LIFEBLOOD

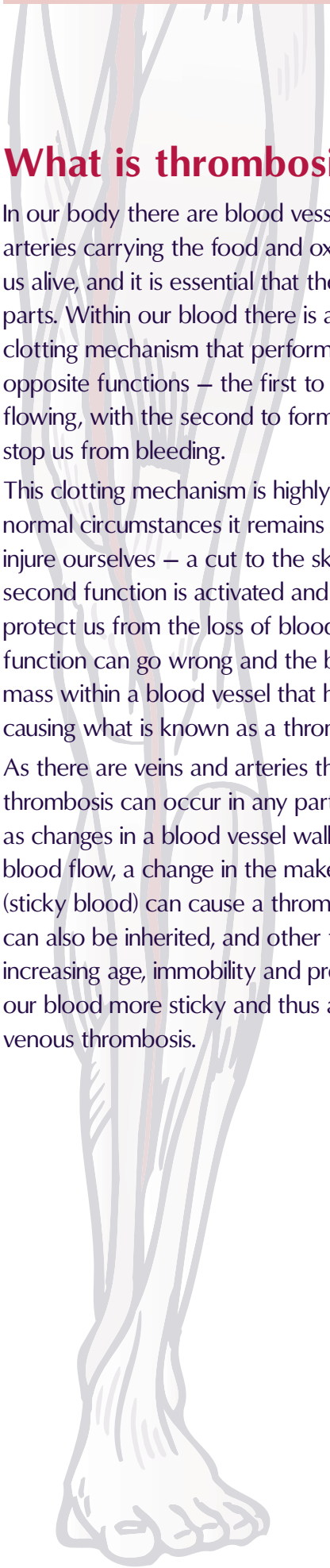
THE Thrombosis CHARITY

thrombosis /thrombŏsiss/ *n.* (*pl.* **thromboses** /-seez/) the coagulation of the blood in a blood-vessel or organ. □□ **thrombotic** /-bóttik/ *adj.* [mod.L f. Gk *thrombōsis* curdling

thrombus /t… /-bī/) a blood-clot formed in t… nd impeding blood flow. [mod.L f. G… od-clot]

Striving to...

‘Stop the clots’ through education & research



What is thrombosis?

In our body there are blood vessels called veins and arteries carrying the food and oxygen needed to keep us alive, and it is essential that these circulate to all parts. Within our blood there is a system known as the clotting mechanism that performs two vital, but opposite functions – the first to keep the blood flowing, with the second to form a 'plug' or clot to stop us from bleeding.

This clotting mechanism is highly effective and under normal circumstances it remains inactive. When we injure ourselves – a cut to the skin for example – the second function is activated and a clot is formed to protect us from the loss of blood. But sometimes this function can go wrong and the blood becomes a solid mass within a blood vessel that has not been cut, causing what is known as a thrombosis or clot.

As there are veins and arteries throughout our bodies a thrombosis can occur in any part of the body. As well as changes in a blood vessel wall and reduction in the blood flow, a change in the make up of the blood (sticky blood) can cause a thrombosis. Sticky blood can also be inherited, and other factors – such as increasing age, immobility and pregnancy – can make our blood more sticky and thus at greater risk of venous thrombosis.

What are the types of thrombosis?

A Blood clot in a vein is known as a **venous thrombosis.** Examples of this are deep vein thrombosis (DVT) when a blood clot occurs in a deep vein, usually in the leg; and retinal vein thrombosis when a blood clot occurs in the retinal vein of the eye.

Blood clots in arteries are known as **arterial thromboses.** Examples of this are myocardial infarction – also known as a heart attack – when a blood clot occurs in the artery of the heart; and cerebrovascular accident – also known as a stroke or brain attack – when a blood clot occurs in the brain.

An **embolism** is when a part of the clot 'breaks off' and travels around the body eventually blocking an artery. An example of this is a pulmonary embolism when part of the clot from a deep vein thrombosis breaks off, moves up the leg, through the heart and lodges in a lung artery or pulmonary artery. This process is known as embolisation, and the piece of clot is called an embolus.

Normally the valves in deep veins prevent blood from travelling back down the leg. Damage to these valves higher in the leg can cause increased pressure in the veins of the lower calf and ankle and cause swelling, pigmentation skin rashes and varicose ulcers. This is known as **post-phlebitic syndrome**.

- Up to one in every 1,000 are affected by venous thrombosis in the UK each year.
- Up to one in ten people who suffer a pulmonary embolism will die if not treated.
- Around one in every 1,000 women develops thrombosis during pregnancy, which can lead to related long-term health problems.
- One in three surgical patients can develop a DVT if no preventative measures are given.
- Venous thromboembolism – or VTE – is the most common cause of hospital deaths in the UK that can be prevented.

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What are the symptoms and risks of venous thrombosis?

The chart below sets out the types of venous thrombosis and the general symptoms and risk factors related to them.

VENOUS THROMBOSIS

	Deep Vein Thrombosis	Pulmonary Embolism	Post-Plebitic Syndrome
SYMPTOMS	● Pain, tenderness and swelling of the leg (usually the calf) ● Sometimes accompanied by discolouration with the leg a pale, blue or reddish purple colour ● If thrombosis is in the thigh veins (common during pregnancy) the whole leg may be swollen ● Can be asymptomatic	● Shortness of breath either severe and sudden or gradual onset ● Chest pain may be worse on inhalation ● Sudden collapse ● The symptoms of deep vein thrombosis may also be present	● Swelling of the ankle and leg, and a heavy ache in the calf and ankle, which is particularly noticeable after standing or walking and tends to get better by resting the leg in an elevated position ● Itchy skin rash ● Prominent veins ● Pigmentation ● Venous ulceration

RISK FACTORS

● Increasing age ● Immobility ● Heart attack or stroke ● Cancer and its treatment
● Pregnancy ● Long-distance travel ● Known thrombophilia ● Previous deep vein thrombosis (acquired or inherited)
● Use of the combined oral contraceptive pill and hormone replacement therapy
● A recent operation especially on hips or knees

When someone has a venous thrombosis, it is usually because more than one risk factor is present at any one time. Someone may have been born with an inherited thrombophilia, but will not have a thrombosis until other risk factors are present which increase the risk.

What are the symptoms and risks of arterial thrombosis?

Most commonly known for causing heart attack or stroke, arterial thrombosis is also responsible for peripheral vascular disease – thromboses in leg arteries.

Usually affecting the leg, it is common for the symptoms to affect one leg first, but the process is usually present in both legs. It is a disease that appears to affect more men than women. A person will experience pain when exercising due to the lack of blood flow in the leg muscles. Occasionally a clot may lodge in these narrow arteries resulting in the leg totally losing its blood supply, and becoming cold, numb and pale and losing its pulse. When this happens it is vital to restore the blood supply quickly to prevent the loss of the leg, and surgery is required to remove the clot.

Can thrombosis be prevented?

The risk of venous thrombosis is generally low unless more than one risk factor is present. Prevention therefore tends to focus on people with an increased or high risk, for example those with a thrombophilia or a family history of venous thrombosis.

Thromboprophylaxis is the practice of giving small doses of anticoagulants to people with an increased risk of venous thrombosis, in situations that further increase the risk, such as those undergoing hip and knee surgery.

Prevention of arterial thrombosis is aided by a healthy lifestyle – to prevent the disease from developing at all, or prevent it from recurring. Prevention involves both lifestyle changes – stop smoking, cut down on salt intake and eat a balanced diet with less fat and at least five portions of fruit and vegetables, increase physical activity and decrease alcohol intake – and medication such as antithrombotic drugs, cholesterol-lowering agents and antihypertensives.

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Thrombosis is often a 'silent' medical condition with no obvious signs or symptoms.

It doesn't discriminate and can affect people of any age or sex.

It can very easily be confused with less serious conditions – a clot in the leg can be mistaken for a sore leg muscle.

BUT thrombosis is a leading cause of death in the United Kingdom, yet most people have little or no understanding about its causes and effects and how it can be prevented.

It is for these reasons that **Lifeblood: The Thrombosis Charity** was formed.

There are a number of ways you can help Lifeblood: The Thrombosis Charity.

You can make a donation and help us to support vital research being carried out in the UK.

You can become a volunteer and help us to explain to others what we are doing. Or why not have some fun and organise a fundraising event in your area? You could host a coffee morning, organise a quiz night or take part in a flag day. If you have any time to spare, we would welcome your help.

For more information on how to help us Stop the Clots write to Lifeblood: The Thrombosis Charity, PO Box 1050, Spalding, PE12 6YF telephone 01406 381017 or visit our website www.thrombosis-charity.org.uk

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