

# Cancer and Blood Clots: Reducing the Risk

## **Patient information leaflet**

This leaflet explains what is deep vein thrombosis (DVT) and pulmonary embolism (PE) and why people with cancer are at higher risk of developing this type of blood clots (called cancer associated thrombosis or CAT).

It also explains how to reduce the risk of CAT.

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## What are blood clots (VTE)?

Your blood has a mechanism that normally forms a blood clot (plug) to stop the bleeding when you are injured (example: when you have a cut). Sometimes this mechanism can go wrong and forms a blood clot without an injury, which can block the vein and stop the blood flowing to the affected area.

This is called **venous thromboembolism (VTE)**, which can happen:

In a vein of the leg causing a deep vein thrombosis (**DVT**)

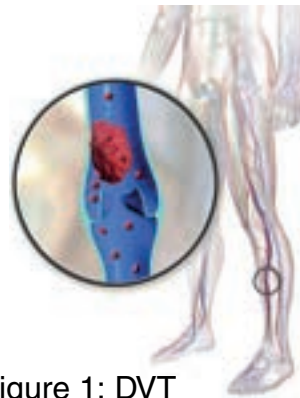


Figure 1: DVT

If the DVT becomes loose, it can travel to the lungs causing a pulmonary embolism (**PE**). This condition can be fatal.



Figure 2: PE

**DVT** can lead to post-thrombotic syndrome on the leg (permanent pain, difficulty walking, leg wounds that don't heal). **PE** when not fatal, can lead to chronic pulmonary hypertension (weak heart, chest pains, shortness of breath)

## Cancer Associated Thrombosis

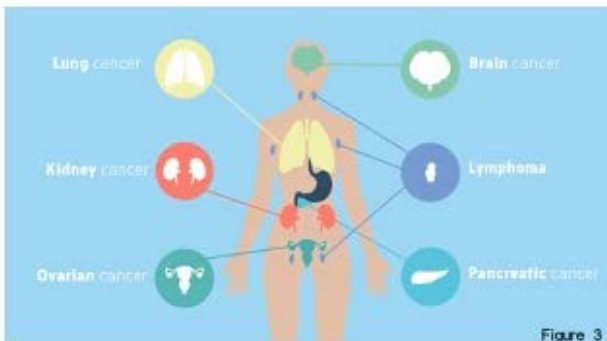
People with cancer are at higher risk of developing blood clots compared to someone who does not have cancer. This is because:

**Cancer cells** release chemicals that increase blood clotting. If the cancer has spread that also increases the risk

**Cancer treatments** such as surgery and chemotherapy, damage the vein's inner layer triggering blood clotting.

**Being less active** when you don't feel well, leading to a slower blood flow, which makes it easier for blood clots to form.

### Some types of cancer carry more risk of blood clots:



### Some cancer treatments carry more risk of blood clots:

- **Any surgery**
- **Chemotherapy** particularly cisplatin
- **Hormone therapy** such as tamoxifen and anastrozole
- **Immunomodulatory drugs** such as thalidomide and lenalidomide
- **Antiangiogenic therapies** such as bevacizumab and sunitinib
- **Supportive agents** such as erythropoietin and darbopoetin

## Other Risk Factors

The risk of VTE varies between people as other risk factors come into play.

The more risk factors, higher is the risk.

<b>VTE Risk Factors other than cancer</b> Do you have any of them?	Tick
Age over 60	
Being overweight	
Having disorders (e.g. diabetes, asthma, high cholesterol, heart disease, ... )	
Dehydration	
Pregnancy or 6 weeks post birth	
You or your family member having a blood clot in the past	
Taking the contraceptive pill or HRT	
Recent surgery, hospital admission, long journey (plane, car, train, bus)	
A significant reduction in your mobility, spending long periods housebound, in bed or chair	



Figure 4

It is a **good thing** to know your risk so you can do something about it.

**Having risk factors** does not mean you will have VTE.

**Not having risk factors** also does not mean you will not have VTE.

**We advise all people with cancer to follow the advice explained in this leaflet to reduce the VTE risk. There are lots of things you can do.**

## How to reduce the risk?

General recommendations for all patients with cancer:



Figure 5

## Stay Active



Figure 6

## Drink Plenty



## VTE Prevention Exercises

These exercises should be done at least 3 x a day

Download the free app: **Preventing VTE**  
It provides instructions on how to do this exercises correctly.



## How do you know if you have VTE?

Unfortunately, if you follow all of the advice to prevent VTE, you may still get it, even if you are at low risk.

**So keep an eye out for DVT and PE:**



Figure 8

**If you suspect you have a DVT call your GP as soon as possible!**



Figure 9

**This is an emergency!**  
**If you suspect you have a PE call 999 immediately!**

## **Useful information:**

**Buckinghamshire Hospitals Trust Patient Medicines  
Helpline: 01296 31 6197**

**Buckinghamshire Healthcare website:**

**<https://www.buckshealthcare.nhs.uk/For%20patients%20and%20visitors/patient-information-leaflets.htm>**

## **National Institute for Health and Care Excellence**

Venous thromboembolism in over 16s: reducing the risk of hospital-acquired deep vein thrombosis or pulmonary embolism

**<https://www.nice.org.uk/guidance/ng89>**

## **Use NHS services**

Reducing the risk of deep vein thrombosis (DVT) for patients in hospital.

## **Other useful websites**

**[www.nhs.uk/conditions/deep-vein-thrombosis](http://www.nhs.uk/conditions/deep-vein-thrombosis)**

**[www.patient.co.uk](http://www.patient.co.uk)**

## **Download the App**

Preventing VTE (found in Google Play)



## **Infection prevention & control message**

Please keep your hands clean:

- Use the hand sanitiser where available.
- Wash your hands well at every opportunity

**Figure 1:**

**[https://simple.wikipedia.org/wiki/Pulmonary\\_embolism](https://simple.wikipedia.org/wiki/Pulmonary_embolism)**

**Figure 3: <https://cancerclot.info>**

**Figures 2, 5, 6: [www.pixabay.com](http://www.pixabay.com)**

**Figure 7: <https://www.finavia.fi/>**

**Figures 8 and 9: <https://cancerclot.info/>**

**[www.buckshealthcare.nhs.uk](http://www.buckshealthcare.nhs.uk)**

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