



# POPLITEAL ARTERY ANEURYSM

## WHAT IS A POPLITEAL ARTERY ANEURYSM?

An arterial aneurysm is a swelling of an artery where it becomes 50% larger than its normal size. A popliteal aneurysm, is a swelling of the popliteal artery – which is one of the main vessels found in your leg.

The popliteal artery is a blood vessel situated behind the knee joint. Here it branches out into three smaller arteries (the lower limb's "arterial tree") providing the blood flow to your lower leg and the foot.

Popliteal aneurysms (also known as popliteal artery aneurysms) often remain undiagnosed until the sudden presentation of acute, limb-threatening symptoms.

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## WHAT CAUSES A POPLITEAL ANEURYSM

Arterial aneurysms can affect any artery of our body (aorta, limbs, brain and internal organs). Sometimes vessels can weaken and expand like a balloon, known as an aneurysm. More rarely, aneurysms can also be caused due to trauma or surgical procedures resulting in the damage of the arteries.

Wherever they occur within the body, aneurysms can lead to limb loss or life-threatening complications either in the form of a burst or ruptured artery or the sudden blockage of the artery (also known as acute ischaemia) due to the build-up of a clot inside the aneurysm sac.

The clot can block the artery at the level of the aneurysm or can become detached and travel within the bloodstream, obstructing the circulation in the smaller arteries of the extremities.

## WHAT TO LOOK OUT FOR

Popliteal aneurysms are relatively uncommon, with nearly half of the patients showing no clear symptoms (asymptomatic) at the time of diagnosis. The exact number of people who may have suffered with them, is currently unknown due to a lack of evidence but a few studies suggest they can be more prevalent in the people aged between 60 and 70 years.

They can be more frequently found in people who have abdominal aortic aneurysms. Which may suggest a genetic / inherited predisposition to the development of aneurysmal diseases.

# WHAT ARE THE RISKS?

The main risk from a popliteal aneurysm is the sudden loss of blood supply to the lower leg.

If left undiagnosed, popliteal aneurysms can lead to irreversible nerve damage and gangrene (due to the lack of oxygen to the nerves and muscles in the leg) which can lead to limb loss and / or life threatening sepsis and multi-organ failure. More rarely, popliteal artery aneurysms may burst causing a severe internal bleed (haemorrhage) within the leg.

# HOW CAN IT BE DETECTED?

An accurate vascular assessment should include but not be limited to:

## Medical and family history

To understand if any first degree family members had any similar conditions

## A physical examination

Where your healthcare professional should be checking for the following:

- A pulse within the leg
- Any signs and symptoms of restricted blood flow (acute lower limb ischaemia) – this would require an emergency, surgical intervention
- Whether you can feel or move the foot
- Excruciating pain progressively evolving towards numbness
- Irreversible coldness, pallor and mottling of the foot and leg

As part of your healthcare professional's diagnostics they may also use / suggest the following:

- Duplex ultrasonography – to visualise the size and shape of the artery, and check for the presence of clot and the flow of blood within the lower leg
- CT-Angiogram or MRA scans – second level imaging for pre-operative assessment and planning

# HOW IS IT TREATED?

There are two key considerations for treatment:

## Asymptomatic

Where the popliteal aneurysms are often larger than 2.5cm with a high risk of clotting and future complications. They should be considered for preventive treatment.

## Symptomatic

Where the popliteal aneurysm presents as an emergency due to a shortage of blood to the leg. Regardless of the size, it should be treated as high risk to prevent the possible amputation of the lower leg.

Traditionally, popliteal artery aneurysms have been treated surgically with open bypass surgical techniques. However endovascular techniques / keyhole surgery – which involve stent grafting (fabric lined metal mesh) through the popliteal artery aneurysm can also be used. Treatment will often be determined by your health and age and the complexity of the intervention needed.

Find out more about the campaign and how you can get involved

[legsmatter.org](https://legsmatter.org)