Video transcript: A guide to hospital-acquired deep vein thrombosis and pulmonary embolism

[Sound: plane taking off. Fade through to narrator]

Many of you will have heard about the risk of deep vein thrombosis after long haul flights because of scare stories in the media.

Blood clots after flights are actually more rare than you might think, but what you may not realise is that blood clots after hospital admission are over 10 times more common than after long haul flights.

This information video is about the risks of blood clots after hospital admission, how to reduce the risks and how to recognise when a clot is forming.

Even before we knew about blood clots caused by plane travel and hospital admission, we knew that some things increased the risk of blood clots.

In the Second World War, during the Blitz, people took refuge in the London Underground and in air raid shelters. In 1940, the medical journal "The Lancet" reported that fatal blood clots in the lung called "pulmonary emboli" occurred in people who sat still or slept for prolonged periods of time in deck chairs. When people stopped sitting in deck chairs, the problem was reduced.

What is DVT?

So what is a deep vein thrombosis and what causes it?

A deep vein thrombosis or DVT is a blood clot forming in the deep veins of the body, usually the leg. If a piece of clot breaks off, it can travel to the lung and cause a pulmonary embolism or PE.

Causes

DVT and PE can be caused by reduced blood flow as a result of immobility and lack of movement in the legs, and also by damage or compression of the vein wall, for example during surgery.

Increased stickiness of the blood can be a side effect of oestrogen-containing contraceptives and the HRT pill. The blood also clots more easily in pregnancy as part of the body's natural preparation for delivery. The blood can also clot more easily with some types of cancer and cancer treatments.

People with a previous DVT or PE are at especially high risk of having further clots when immobile or unwell.

Sometimes, more than one person in a family can get blood clots because of genetic risk factors. When genetic or acquired changes in the blood occur which increase the risk of blood clots, we call this 'thrombophilia'.

Other things which increase the risk of DVT and PE include dehydration, medical conditions like heart failure, infections and inflammation.

As we get older the risk of blood clots steadily increases.

Being overweight is also a risk – for example if your body mass index or "BMI" is over 30.

What can be done to reduce the risk?

It is important to remain as mobile as possible. This helps with the movement of blood through the veins.

When resting, keep your legs elevated, rather than bent.

Keep well hydrated.

The hospital can also do things to reduce your risk.

All patients admitted to hospital should be assessed for their risks of getting DVT and PE.

This helps to decide on what extra treatments might be required.

For example, after surgery you might be fitted with graduated elastic compression socks. They are tighter at the ankle than the calf to encourage blood flow through the veins. They can be either above or below the knee. Not everyone is suitable for compression socks. For example, it depends on the shape of your leg and you must have intact skin and good arterial circulation to be able to wear them. It's important that they are fitted correctly with no creases. If you are sent home with compression socks, you can take them off at night and wash them regularly.

The most effective way to reduce DVT and PE during hospital admission is by using special medications to thin the blood. The most commonly used medicines are made from a naturally occurring blood thinner called heparin or are synthesised to work like heparin. These are given by injection under the skin and reduce the risk of DVT and PE by between 50% and 70%. For some patients, blood thinning tablets may also be used.

How do you know if you are developing DVT or PE?

This can be indicated by:

- developing pain and tenderness below the knee

- aching in the calf or thigh
- leg swelling
- changes in skin colour

Symptoms of PE include sudden shortness of breath, even at rest, and stabbing chest pain which is made worse even on shallow breathing.

If you are at home and you think you have had a DVT or PE, you can ring NHS direct, your emergency GP, or go straight to the accident and emergency department at your local hospital. If you are very unwell then you should call 999 for an ambulance.

We hope that you have found this information useful. If you have any questions, you can speak to your GP or, if in hospital, ask to speak to one of your medical team.

A useful website is that of Lifeblood: the Thrombosis Charity.

- Lifeblood website