

## **Deep Vein Thrombosis**

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Your veins return blood back to your heart after your body has used the oxygen and nutrients it contained. There are three kinds of veins in your body: 1) superficial veins lie close to your skin, 2) deep veins lie within groups of muscles, and 3) perforating veins connect the superficial veins to the deep veins. The deep veins connect to your body's largest vein, the vena cava, which runs directly to your heart. Deep vein thrombosis (DVT) is a blood clot in one of the deep veins.

It can be difficult to recognize the symptoms of DVT. However, the condition can be effectively treated once diagnosed. Half of all DVTs do not cause symptoms. The symptoms you feel depend on the location and the size of the clot. They include swelling, tenderness, leg pain that may worsen when you walk or stand, a sensation of warmth, and skin that turns blue or red. DVT can be dangerous because it can lead to a complication known as pulmonary embolism. This occurs when a blood clot breaks free from the deep veins, travels through your bloodstream, and settles in your lungs. This clot can block blood flow in your lungs which can strain your heart and lungs. It is a medical emergency and can be potentially be fatal.

DVTs can be caused when something goes wrong with your body's blood clotting system. If the blood flow in your veins is slow, the risk for a DVT is present. This slow flow can occur when you are not able to move for long periods of time. This can occur at the time of major surgery, prolonged travel, inherited blood clotting abnormalities and some types of cancer. Although it is true that long airplane flights can increase your risk of DVT, this rarely occurs. Most cases of DVT occur in hospitalized patients.

Your chance of developing a DVT is higher if you: 1) are obese; 2) have a history of heart attack or stroke; 3) have congestive heart failure; 4) are pregnant or nursing; 5) are taking birth control pills; or, 6) have inflammatory bowel disease. Performing repetitive activities with your arms can lead to a DVT, but this type of DVT is rare and occurs mostly in athletes such as weight lifters, swimmers, and baseball pitchers.

If a DVT is suspected, the evaluation begins with questions about your health, medical history, symptoms

and a physical exam. To confirm the diagnosis of DVT, the physician may order an ultrasound test. Less common tests for DVT include CT scan or MRI. These tests are reserved for special circumstances. Duplex ultrasound uses high-frequency waves to measure flow within the veins and to create an image of the veins. The test will measure the speed with which blood goes through the vein and may be able to visualize the clot directly as well.

Your physician can usually treat DVT with medications or minimally invasive procedures. For most patients, the treatment begins with a blood thinner called heparin. Heparin helps prevent clots from forming and prevents an existing clot from growing larger, but it cannot break up a clot that has already formed. Heparin acts rapidly but must be given by vein continuously or as an injection under the skin twice daily. This will continue for five to seven days. After that, patients take a pill called warfarin or Coumadin, usually for six months. During the time patients receive medication, blood tests are necessary to make sure the level of medication is adequate to prevent clots, but not too high to cause excessive bleeding.

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