

Deep vein thrombosis, or DVT, is a blood clot that forms in a vein deep within a muscle. It can occur in any vein, but most often occurs in leg veins. In some patients with DVT, parts of the clot can break off and move to other blood vessels in other parts of the body lodging in the lungs or other areas. When it lodges in the lungs, it's called pulmonary embolism, a condition that can be life-threatening.



Symptoms of DVT

Symptoms of DVT usually occur in one leg. They may include:

- Pain or tenderness
- Swelling
- A warm feeling in the leg
- Changes in skin color/redness in the leg
- Swelling that worsens with standing

Causes of DVT

Several factors contribute to the development of DVT. Other conditions that increase the tendency of blood to clot include recent surgery, nonsurgical trauma, previous DVT, prolonged immobilization, cancer, leg paralysis, obesity and estrogen or oral contraceptive use. DVT is more common in people over the age 60. Some people have a genetic tendency towards blood clotting. There are tests your doctor can do to determine if you are at risk for developing blood clots.

How are DVTs treated?

Deep vein thrombosis is treated to prevent clots from moving and lodging in a more dangerous location, or causing more serious complications.

Usually, DVT is treated with anticoagulant medications. These drugs are usually more than 90 percent effective at preventing another clot. If you cannot use these medications or they are not working, you may have a filter inserted into your vein to prevent clots from moving.

In rare cases, surgery is performed. Your doctor will discuss treatment options with you and tailor a treatment plan to your needs.

Your doctor may prescribe an anticoagulant medication. You may have heard anticoagulation medication referred to as blood thinners. However, anticoagulants do not make blood thinner. They are medications that make the blood less able to clot. Over time, existing clots will be absorbed by your body.

Heparin is one of these medications. It is given continuously through a vein for several days. Your doctor will closely monitor the effects of this drug with blood tests to see how fast your blood is clotting. You usually take these medications for about one week.

A type of medication called low molecular weight heparin is also used to prevent and treat DVTs. Examples of these medications are enoxaparin (Lovenox[®]), dalteparin (Fragmin[®]) and tinzaparin (Innohep[®]). These medications are given by injection under the skin. Your doctor may prefer to use these medications because you can take them at home. These drugs have been shown to be as effective as the IV heparin.

Another type of anticoagulant is warfarin (Coumadin[®]), which is given in pill form. It is not totally effective until taken for several days; therefore, it is given with heparin or low molecular weight heparin in the first few weeks. The length of Coumadin therapy is at least three to six months; perhaps longer depending on your history and the extent of your clot.

When to call your doctor

Some minor discomfort may persist in the affected area for several weeks to months. Measured support stockings can help this condition. This is known as post-phlebotic pain and should be discussed with your doctor.

With close monitoring, complications from either DVT or the medications are infrequent. Call your doctor if you experience any of the following:

Complications of DVT

- Dizziness, or visual or speech problems
- Significantly worsened tender swelling without obvious cause—especially in any part of your leg
- Pain and discomfort in the affected limb that worsens with time
- Weakness or numbness/tingling in limbs
- Shortness of breath or other breathing difficulties
- Severe and prolonged headaches
- Acute chest pain

Complications of the drug therapy

- Prolonged nosebleeds
- Frequent bruises or bruises that continue to enlarge
- Coughing up blood
- Bleeding heavily from your gums after brushing your teeth
- Prolonged bleeding from small cuts
- Heavy or prolonged menstrual periods
- Vomiting red blood or material that looks like coffee grounds
- Bowel movements that are loose or black or that contain blood
- Urine that contains red blood or is dark brown
- Headache or confusion after a serious fall or injury to the head

Keep in mind

- Take pain medication as needed and ordered by your doctor.
- Limit your activity as recommended by your doctor. He or she may restrict your travel immediately following the diagnosis.
- Elevate the affected area on pillows.
- Take anticoagulants as prescribed by your doctor.
- In the first few weeks of therapy, remember not to stand or sit for more than one hour at a time. Do not cross your legs at the knees. When possible, elevate your legs while sitting.
- Your doctor may suggest the use of elastic stockings or Ace[®] bandage wraps if your activity is restricted. Discuss these options with your doctor. If you do wear stockings, they should be removed at least twice a day. Signs of irritation and calf tenderness should be reported to your doctor.

Superficial thrombophlebitis

Blood clots can also occur in the veins that are close to the skin. This is called superficial thrombophlebitis. Superficial thrombophlebitis is not as serious as deep vein thrombosis, because these clots usually do not break off and move to other parts of the body. Your doctor may recommend self-care steps such as applying heat to the area, elevating your leg and taking a nonsteroidal anti-inflammatory drug. The condition usually improves within a week or two.

This brochure is based on guidelines developed by a team of health care experts at the Institute for Clinical Systems Improvement (ICSI), of which Park Nicollet Health Services is an active member. It will be reviewed and updated on a regular basis as scientific evidence changes. This material is for informational purposes only and is not intended to be a substitute for professional medical advice, diagnosis or treatment.

Managing Deep Vein Thrombosis