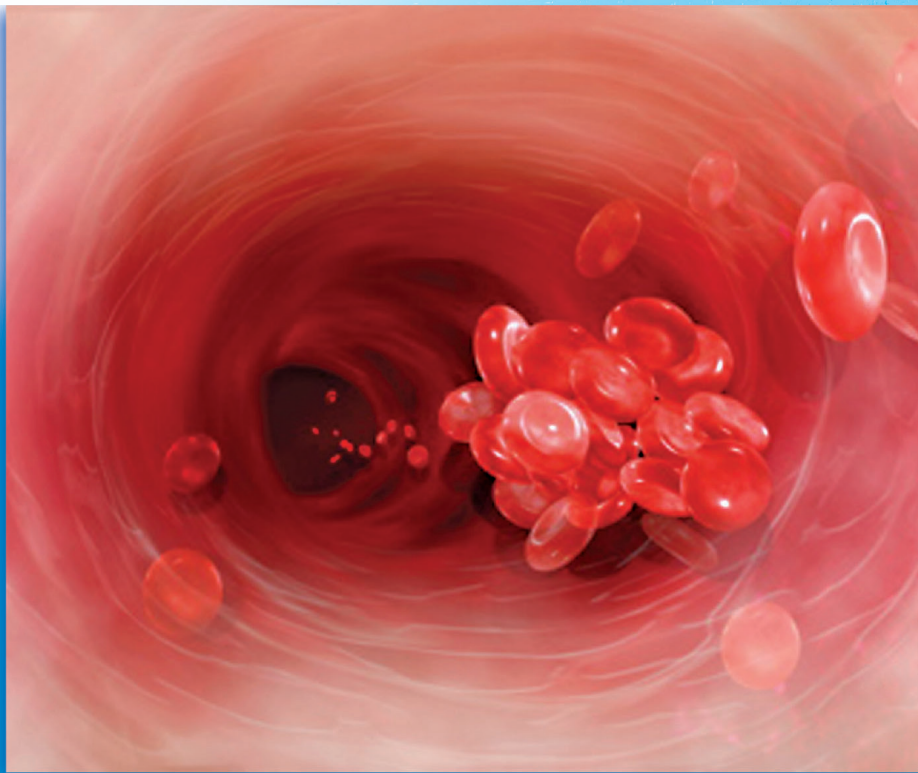


# VENOUS THROMBOEMBOLISM (VTE)



Hôpital général juif  
Jewish General Hospital



**CETAC**

Centre intégré  
universitaire de santé  
et de services sociaux  
du Centre-Ouest  
de l'Île-de-Montréal

**Québec** 





## CETAC

The Centre of Excellence in Thrombosis and Anticoagulation Care (CETAC) team consists of healthcare professionals, including doctors, nurses and pharmacists who specialize in treating patients with VTE, blood-clotting disorders and patients on blood thinners. We strongly believe that the best way of managing your VTE safely will come from a partnership between you and your CETAC team. We aim to prevent patients from developing VTE whenever possible, to offer patients with VTE the best scientifically approved treatment(s), to provide safe management of therapy with anticoagulants, and to provide patients and their families with information about VTE. We are also committed to advancing research and expanding our knowledge in the care and management of VTE. If you would be interested in participating in one of our research studies related to VTE or would like more information about thrombosis research studies at the Jewish General Hospital, please call the Thrombosis Research Office at 514-340-8222 ext.24817 or ext.23703

## Disclaimer:

Please note that the information contained in this booklet is not to be considered or accepted as an alternative to medical advice from a doctor or a healthcare provider, or for individual medical needs. All the information contained in this booklet is solely for information purposes and shall not be construed as a medical opinion. You should not delay seeking medical advice, disregard medical advice or deviate from any medical treatment because of the information contained in this booklet. Should you have any questions relating to the information contained in this booklet, you should consult a doctor. If you are sick, or for any emergency, you should consult a doctor or present yourself to an emergency room.

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## WHAT IS VENOUS THROMBOEMBOLISM (VTE)?



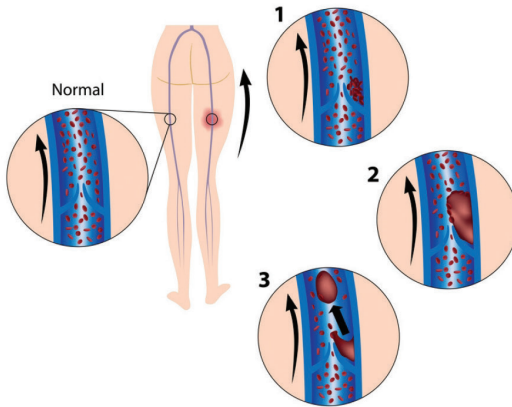
***Venous Thromboembolism (VTE) usually happens in any of the following ways:***

- ***A blood clot develops in the large veins of the legs, arms, or rarely the pelvis. This condition is called a Deep Vein Thrombosis (DVT).***
- ***A clot travels (embolizes) from the legs to the lungs. This condition is called a Pulmonary Embolism (PE).***
- ***A blood clot develops in the veins of different organs such as the stomach, liver, ovary, or kidney. This condition is less common than a PE or DVT and is called an Unusual Site DVT(USDVT)***

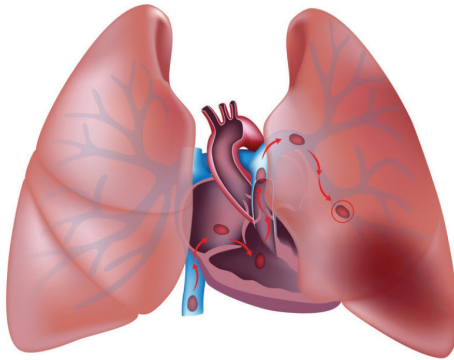
Blood clots found in the veins, like DVTs, PEs or USDVTs, differ from clots found in the arteries.

Arterial clots are the ones that can cause heart attacks and strokes, but clots in the veins cannot. Because clots in the veins and clots in the arteries are two very different conditions, the way that we treat and prevent these two conditions is also different. In this booklet we will only be talking about clots in the veins, or VTE.

### Deep Vein Thrombosis



### Pulmonary Embolism



## HOW COMMON IS VTE?

VTE is a fairly common condition:

- About 80,000 people are diagnosed with VTE in Canada each year
- A person's risk of developing VTE is a 1 in 1,000 chance per year and a 1 in 20 chance during one's lifetime. This risk may increase with certain factors in one's blood, illnesses or medications.

## WHAT CAUSES VTE?

There are many reasons, or risk factors, that increase one's chances of developing VTE. It is important to understand that some risks are more likely to cause VTE than others. Some examples of these risk factors are:

- ***Surgery such as hip and knee replacement, major abdominal and major pelvic surgery***
- ***Previous history of VTE Family history of VTE***
- ***Major trauma or an injury to the arm or leg Certain cancers and their treatments***
- ***Prolonged immobilization, such as bed rest for more than 3 days***
- ***Factors in your blood that can increase the chances of developing a blood clot, called "thrombophilia"***
- ***Pregnancy and the period of time after delivery***
- ***Oral contraceptive pill or hormone replacement therapy***
- ***Long distance travel (car/plane) for more than 6 hours***
- ***Obesity***



Most of the time, patients will receive blood-thinning medication (called an anticoagulant) as treatment for their VTE. It is important to understand that this anticoagulant will not get rid of the clot but rather will prevent it from getting larger. The anticoagulant will also prevent new harmful clots from forming. Anticoagulants work by prolonging the time it takes for your blood to clot.

**There are many anticoagulants that can be used. They can be in the form of:**

- Pills
- Injections
- Intravenous medication (while hospitalized)

**In certain cases, your doctor might decide that additional treatment is needed, which can include:**

- Clot-busting medications, called thrombolytics
- Procedure to remove the clot, called a thrombectomy
- Procedure to place a filter in the vena cava (large vein in the abdomen) that prevents blood clots in the legs from moving into the lungs



## WHO WILL BE FOLLOWING MY TREATMENT?

The Thrombosis Clinic is located on the 3<sup>rd</sup> floor, Pavilion D, Room B-304. Our doctors will follow you to look into why you might have developed VTE and make recommendations about how long you will need to be treated. The Thrombosis team is composed of doctors specializing in blood clotting (thrombosis physicians), blood (hematologists), breathing (respirologists), Thrombosis Clinical Nurse, pharmacists and researchers.

If you are prescribed warfarin (also called Coumadin®) pills to treat your VTE, the Anticoagulation Clinic team will monitor your antico-agation therapy. They will monitor your "INR" blood test results and adjust your dose of warfarin to ensure you are in the right target range. The Anticoagulation Clinic offers a teaching session to all new patients – be sure to attend and make sure you are well informed. This/these clinic appointments will be given to you prior to your discharge from either the Emergency Department or the hospital ward.

### **IMPORTANT**

- *If you live out of town or*
- *If your treatment will not be followed at the Jewish General Hospital, please:*

***Let the doctors and nurses know who will be treating you for your VTE so that they can arrange your follow-up appointment with that person before you are discharged.***

## **IN CASE I HAVE ANY QUESTIONS WHO CAN I CALL?**

***Thrombosis Clinic: 514-340-8222 extension 23444***

***Anticoagulation Clinic: 514-340-8222 extension 25070***

## **HOW LONG WILL MY TREATMENT LAST?**

The Thrombosis Clinic team will decide when is the safest time to stop taking the anticoagulants. For some people, treatment lasts for 3-6 months. Other people require longer treatment. That decision will be made together with you, taking the following information into consideration:

- Your past medical history
- Where your VTE occurred (for example, in your leg below your knee or above your knee, arm or elsewhere)
- The main reason(s) you may have developed VTE
- Test results, such as blood tests, a recent lung scan or CT scan



## WHAT IF I NOTICE SOME BLEEDING?

### Minor bleeding can include:

- Minor bleeding can include:
- Gum bleeding after brushing teeth
- Occasional small nosebleeds
- Bruising easily
- Bleeding after a minor cut that stops within a few minutes
- Menstrual bleeding that is a little heavier than usual

If you have minor bleeding: Minor bleeding can usually be managed at home, but if you're concerned, consult a healthcare professional. Also contact the Anticoagulation Clinic, and they will evaluate if your INR needs to be checked.

### Major bleeding can include:

- Urine that is red, dark, or coffee-colored
- Black, red or tarry stools
- Bleeding from the gums, nose or a cut that will not stop within 10 minutes of applying constant pressure
- Vomiting bright red or coffee-ground colored vomit
- Coughing up red-tinged secretions
- Sudden appearance of bruises for no reason, especially on your back, abdomen or chest
- Excessive menstrual bleeding
- Persistent severe headache
- Any other new or unusual symptoms<sup>9</sup>
- Bleeding

***Other signs or risks of bleeding can be less obvious but also require emergency medical care:***

- ***Any falls***
- ***Hitting your head or abdomen***
- ***Severe pain, such as a headache or stomachache***
- ***Unusual pain, swelling or discomfort***
- ***Vision changes or loss of vision***

**If you have major bleeding:**

Major bleeding can be dangerous. Contact your healthcare provider immediately or go to the Emergency Department

**HOW CAN I TELL IF I'M HAVING ANOTHER VTE?**

While you are on anticoagulant treatment, there is a very small chance of developing another VTE. There is also a chance of developing a new clot once your treatment is completed. Therefore, it is important to be able to recognize the common signs of VTE.

***New or sudden increase of these symptoms in either your legs or arms can be a sign of a DVT:***

- ***New or sudden warmth in your arm or leg***
- ***New pain in your arm or leg that doesn't get better***
- ***Swelling of your arm or leg***
- ***Redness or change in colour in your arm or leg***

***New or sudden increase of these symptoms can be a sign of a PE:***

- ***Sudden chest pain or a feeling of chest tightness***
- ***Sudden shortness of breath or difficulty breathing***
- ***Dizziness***
- ***Palpitations, coughing up blood***

**WHEN SHOULD I GO TO THE EMERGENCY DEPARTMENT?**

You need to go to the Emergency Department if you are having any new symptoms of a DVT or PE. You are having any warning signs of major bleeding.

## ARE THERE COMPLICATIONS OF DVT?

Yes, up to 50% of patients with a DVT develop a condition known as **Post Thrombotic Syndrome (PTS)**.

PTS is not dangerous, but it can be uncomfortable. It is usually associated with chronic pain, swelling, skin discolouration, sensation of pins and needles, or itching of the affected leg. In extreme cases, PTS can lead to ulcers or wounds on the affected leg.

## WHAT CAN BE DONE TO REDUCE THE SYMPTOMS OF THE POST THROMBOTIC SYNDROME (PTS)?

Special stockings, called Elastic Compression Stockings (ECS), help reduce the symptoms of PTS by improving the circulation in the veins of the legs and reducing swelling in the foot and leg. These stockings work by applying pressure mostly at the level of the ankle. The pressure then progressively decreases going up the leg. This helps push the blood back up towards the heart, which helps improve the circulation in the veins. Stockings are available in different pressure strengths (called compression). Your doctor at the Thrombosis Clinic will decide and prescribe the level of compression that is best for you. These stockings should be worn during the daytime on the leg with the DVT.

Stockings that are sold in the pharmacy, without a prescription, do not have the compression that you need to reduce symptoms of PTS. Compression stockings that are used to prevent PTS require a doctor's prescription and must be purchased at a medical supply store.

## ARE THERE COMPLICATIONS OF PE?

Yes, complications from PE are rare. However, in 2-4% of patients with a PE, a complication called Pulmonary Hypertension (PHT) can occur. This happens when the pressure in the artery of the lung increases and puts a strain on the right side of your heart.

Symptoms of PHT can include worsening shortness of breath, generalized fatigue, chest pain, near fainting and fainting. Other symptoms can be swelling of both ankles and legs, a swollen abdomen and a sensation of feeling full.

## WHAT IS THE TREATMENT FOR PULMONARY HYPERTENSION?

Treatments for pulmonary hypertension can vary, depending on the patient's condition. Treatment usually involves continuing treatment with anticoagulants. In some cases, surgical removal of the chronic clot(s) tissue in the lung is needed. This surgery is called a pulmonary endar-terectomy.

## WHAT CAN BE DONE TO REDUCE THE RISK OF PULMONARY HYPERTENSION?

Quitting smoking, maintaining a healthy body weight, and taking the anticoagulant treatment exactly as prescribed are all good ways of reducing the risk of Pulmonary Hypertension.

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### HOW TO REDUCE THE RISK OF HAVING ANOTHER VTE?

Because VTE can occur with little or no warning, the best thing that we can do is try to prevent it from happening again. Here are some helpful tips on how to reduce your chance of getting another VTE:

- Take your anticoagulant exactly as prescribed
- Maintain a healthy body weight
- Stay active! This helps blood circulation and maintenance of a healthy body weight
- Stop smoking

### THE BEST PREVENTION IS KNOWLEDGE!

**We recommend that:**

- If you take warfarin attend the warfarin teaching class held every week in the Anticoagulation Clinic
- Speak to your doctor or nurse when you have any questions or concerns
- Go onto our website & address [www.cetacmtl.ca](http://www.cetacmtl.ca)

### IF YOU ARE TRAVELLING FOR MORE THAN 5 HOURS BY CAR OR PLANE MAKE SURE:

- To inform your Thrombosis Clinic doctor that you are going on a long trip
- Take the time to walk every couple of hours
- Stay well hydrated: drink plenty of liquid, avoid coffee, tea or alcoholic beverages
- Wear compression stockings (if prescribed)
- Improve your blood circulation while sitting by doing leg and foot exercises (rotate your feet up and down, bend and straighten your legs)



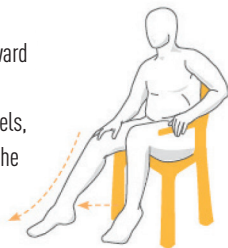
## WHAT EXERCISES CAN HELP REDUCE THE RISK OF ANOTHER VTE WHEN TRAVELLING? THESE CAN BE ESPECIALLY HELPFUL IF YOU'RE TRAVELLING FOR 5 HRS OR MORE.

**IF YOU RECENTLY HAD A HIP OR KNEE SURGERY, BEFORE DOING ANY EXERCISES YOU SHOULD DISCUSS THEM WITH YOUR PHYSIOTHERAPIST OR SURGEON FIRST.**

### Movements you can do while seated

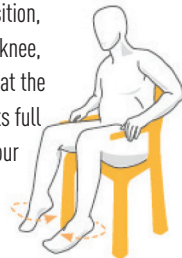
#### Foot Pumps

Keeping your heels on the floor, lift the front of your feet toward you. Hold for three seconds then flatten your feet. Then lift your heels, keeping the balls of your feet on the floor, hold for three seconds and repeat.



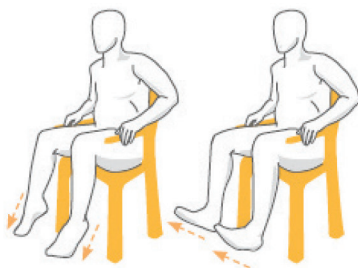
#### Knee Extension

While in a seated position, straighten your right knee, increasing the space at the back of the knee to its full range. Repeat with your left knee.



#### Ankle Circles

Lift your feet off the floor and twirl them as if drawing circles with your toes. Continue for 15 seconds then reverse direction and repeat.



## HOW TO REDUCE THE RISK OF HAVING ANOTHER VTE?

### WHERE CAN I GET ADDITIONAL INFORMATION ON VTE AND ANTICOAGULATION?

- The teams at the Thrombosis Clinic and/or Anticoagulation Clinic can be a great source of information.
- If you are treated with warfarin, be sure to attend the Anticoagulation Clinic's teaching session.
- You can attend this session as many times as you like! Please call on Tuesday morning to confirm.
- The Internet is also a way of getting additional information online. Below are some websites that we recommend.

#### Centre of Recommended website:

*Centre of Excellence in Thrombosis & Anticoagulation Care at  
[www.cetacmtl.ca](http://www.cetacmtl.ca)*





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