balloon catheter, which is inserted so that the ends of the stent cover the entirety of the stenosis. When the balloon is inflated, the stent expands, supporting the vessel walls. The stent remains in place even after the balloon catheter is removed, and eventually becomes integrated into the vessel wall.

The success rate is very high.

Complications include those of angiography as well as formation of a clot or scar tissue within the stent, which may require re-stenting later on.

A new type of stent, **the drug-eluting stent**, has been developed to reduce the risk of scar tissue stenosis within the stent. The drug-eluting stent is currently only used in heart procedures

#### **Patient Preparation**

*Prior to an Angiography procedure for the diagnosis and treatment of peripheral arterial disease, patients are required to complete the following*

- i. Ensure you have someone to take you to and from the clinic on the day of your procedure (they can even stay with you through the whole procedure)
- ii. Make sure you have returned your signed information to our Patients' Service team at reception
- iii. Have a shower on the morning of your procedure
- iv. Wear comfortable loose clothing

#### **Post Procedure Patient Care**

Foot care is essential for people with peripheral arterial disease of the leg arteries. The following self-care measures and precautions can help:

- Inspect the feet daily for cracks, sores, corns, and calluses.

- Wash the feet daily in lukewarm water with mild soap, and dry them gently and thoroughly.
- Use a lubricant, such as lanolin, for dry skin.
- Cut toenails straight across and not too short. (A podiatrist may have to cut the nails. Tell the podiatrist that peripheral arterial disease is present.)
- Have a podiatrist treat corns or calluses.
- Do not use adhesive or harsh chemicals to remove corns or calluses.
- Wear loose wool socks to keep the feet warm.
- Do not wear tight garters or stockings with tight elastic tops.
- Wear shoes that fit well and have wide toe spaces.
- Do not wear open shoes or walk barefoot.
- Ask the podiatrist about a prescription for special shoes if the feet are deformed.
- Do not use hot water bottles or heating pads.
- Do not soak feet in hot water or chemical solutions.

#### **Making an appointment**

Making an appointment to see one of our physicians is easy. We have two options:

1. Phone our Claremont clinic on (08) 9284 2900 and you will speak directly to one of our friendly Patients' Service team members who will book your appointment and answer any of your questions.
2. More information can be found on our website [www.endovascularwa.com.au](http://www.endovascularwa.com.au).