

What should I do next?

Even if you don't have exactly the symptoms described in this leaflet, if you have any concerns about the condition of your legs or feet you should have them professionally assessed. In the first instance, speak to your doctor, nurse or local Leg Club, who will give you a thorough examination. This may include a full health check and review of the circulation in your legs.

What is a Leg Club?

Leg Clubs are a research-based initiative which provide community-based treatment, health promotion, education and ongoing care for people of all age groups who are experiencing leg-related problems.

The Leg Club nursing teams are employed by NHS local provider services, CCGs and GP consortia and the nurses incorporate the Leg Clubs into their everyday practice.

No appointment is required and the Leg Club opening hours should be available from the local surgery, community nurses' office, and adverts in the local parish magazine and village shops or from the Leg Club website www.legclub.org

Through education, ongoing advice and support from your Leg Club nurses, you will be made aware that care and prevention of recurrence of leg-related problems is for life.

Visit your nearest Leg Club

The Lindsay Leg Club Foundation
Ipswich, PO Box 689, IP1 9BN

Telephone

01473 749565

Email:

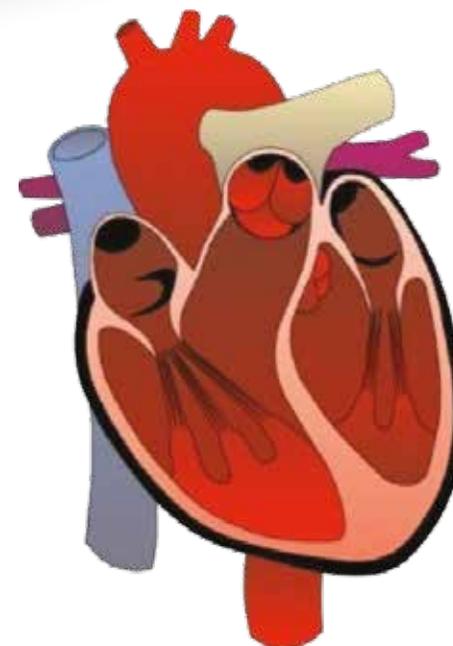
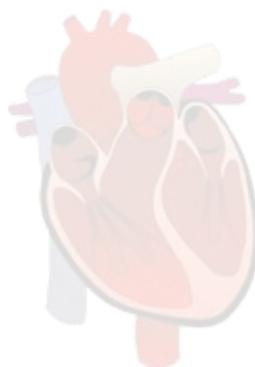
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www.legclub.org

Circulation and the Heart

What can go wrong with your Circulation?

Circulation and the heart



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The heart is a pump that behaves a little like a tap and hose. The stronger the tap (heart) is turned on, the higher the pressure within the hose (veins).

The heart forms different pressures within the arteries and medical conditions, exercise or stress can affect this pressure in different ways.

The heart pumps between 5-6 litres of blood around an adults body every minute (based on an average heart rate of 72 beats per minute + an average of 70 mls of blood pumped with each heart beat). This cardiac output is dependent upon on a variety of factors including physical activity and the return of blood through our arteries to the heart.

Blood pressure is the force the heart exerts against the walls of arteries as it pumps the blood out to the body.

Heart rate is the number of times the heart beats per minute.

To cope with the blood pressure, the artery walls contain tiny muscles to hold them in shape allowing them to become wider or narrower as the flow of blood demands.

Blood pressure forces the blood around the body where it collects oxygen and nutrients and is cleaned thoroughly. Before the veins return the blood back to the heart the oxygen and nutrients are dispersed into the tissues. The veins contain small one-way valves which permit blood to pass upwards towards the heart but prevent gravity pulling it back towards the feet. Fig. 1 shows how the circulation works – red is arteries and blue is veins.

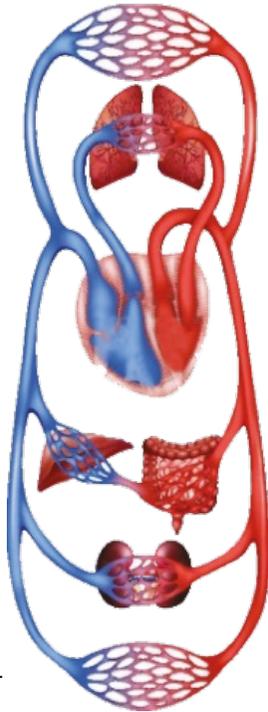


Fig. 1. Circulation

What goes wrong with the circulation?

The most likely problem to occur with circulation is failure of the one-way valves. This may happen due to an injury, a deep vein thrombosis that you may or may not have been aware of, or simply just wearing out caused by long periods of standing. When this happens the valves do not close (fig. 2), allowing blood to pass back through them.

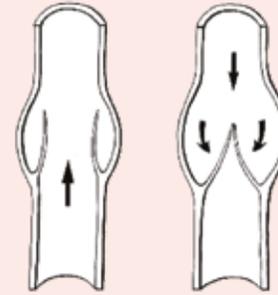
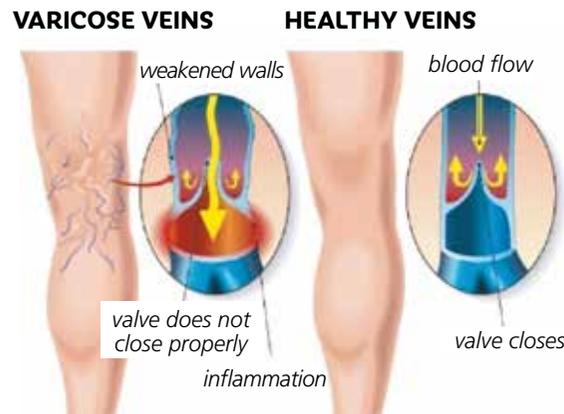


Fig. 2. Valves working

This can cause the ankles to swell or the veins to protrude (varicose veins) as they are abnormally full of fluid (fig. 3). This can then lead to venous leg ulcers developing which are difficult to heal.

Some people also have a blood flow problem with their arteries meaning less blood reaches the lower limbs. This puts the skin at a higher risk of breaking down as there will be less oxygen and nutrients available. This is known as Peripheral Arterial Disease (PAD) and one main cause of this could be smoking. Smoking harms nearly every organ in the body, including the heart and blood vessels.

Fig. 3. Varicose veins



Each cigarette smoked triggers a fight or flight reaction which immediately releases stored fats into the bloodstream (providing instant energy to fight any threat). Atherosclerosis is when plaque (a waxy type substance containing fats) builds up inside artery walls, gradually hardening and narrowing the arteries. This reduces the delivery of oxygen-rich blood to the legs and organs. The most common symptom of PAD is Intermittent Claudication. Pain, cramping, or aching occurs in the calf, thigh or buttock muscles when walking and is relieved by rest. Anyone with this symptom should discuss it with their GP, district nurse or visit their local Leg Club for a limb assessment.

20% of people with PAD are at risk of their toes or feet beginning to turn black because blood cannot reach its end point (critical ischaemia). 1-2% of people with critical ischemia require a limb amputation, while many more die within 5 years.

Diabetes is another potential cause of PAD and roughly 20% of people with PAD are diabetic.

Maintaining controlled and stable blood sugars and choosing correctly fitting shoes to prevent injury are very important and if necessary, can be discussed with your GP or district nurse.

What can I do to avoid PAD?

Stopping smoking can significantly reduce the risk of PAD and critical ischaemia but whether you are a smoker or not, with or without diabetes, visit you GP, district nurse or your local Leg Club.

They will advise on how to avoid the condition developing or worsening and can provide a full risk assessment. Log on to www.legclub.org/about-leg-clubs to find your nearest Leg Club (no appointment required) or telephone **01473 749565**.