

THROMBOSIS CAN AFFECT ANYONE

regardless of age, gender or ethnicity



WHAT IS THROMBOSIS?

In our body there are blood vessels called veins and arteries carrying the nutrients and oxygen needed to keep us alive. Within our bodies there is a system known as the clotting mechanism that performs two vital, but opposite, functions. The first is to keep the blood flowing, with the second to form a clot to stop us from bleeding.

This clotting mechanism is highly effective and under normal circumstances it stays 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 losing 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 happen in any part of the body. As well as the changes in the 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 be inherited, or caused by other factors. Getting older, not being able to move around much, and pregnancy can all make our blood more sticky and at greater risk of a clot.

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 forms in a deep vein, usually in the leg. A pulmonary embolism (PE) is when part of a DVT breaks off and travels through the veins to the heart and lungs where it can become lodged.

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 happens in the artery of the heart, and cerebrovascular accident - also known as a stroke or brain attack - when a blood clot happens in the brain.

An **embolism** is when 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-phlebotic syndrome**.



55% of all deaths from thrombosis are due to clots formed when someone is in hospital.



80% of all deep-vein thromboses are 'silent' - they have no symptoms.



Although clots are more common in older people they can, and do, affect young adults as well.

WHAT ARE THE SYMPTOMS OF VENOUS THROMBOSIS?

Below sets out the types of venous thrombosis and general symptoms related to them.

Deep-vein thrombosis:

- Pain, tenderness and swelling of the leg (usually the calf).
- Sometimes accompanied by discolouration of the leg (pale blue or reddish purple colour).
- If thrombosis affects the thigh veins (common in pregnancy), the whole leg may be swollen.
- But 80% of DVTs have no symptoms.

Pulmonary embolism:

- Shortness of breath, either severe and sudden or coming on gradually.
- Chest pain which may be worse when breathing
- Suddenly collapsing.
- The symptoms of deep-vein thrombosis may also be present

Post-phlebitic syndrome:

- 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 (colour change in the skin).
- Ulcers on the skin.

WHAT ARE THE RISK FACTORS FOR DEVELOPING VENOUS THROMBOSIS?

- Getting older
- Not being able to move about freely
- Heart attack or stroke
- Cancer and its treatment
- Pregnancy
- Long-distance travel
- Known thrombophilia
- Previous deep-vein thrombosis (acquired or inherited)
- Using the combined oral contraceptive pill or hormone replacement therapy
- A recent stay in hospital, especially for hip or knee surgery

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



WHAT ARE THE SYMPTOMS AND RISKS OF ARTERIAL THROMBOSIS?

- Arterial thrombosis is most commonly known for causing heart attack or stroke
- 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 men more 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 you from losing your leg, and surgery is needed to remove the clot.

CAN THROMBOSIS BE PREVENTED?

The risk of venous thrombosis is generally low unless more than one risk factor is present. As a result, prevention 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. This could be in a situation where there could be a further increase in risk, such as people having hip and knee surgery.

You can help to prevent arterial thrombosis by living a healthy lifestyle. This could be to prevent the disease from developing at all, or prevent it from coming back. Stop smoking, cut down on salt, and eat a balanced diet with less fat and at least five portions of fruit and vegetables a day, increase physical activity and reduce how much alcohol you have. You could also take medication such as antithrombotic drugs, cholesterol-lowering agents and antihypertensive medication.

Helping a lot by donating a little

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- **Make a donation** and help us to support vital research being carried out in the UK.
- **Become a volunteer** and help us 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 fun run.

For more information on how to help us

Write to: PO Box 1242, Chew Magna, Bristol, BS40 8WG

Email: admin@thrombosisuk.org

or visit our website: www.thrombosisuk.org

Links to support groups

Thrombosis UK (www.thrombosisuk.org)

Email: admin@thrombosisuk.org



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