

# Blood Clots and Cancer

## Venous Thromboembolism (VTE)



Symptom Management

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## A Guide for People with Cancer


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Write the contact numbers for your nurse, hospital, clinic or cancer centre here:



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## Information about Blood Clots and Cancer

Cancer and cancer treatments increase substances in your body that cause your blood to clot more than normal. This is why people with cancer are at higher risk of developing Venous Thromboembolism (VTE).

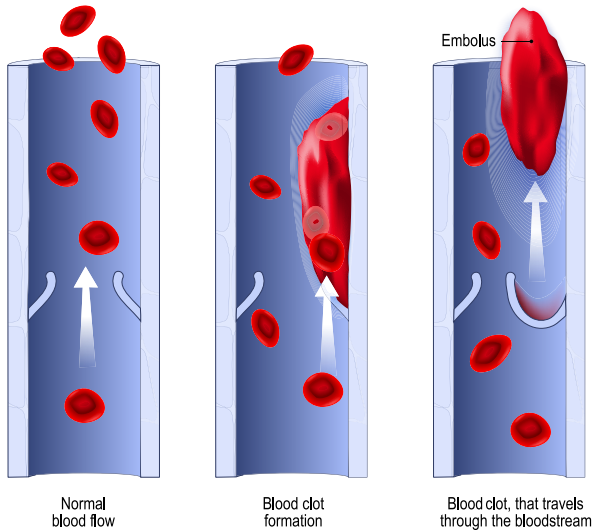
A **blood clot** happens when cells like platelets and fibrin stick together and form a gel-like mass. These cells help us stop bleeding when we get cut.

**A**

### What is Venous Thromboembolism?

**Venous Thromboembolism (VTE)** happens when a blood clot forms in the deep veins in the body or breaks off and travels to another place in the body.

When the blood clot breaks off from the vein wall, it is called an **embolus**. An embolus is dangerous because it can travel through the blood stream and get stuck in other areas of the body, like the lungs or the brain, causing



the blood circulation to be cut off from those areas. If it happens in the brain, it is called a **stroke** and in the lungs, it is called a **Pulmonary Embolus (PE)**.

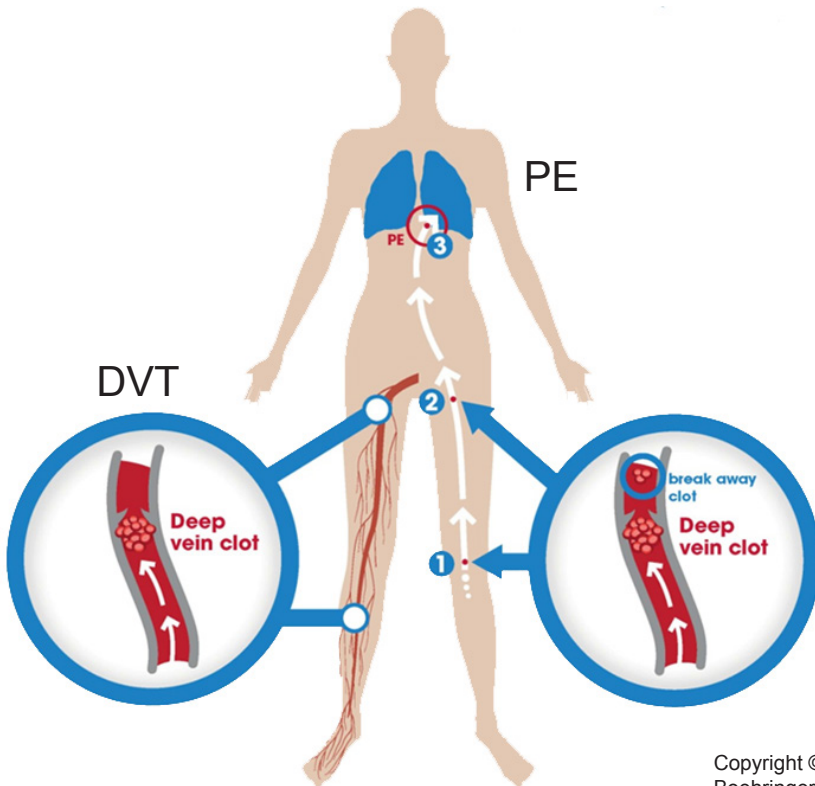
The most common blood clot in a vein is either a:  
**Deep Vein Thrombosis (DVT)** or **PE**.

### Deep Vein Thrombosis (DVT)

- A blood clot forms in a vein of the leg or pelvis
- It may partially or totally block the flow of blood

### Pulmonary Embolism (PE)

- A blood clot forms in the lungs or somewhere else in the body
- If the clot is from somewhere else, it travels through the bloodstream to the lungs, gets stuck there and cuts off the blood supply



**B**

**What are the signs and symptoms?**

**Deep Vein Thrombosis (DVT)**

- Pain or tenderness in the calf, behind the knee, along the inner thigh to groin
- Swelling (in one leg more than the other)
- A change in the colour of your skin (a blue, purple or red colour) in the area where the clot can be found
- The area feels warm to the touch

**Pulmonary Embolism (PE)**

- Shortness of breath or trouble breathing
- Chest pain or upper back pain, especially when you breathe
- Coughing up blood
- Increase in heart rate



If you have any of the above symptoms, go to the nearest Emergency room right away.

A PE can be **life-threatening**.

C

## What can cause VTE?

Many things can cause a blood clot. Some risk factors that may increase your chance of a blood clot are:

- Having cancer
- Having other medical conditions such as heart failure, inflammatory disorders
- Not being able to stand or walk for a long period of time. For example if you are hospitalized or have a long car or plane ride (greater than 5 hours)
- Having surgery
- Treatments such as chemotherapy and radiation
- Having a previous blood clot or clotting disorder
- Using estrogen hormone-based therapies or birth control pills, patches or rings
- Family history of clotting disorder



Being obese or smoking heavily can also be risk factors, if they are combined with anything on the list above.

## D

## How can I prevent VTE?

	<p><b>Exercise</b></p> <p>Weight-bearing exercises, such as walking or jogging, hiking, climbing stairs, dancing or playing racket sports can help stop clot formation. Exercise can also help you maintain a healthy weight.</p>
	<p><b>Move regularly</b></p> <p>If you have been sitting for a long time, stand up and take a break to stretch your legs. This is a good idea to do on long car or plane rides (greater than 5 hours).</p>
	<p><b>Drink 6 to 8 glasses of fluid every day</b></p>
	<p><b>Do not smoke or use tobacco products</b></p> <p>If you do, try to cut down.</p>
	<p><b>Make lifestyle changes</b></p> <p>These can generally improve your health and may slightly reduce your risk of blood clot.</p>
	<p><b>Wear compression stockings</b></p> <p>If your doctor has recommended or prescribed them, wear them daily. (see page 11).</p>
	<p><b>Maintain a healthy body weight</b></p> <p>Ask your doctor if you're not sure what a healthy weight is for you.</p>
	<p><b>Talk about your history</b></p> <p>If you are staying in the hospital or plan to have surgery, tell your doctor if you have a history of blood clots.</p>

**E**

**How is VTE diagnosed?**

It is important to make a quick diagnosis so that treatment can be started. If your doctor thinks you have a blood clot, he or she will ask you about your symptoms and examine your legs and lungs.

Sometimes you will need blood tests or imaging scans so your doctor can see the blood vessels. These may include:

- CT scan of the chest (for PE)
- Ultrasound of the leg (for DVT)
- V/Q scan (ventilation-perfusion scan) of the lung



*Picture of a patient having a CT scan.*



## Treatment for VTE

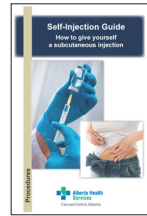
The main treatment used for VTE is a medicine that thins the blood. This is called a **blood thinner** or an **anticoagulant**. Blood thinners do not get rid of the clot, but make the blood thinner so it can flow easily around the clot. This way the clot does not break off and travel or move to another area of the body.



Blood thinners can be given as a pill, an injection under the skin, or an injection into a vein (intravenous or IV).

**Normally, people with cancer get an injection under the skin.**

If you need instructions on how to self-inject, ask for the Self-Injection booklet .



### F

## How do blood thinners work?

Blood thinners will not get rid of the clot, but will stop it from growing bigger. Over time, the body will absorb the clot. Blood thinners also help to stop new clots from forming.

**What type of blood thinner will I get and for how long?**

The type of blood thinner you get and for how long depends on:

- Why the clot formed (your risk factors, page 4)
- Your risk of bleeding

## What are the side effects of blood thinners?

If you are taking a blood thinner, you will **have a higher risk for bleeding**. Bleeding can be:

- Minor – such as with small cuts and scrapes. These will usually stop on their own if you apply pressure to the area.

- **Major** – see Section G (next page) for signs of major bleeding. **Stop your blood thinner and go to the nearest emergency department.**

Please check with your pharmacist for other, less common side effects and interactions with your other medicines.

### Important notes

- Take/inject your blood thinners at the **same time** each day. If you miss a dose, take it as soon as you remember. Skip the missed dose if it is almost time for your next dose. Do not use extra medicine to make up the missed dose.
- Even if you do not think it's important, tell all of your health care providers that you are on a blood thinner. This includes your dentist, podiatrist, gynecologist or other.
- If you need surgery, your doctor may stop your blood thinners for a little while to reduce your risk of bleeding during your surgery.



#### Did You Know?

Sometimes prescriptions, over-the-counter medicines, vitamins, anti-oxidants, or herbal medicines may increase your risk of bleeding or cause problems with the medication you take.

**Always tell your doctor what medicines or supplements you already take or plan to take.**

## Can everyone take blood thinners?

No. You cannot have a blood thinner if you:

- are actively bleeding
- had a recent major bleed
- need emergency surgery

Your doctor will talk to you about your options. In very specific circumstances, this may include a small surgical procedure that places a temporary “filter” to catch clots before they get to the lung.

**G**

## What are the signs of major bleeding?

Major bleeding is **serious**. These are the signs and symptoms to watch for:

- Blood in your stool (bright red or black and tarry looking)
- Blood in your urine (pink or brown colour)
- Blood in your vomit (may look like coffee grounds)
- Blood when you cough (foamy pink or red)
- Bruises or swelling for no reason
- Bleeding that lasts longer than 20 minutes



If you have major bleeding,  
**stop taking your medication and  
go to the nearest emergency room.**

## Other reasons to go to the **EMERGENCY** room immediately

- Sudden or severe headache, problems seeing, talking or walking.
- If you suffer a head injury, even if you cannot see any blood, you should be examined for internal bleeding.
- Signs of an allergic reaction such as itching or hives, swelling in your face or hands, swelling or tingling in your mouth or throat, chest tightness, or trouble breathing.

It is a good idea to wear a **medical alert bracelet** if you are taking a blood thinner.



## H

### What can I do to prevent bleeding?



Avoid using:

- ASA (acetylsalicylic acid), such as aspirin
- non-steroidal anti-inflammatory drugs (NSAID), such as ibuprofen, unless your doctor tells you it is okay to take these medications.



If you drink alcohol, make sure it is **in moderation** (please check with your health care provider for what that means for you).

**Alcohol with a blood thinner will increase your risk of bleeding.**

## I

**Compression Stockings**

Compression stockings are a way to help prevent blood clots from forming. You can use them with or without blood thinners. They are made of a special elastic fiber and help squeeze the blood up your leg. This squeezing action helps return blood to your heart, decreasing the chance of clots forming. They can also decrease swelling and pain in your leg.

It is important to have the right fit and weight of stocking, otherwise the stockings may not help prevent blood clots. Your doctor will prescribe one for you. You can buy these at medical supply stores.



If you are staying in hospital or going in for surgery, you may wear a **Sequential Compression Device (SCD)** (sometimes called Pneumatic Compression Stockings or PCS). These wrap around your legs and inflate on and off with air. This imitates walking and will help prevent blood clots, as they help to push the blood through your legs.

You should wear your SCD any time you are in bed or sitting in a chair. The SCD must be removed for walking.

## Long Term Side Effect

### J

### Post-Thrombotic Syndrome (PTS)

**Post-thrombotic syndrome** (PTS) is a long-term (chronic) side effect that can happen after a blood clot in your leg. The veins can become damaged or the clot can keep blood from going back to your heart.

#### What are the symptoms for PTS?

- Leg swelling that does not go away completely
- Pain, pressure, heaviness, tightness, cramping, tingling or leg tiredness that does not go away
- Skin that becomes hard, flaky, dry, and itchy
- Skin that becomes darker in colour
- Spider veins become visible
- Sores (skin breakdown or ulcers)

#### What do I do if I notice any of these symptoms?

- Make sure you have your leg checked by a health care provider. Your symptoms may be similar to when you first developed a blood clot. We need to make sure that it is PTS and not a new blood clot.

#### Is there anything I can do to prevent PTS?

- Prevent new or repeat blood clots in the same leg (see page 5)
- Take your blood thinners correctly
- Use compression stockings to reduce swelling and symptoms of PTS



## When should I go to the Emergency Room?

You should go immediately if:

- you think you have a **blood clot**.  
(see page 4 for signs and symptoms of a DVT or PE)
- you are on a blood thinner and have **major bleeding**.  
(see page 9 for signs of major bleeding)

Remember:



### Tell your health care providers

- the name of the blood thinner you are on
- when you had your last treatment

**Ask your doctor questions if you have any concerns about your condition or treatment.**



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**Find other Alberta cancer care resources  
at your cancer centre and online:**

[www.cancercontrolalberta.ca](http://www.cancercontrolalberta.ca)

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