

Deep Vein Thrombosis (DVT)

Deep vein thrombosis (DVT) is a condition in which a blood clot (thrombus) forms in a deep vein in the body. The blood clot can partially or totally block blood flow in the vein. Deep vein thrombosis occurs most often in the leg veins, but may also occur in the veins of the arms. The blood clot can break off and travel to the lungs, resulting in a pulmonary embolus, which can be life-threatening. A hospital stay with a decreased level of activity increases your DVT risk.

If you have questions or concerns about DVT, please ask your physician or nurse.

Risk factors

Risk factors for DVT include:

- Immobility, such as long car or airplane trips
- Recent surgery
- Stroke
- Injury to a vein
- Pregnancy
- Estrogen (birth control or hormone replacement therapy)
- Coagulation disorders (tendency for the blood to clot)
- Cancer
- Older than 60 years of age
- History of DVT or pulmonary embolus
- Obesity
- Heart failure
- Smoking

Symptoms

The symptoms depend on the size and location of the blood clot and can include:

- Sudden swelling in one leg or arm
- Warmth or redness of the skin
- Bluish discoloration of the skin
- Limb weakness

In some cases, you may have no symptoms.

Prevention

Hospital

In the hospital, all patients are at risk for DVT. Steps will be taken to help prevent blood clots from forming. These may include:

- Low-dose “blood-thinning” medicines.
- DVT prevention boots. These boots gently squeeze your calves to promote blood flow to the heart.

Treatment

Medicines

Anticoagulants or “blood thinners” may be used to prevent a new blood clot from forming or an existing blood clot from getting larger. These medicines do not dissolve blood clots that have already formed.

The blood thinners may be given in the following ways:

- IV (into the vein) line
- Injection into the skin
- By mouth (orally)

At first, blood thinners are often given in 2 forms. They are given through IV or by injection, along with the oral medicine warfarin. Then, warfarin may be given alone. In some cases, you may be on warfarin along with injections at the same time.

Your physician will use blood tests to select the correct dose of medicine. These blood tests are called the international normalized ratio (INR) or prothrombin time (PT). Newer oral medications are also now available to treat DVT. These medications are called direct oral anticoagulants (DOACs) and do not require testing of the INR or PT. Your physician will decide how long you will need to take blood thinners.

Procedures

- Inferior vena cava filter placement: When a blood thinner cannot be used, a filter may be placed in the vena cava (the large vein in the abdomen). The filter prevents blood clots from traveling to your lung.
- Catheter-directed thrombolysis: This procedure involves inserting a catheter into a vein to the area of the blood clot. A medication is given through the catheter to dissolve the clot.
- Angioplasty or stenting: These procedures involve opening a blocked or narrowed vein.

Other treatment

Limb elevation

- Elevate the affected arm or leg above the level of the heart.

At home

- Know the risk factors and signs of DVT. If you are at risk for DVT, talk with your physician. Blood thinner medicines or compression stockings may be used in high-risk patients, or those having certain types of medical procedures or surgery.
- Be aware that if elastic stockings are not worn correctly (such as rolled or the wrong size), they can impair blood flow.
- Avoid prolonged sitting. It is helpful to stand up and walk at least every hour.
- Exercise for a few minutes every hour while you are on long car or airplane rides. Exercise both feet while lying, sitting or standing for long periods of time.
- As directed by your physician, stop any medications (such as estrogen) that contribute to blood clotting. This is important before any surgery.
- Avoid tight clothing that can restrict blood flow.

When to notify your physician or nurse

Report any sudden onset of swelling of the leg or arm or any other DVT symptoms.

Seek medical attention right away if you have any of the following:

- Chest pain or discomfort
- Shortness of breath or rapid breathing
- Cough or sudden onset of bloody sputum
- Rapid heart rate
- Fainting
- Sudden, unexplained pain, redness or swelling of an extremity

Northwestern Medicine – Health Information Resources

For more information, contact Northwestern Memorial Hospital's Alberto Culver Health Learning Center (HLC) at hlc@nm.org, or by calling 312.926.5465. Health information professionals can help you find the information you need and provide you with personal support at no charge.

For more information about Northwestern Medicine, please visit our website at nm.org.

Para asistencia en español, por favor llamar al Departamento de Representantes para Pacientes al 312.926.3112.

The entities that come together as Northwestern Medicine are committed to representing the communities we serve, fostering a culture of inclusion, delivering culturally competent care, providing access to treatment and programs in a nondiscriminatory manner and eliminating healthcare disparities. For questions, please call either Northwestern Memorial Hospital's Patient Representatives Department at 312.926.3112, TDD/TTY 312.926.6363 or the Northwestern Medical Group Patient Representatives Department at 312.695.1100, TDD/TTY 312.926.6363.

Developed by: NMH Surgical Nursing and the Division of Vascular Surgery with the Center for Vascular Disease