

- If your blood clot occurred after a short-term risk (for example, surgery), your treatment time may be shorter.
- If you've had blood clots before, your treatment time may last longer.
- If you have certain other illnesses, such as cancer, you may need to take blood thinners for as long as you have the illness.

The most common side effect of blood thinners is bleeding. This happens if the medicine thins your blood too much. This side effect can be life threatening. Sometimes, the bleeding is internal (inside your body). People treated with blood thinners usually receive regular blood tests to measure their blood's ability to clot. These blood tests are called PT and PTT tests. These tests also help your doctor make sure you're taking the right amount of medicine. Call your doctor right away if you have easy bruising or bleeding. This may be a sign that your medicines have thinned your blood too much.

Thrombin Inhibitors

These medicines interfere with the blood clotting process. They're used to treat blood clots in patients who can't take heparin.

Thrombolytics

These medicines are given to quickly dissolve a blood clot. They're used to treat large blood clots that cause severe symptoms. Because thrombolytics can cause sudden bleeding, they're used only in life-threatening situations.

Other Types of Treatment

Vena Cava Filter

A vena cava filter is used if you can't take blood thinners or if you're taking blood thinners and still developing blood clots. The filter is inserted inside a large vein called the vena cava. The filter catches blood clots that break off in a vein before they move to the lungs. This prevents pulmonary embolism. However, it doesn't stop new blood clots from forming.

Graduated Compression Stockings

These stockings can reduce the swelling that may occur after a blood clot has developed in your leg. Graduated compression stockings are worn on the legs from the arch of the foot to just above or below the knee. These stockings are tight at the ankle and become looser as they go up the leg. This creates gentle pressure up the leg. The pressure keeps blood from pooling and clotting. These stockings should be worn for at least a year after DVT is diagnosed.

How Can Deep Vein Thrombosis Be Prevented?

You can take steps to prevent deep vein thrombosis (DVT). If you're at risk for DVT or pulmonary embolism (PE), you can help prevent the condition by:

- Seeing your doctor for regular checkups.
- Taking all medicines your doctor prescribes.
- Getting out of bed and moving around as soon as possible after surgery or illness. This lowers your chance of developing a blood clot.
- Exercising your lower leg muscles during long trips. This helps prevent a blood clot from forming.

If you've had DVT or PE before, you can help prevent future blood clots by following the above steps and:

- Taking all medicines your doctor prescribes to prevent or treat blood clots
- Following up with your doctor for tests and treatment
- Using compression stockings as your doctor directs to prevent swelling in your legs from DVT
- Contact your doctor at once if you have any signs or symptoms of DVT or PE.

Travel Tips

Your risk of developing DVT while traveling is small. The risk increases if the travel time is longer than 4 hours, or if you have other risk factors for DVT. During long trips, it may help to:

- Walk up and down the aisles of the bus, train, or airplane. If traveling by car, stop about every hour and walk around.
- Move your legs and flex and stretch your feet to encourage blood flow in your calves.
- Wear loose and comfortable clothing.
- Drink plenty of fluids and avoid alcohol.

If you're at increased risk for DVT, your doctor may recommend wearing compression stockings during travel or taking a blood-thinning medicine before traveling.

Living With Deep Vein Thrombosis

If you've had a deep vein blood clot, you're at greater risk for another one. During treatment and after, it's important to:

- Take steps to prevent deep vein thrombosis (DVT). (See "How Can Deep Vein Thrombosis Be Prevented?")
- Check your legs for signs and symptoms of DVT. These include swollen areas, pain or tenderness, increased warmth in swollen or painful areas, or red or discolored skin on the legs.
- Contact your doctor right away if you have signs and symptoms of DVT.

Ongoing Health Care Needs

Medicines that thin your blood and prevent blood clots are used to treat DVT. These medicines can thin your blood too much and cause bleeding (sometimes inside the body). This side effect can be life threatening.

Bleeding may occur in the digestive system or the brain. Signs and symptoms of bleeding in the digestive system include:

- Bright red vomit or vomit that looks like coffee grounds
- Bright red blood in your stools or black, tarry stools
- Pain in your abdomen

Signs and symptoms of bleeding in the brain include:

- Severe pain in your head
- Sudden changes in your vision
- Sudden loss of movement in your arms or legs
- Memory loss or confusion

If you have any of these signs or symptoms, get treatment right away. You also should seek treatment right away if you have a lot of bleeding after a fall or injury. This could be a sign that your DVT medicines have thinned your blood too much. Talk to your doctor before taking any medicines other than your DVT medicines. This includes over-the-counter medicines. Aspirin, for example, also can thin your blood. Taking two medicines that thin your blood may raise your risk for bleeding. Ask your doctor about how your diet affects these medicines. Foods that contain vitamin K can change how warfarin (a blood-thinning medicine used to treat DVT) works. Vitamin K is found in green, leafy vegetables and some oils, like canola and soybean oil. Your doctor can help you plan a balanced and healthy diet.

Discuss with your doctor whether drinking alcohol will interfere with your medicines. Your doctor can tell you what amount of alcohol is safe for you.

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DEEP VEIN THROMBOSIS DVT

DVT Key Points

- Deep vein thrombosis (DVT) is a blood clot that forms in a vein deep in the body. Most deep vein blood clots occur in the lower leg or thigh. They also can occur in other parts of the body.
- A blood clot in a deep vein can break off, travel through the bloodstream to the lungs, and block blood flow. This condition is called pulmonary embolism (PE). PE is a very serious condition that can cause death.
 - Blood clots can form in your body's deep veins when:
 - Damage occurs to a vein's inner lining
 - Blood flow is sluggish or slow
 - Your blood is thicker or more likely to clot than usual
- Many factors increase your risk for DVT. People who have had DVT before or have more than one risk factor are at increased risk for the condition.
- Only about half the people with DVT have symptoms. These symptoms occur in the leg affected by the deep vein clot. They include swelling of the leg or along a vein in the leg, pain or tenderness in the leg, increased warmth in the area of the leg that's swollen or in pain, and red or discolored skin on the leg.
- Other symptoms may relate to PE. These may include unexplained shortness of breath, pain with deep breathing, and coughing up blood.
- Your doctor will diagnose DVT based on your medical history, a physical exam, and the results from tests. He or she will identify your risk factors and rule out other causes for your symptoms.
- DVT is treated with medicines that thin the blood, interfere with the blood clotting process, and dissolve blood clots. Other treatments include filters to catch blood clots and compression stockings that prevent blood from pooling and clotting.
- You can take steps to prevent DVT. See your doctor regularly. Follow your treatment plan as your doctor prescribes, stay active if possible, and exercise your lower leg muscles during long trips.
- Contact Dr. Longobardi at once if you have any symptoms of DVT or PE.

Please be sure to read the whole pamphlet on DVT for a full explanation.

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DEEP VEIN THROMBOSIS DVT

What is Deep Vein Thrombosis?

Deep vein thrombosis (throm-BO-sis), or DVT, is a blood clot that forms in a vein deep in the body. Blood clots occur when blood thickens and clumps together.

Most deep vein blood clots occur in the lower leg or thigh. They also can occur in other parts of the body.

A blood clot in a deep vein can break off and travel through the bloodstream. The loose clot is called an embolus. When the clot travels to the lungs and blocks blood flow, the condition is called pulmonary embolism (PULL-mun-ary EM-bo-lizm), or PE.

PE is a very serious condition. It can damage the lungs and other organs in the body and cause death.

Blood clots in the thigh are more likely to break off and cause PE than blood clots in the lower leg or other parts of the body.

Blood clots also can form in the veins closer to the skin's surface. However, these clots won't break off and cause PE.

Other Names for Deep Vein Thrombosis

- Blood clot in the legs.
- Venous thrombosis.
- Venous thromboembolism (VTE). This term is used for both deep vein thrombosis and pulmonary embolism.

What Causes Deep Vein Thrombosis?

- Blood clots can form in your body's deep veins when:
- Damage occurs to a vein's inner lining. This damage may result from injuries caused by physical, chemical, and biological factors. Such factors include surgery, serious injury, inflammation, or an immune response.
- Blood flow is sluggish or slow. Lack of motion can cause sluggish or slowed blood flow. This may occur after surgery, if you're ill and in bed for a long time, or if you're traveling for a long time.
- Your blood is thicker or more likely to clot than usual. Certain inherited conditions (such as factor V Leiden) increase blood's tendency to clot. This also is true of treatment with hormone replacement therapy or birth control pills.

Who Is At Risk for Deep Vein Thrombosis?

Many factors increase your risk for deep vein thrombosis (DVT). They include:

- A history of DVT.
- Disorders or factors that make your blood thicker or more likely to clot than normal. Certain inherited blood disorders (such as factor V Leiden) will do this. This also is true of treatment with hormone replacement therapy or using birth control pills.
- Injury to a deep vein from a broken bone or other trauma.
- Slow blood flow in a deep vein from lack of movement. This may occur after surgery, if you're ill and in bed for a long time, or if you're traveling for a long time.
- Pregnancy and the first 6 weeks after giving birth.
- Recent or ongoing treatment for cancer.

- A central venous catheter. This is a tube placed in vein to allow easy access to the bloodstream for medical treatment.
- Being older than 60 (although DVT can occur in any age group).
- Being overweight or obese.
- Your risk for DVT increases if you have more than one of the risk factors listed above.

What Are the Signs and Symptoms of Deep Vein Thrombosis?

The signs and symptoms of deep vein thrombosis (DVT) may be related to DVT itself or to pulmonary embolism (PE). See your doctor right away if you have symptoms of either. Both DVT and PE can cause serious, possibly life-threatening complications if not treated.

Deep Vein Thrombosis

Only about half of the people with DVT have symptoms. These symptoms occur in the leg affected by the deep vein clot. They include:

- Swelling of the leg or along a vein in the leg
- Pain or tenderness in the leg, which you may feel only when standing or walking
- Increased warmth in the area of the leg that's swollen or in pain
- Red or discolored skin on the leg

Pulmonary Embolism

Some people don't know they have DVT until they have signs or symptoms of PE.

Symptoms of PE include:

- Unexplained shortness of breath
- Pain with deep breathing
- Coughing up blood
- Rapid breathing and a fast heart rate also may be signs of PE.

How Is Deep Vein Thrombosis Diagnosed?

Your doctor will diagnose deep vein thrombosis (DVT) based on your medical history, a physical exam, and the results from tests. He or she will identify your risk factors and rule out other causes for your symptoms.

Medical History

To learn about your medical history, your doctor may ask about:

- Your overall health
- Any prescription medicines you're taking
- Any recent surgeries or injuries you've had
- Whether you've been treated for cancer

Physical Exam

During the physical exam, your doctor will check your legs for signs of DVT. He or she also will check your blood pressure and your heart and lungs.

Diagnostic Tests

You may need one or more tests to find out whether you have DVT. The most common tests used to diagnose DVT are:

Ultrasound. This is the most common test for diagnosing deep vein blood clots. It uses sound waves to create pictures of blood flowing through the arteries and veins in the affected leg.

A D-dimer test. This test measures a substance in the blood that's released when a blood clot dissolves. If the test shows high levels of the substance, you may have a deep vein blood clot. If your test is normal and you have few risk factors, DVT isn't likely.

Venography (ve-NOG-ra-fee). This test is used if ultrasound doesn't provide a clear diagnosis. Dye is injected into a vein, and then an x ray is taken of the leg. The dye makes the vein visible on the x ray. The x ray will show whether blood flow is slow in the vein. This may indicate a blood clot.

Other less common tests used to diagnose DVT include magnetic resonance imaging (MRI) and computed tomography (CT) scanning. These tests provide pictures of the inside of the body. You may need blood tests to check whether you have an inherited blood clotting disorder that can cause DVT. You may have this type of disorder if you have repeated blood clots that can't be linked to another cause, or if you develop a blood clot in an unusual location, such as a vein in the liver, kidney, or brain. If your doctor thinks that you have pulmonary embolism (PE), he or she may order extra tests, such as a ventilation perfusion scan (V/Q scan). The V/Q scan uses a radioactive material to show how well oxygen and blood are flowing to all areas of the lungs.

How Is Deep Vein Thrombosis Treated?

Goals of Treatment

The main goals of treating deep vein thrombosis (DVT) are to:

- Stop the blood clot from getting bigger
- Prevent the blood clot from breaking off and moving to your lungs
- Reduce your chance of having another blood clot

Medicines

Medicines are used to prevent and treat DVT.

Anticoagulants

Anticoagulants (AN-te-ko-AG-u-lants) are the most common medicines for treating DVT. They're also known as blood thinners.

These medicines decrease your blood's ability to clot. They also stop existing blood clots from getting bigger. However, blood thinners can't break up blood clots that have already formed. (The body dissolves most blood clots with time.)

Blood thinners can be taken as either a pill, an injection under the skin, or through a needle or tube inserted into a vein (called intravenous, or IV, injection).

Warfarin and heparin are two blood thinners used to treat DVT. Warfarin is given in pill form. (Coumadin® is a common brand name for warfarin.) Heparin is given as an injection or through an IV tube. There are different types of heparin. Your doctor will discuss the options with you.

Your doctor may treat you with both heparin and warfarin at the same time. Heparin acts quickly. Warfarin takes 2 to 3 days before it starts to work. Once the warfarin starts to work, the heparin is stopped.

Pregnant women usually are treated with heparin only, because warfarin is dangerous during pregnancy.

Treatment for DVT with blood thinners usually lasts from 3 to 6 months. The following situations may change the length of treatment.