**Circulation Foundation: Leaflet
Lifestyle and medical management of PAD**

**What is Peripheral Arterial Disease (PAD)**

PAD is the obstruction of blood vessels, called arteries, which supply the legs causing them to become narrowed and leading to reduced blood supply. This is most commonly caused by fatty deposits in the walls of the arteries which is called ‘atherosclerosis’. The most common symptom of PAD is pain in the leg which comes on with walking and eases after a few minutes of rest. The medical term for this is ‘intermittent claudication’. The pain is typically in the calf but can be experienced in the thigh, hip or buttocks depending on where the artery is narrowed.

**Why is PAD important?**

Most people with PAD can be treated without an operation and they will not get worse over time and will often improve. The main treatments are lifestyle changes (including stopping smoking), medical therapy (tablets) and exercise. With these treatments, symptoms (often walking distance) and quality of life can improve. Occasionally, simple surgery (e.g. angioplasty – a balloon used to stretch the artery) is offered to people with very severe symptoms, who are extremely limited. However, in general terms, research suggests that these people do not have a better improvement in their symptoms and quality of life than those treated with lifestyle changes, medical therapy (tablets) and exercise.

People with PAD are more likely to experience other things such as heart attacks and strokes. On average, every year, one in every 20 people with PAD will have a heart attack, stroke or will die. In fact this is the most important complication of PAD and making lifestyle changes and taking medicines to reduce the risk of these is especially important.

**What if my PAD gets worse?**

A small number of people with PAD will get worse and experience signs or symptoms that mean, even at rest, they do not have enough blood supply to the legs. Each year, this will be the case for 1-2 out of every 100 people with PAD. The medical term for this is chronic limb-threatening ischaemia (CLTI). This causes severe pain in the foot at rest and/or in bed that wakes you up from sleep and is often relieved by getting out of bed. If things get even worse, ulcers (ie. wounds) and gangrene can develop as the tissue starts to die and are unable to heal due to the lack of blood supply. CLTI is a serious condition with a high risk of amputation if not treated. Also, 1 in 5 people with CLTI die within a year of being diagnosed. It is very important that people with CLTI are seen by vascular surgeons urgently. This is the main group of people who we treat with operations to save their leg and life.

**Can we cure PAD?**

We cannot cure PAD. Treatment of PAD aims to improve your quality of life by trying to reduce the pain in your leg, and increase the distance you can walk pain free. It also aims to reduce the risk of progression of PAD to CLTI with its complications including ulcers and amputation. Most importantly, the treatment of PAD aims to reduce your risk other things such as heart attacks, strokes and death.

**What is the treatment for PAD?**

The majority of people with PAD do not need a vascular operation and can be safely managed in the community by their GP. The focus is on lifestyle changes, medication to reduce other risks and exercise to improve walking distance.

**What lifestyle changes should I make to improve my PAD?**

The two most important lifestyle changes you can make are to undertake regular exercise and to stop smoking. Other changes should also include having a healthy, low-salt diet and moderating your alcohol intake. Beyond this, some specific medications are recommended to reduce your risk of strokes, heart attacks and death.

***Stop smoking***

If you smoke, then stopping smoking will be the most important treatment of your PAD. The chemicals found in cigarettes speed up the narrowing of your arteries. After 5 years a person with PAD who stopped smoking will be twice as likely to still be alive, and less likely to need an amputation, compared to someone who continued to smoke. Stopping smoking will also improve your pain and walking performance.

***Take exercise***

Exercise is the best thing you can do if you have PAD. If a supervised exercise programme is available then you should join it, but these are often not available so most people need to be self-motivated to exercise at home. We recommend walking, using the “walk-rest-walk” method. This involves walking as far as you can until the symptoms of pain become unbearable and then rest until the pain goes. Once the pain has disappeared, begin walking again until unbearable pain returns, and then repeat this until you have spent at least 30 minutes walking in total. Aim to do this several times per week.

***Modify your diet***

It is recommended that you adopt a Mediterranean diet where you get most of your calories from whole grains, legumes, fruit and vegetables, and seafood, and limit the amount of meat and dairy in your diet. You could perhaps aim to have whole grains, legumes, fruit and vegetables every day, seafood 2-3 times per week, poultry, eggs and dairy once a week, and red meat and sweets sparingly. You should aim to have a low salt diet as having too much salt in your diet will make your blood pressure higher, worsening your PAD and increasing the risk of heart attacks and strokes.

***Reduce your alcohol intake***

It is known that drinking alcohol heavily will make your PAD worse. Heavy drinking is defined as having more than 10 drinks (15 units) per week. If you drink heavily then you should reduce your alcohol intake. If you are struggling to reduce your alcohol intake then you should seek help from your clinician.

**What medications can I take to treat my PAD?**

All people with PAD should take medications to lower their cholesterol and thin their blood. If you also have diabetes or high blood pressure, then you should also be on medication to treat these. It is important to take these medications every day and follow the instructions on the prescription exactly.

***Why should I take cholesterol tablets?***

All people with PAD should take drugs to lower their cholesterol. Statins are the most commonly used for this. Taking these medicines will reduce the chance of your PAD getting worse and reduce your risk of having a heart attack, stroke, or requiring an amputation by about 25%. In other words, if we had a group of 100 people who took a statin and a group of 100 people who did not, we would expect there to be 7 fewer people having a heart attack, stroke or getting CLTI in the group taking a statin.

***Why should I take blood thinner?***

Everyone who has PAD should take blood thinning medication. The most commonly used antiplatelet medication in PAD is called clopidogrel. Taking this will reduce your risk of developing CLTI by reducing the risk of blood clots which can cause obstruction to the blood flow to your leg. It will also reduce your risk of heart attacks and strokes.

***Why should I take medication to lower my blood pressure?***

Approximately half of all people with PAD will also have high blood pressure. Having high blood pressure is known to damage your arteries which can make your PAD worse and put a higher strain on your heart, increasing your risk of heart attacks. There are different medications that can be used to treat your high blood pressure, and your GP will advise you on the best one for you.

***How will diabetes affect my PAD?***

People who have PAD and diabetes tend to get more severe PAD and have a higher risk of developing CLTI. They are five to ten times more likely to need a major amputation compared to people without diabetes. People with diabetes are also more likely to require surgery to improve the blood supply to their leg. If you have poor control of your diabetes, then the surgery is more likely to fail and you are at increased risk of complications requiring further surgery or amputation. It is important to have good control of your blood sugars through diet and medication. Your blood sugar and HbA1c goals should be discussed with your GP.