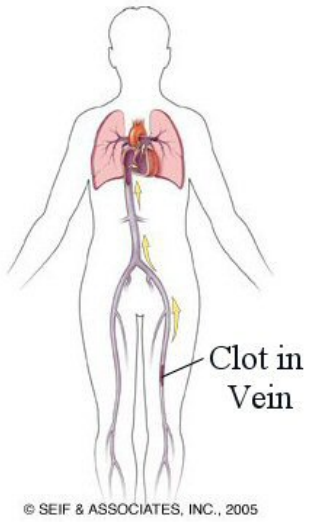
# Deep Vein Thrombosis

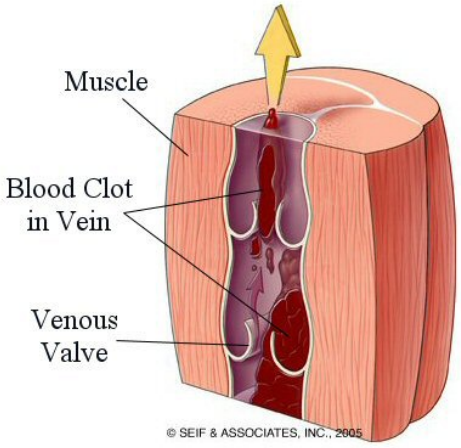
A deep vein thrombosis (DVT) is a blood clot (*thrombus*) that develops in a deep vein. A DVT is a clot in the deep, larger veins of the leg, arm, or pelvis. These are more dangerous than clots that might form in veins on the surface of the body. Deep vein thrombosis can lead to complications if the clot breaks off and travels in the bloodstream to the lungs.




## CAUSES

Blood clots form in a vein for different reasons. Usually several things cause blood clots. They include:

- The flow of blood slows down.
- The inside of the vein is damaged in some way.
- The person has a condition that makes blood clot more easily. These conditions may include:
  - Older age (especially over 75 years old).
  - Having a history of blood clots.
  - Having major or lengthy surgery. Hip surgery is particularly high-risk.
  - Breaking a hip or leg.
  - Sitting or lying still for a long time.
  - Cancer or cancer treatment.
  - Having a long, thin tube (*catheter*) placed inside a vein during a medical procedure.
  - Being overweight (*obese*).
  - Pregnancy and childbirth.
  - Medicines with estrogen.
  - Smoking.
  - Other circulation or heart problems.




## SYMPTOMS

When a clot forms, it can either partially or totally block the blood flow in that vein. Symptoms of a DVT can include:

- Swelling of the leg or arm, especially if one side is much worse.
- Warmth and redness of the leg or arm, especially if one side is much worse.
- Pain in an arm or leg. If the clot is in the leg, symptoms may be more noticeable or worse when standing or walking.

If the blood clot travels to the lung, it may cause:

- Shortness of breath.
- Chest pain. The pain may be worsened by deep breaths.
- Coughing up thick mucus (*phlegm*), possibly flecked with blood.

Anyone with these symptoms should get emergency medical treatment right away. **Call your local emergency services (911 in U.S.) if you have these symptoms.**

## DIAGNOSIS

If a DVT is suspected, your caregiver will take a full medical history. He or she will also perform a physical exam. Tests that also may be required include:

- Studies of the clotting properties of the blood.
- An ultrasound scan.
- X-rays to show the flow of blood when special dye is injected into the veins (*venography*).
- Studies of your lungs if you have any chest symptoms.

## PREVENTION

- Exercise the legs regularly. Take a brisk 30 minute walk every day.
- Maintain a weight that is appropriate for your height.
- Avoid sitting or lying in bed for long periods of time without moving your legs.
- Women, particularly those over the age of 35, should consider the risks and benefits of taking estrogen medicines, including birth control pills.
- **Do not** smoke, especially if you take estrogen medicines.
- Long-distance travel can increase your risk. You should exercise your legs by walking or pumping the muscles every hour.
- In hospital prevention:
  - Prevention may include medical and nonmedical measures.

## TREATMENT

- The most common treatment for DVT is blood thinning (*anticoagulant*) medicine, which reduces the blood's tendency to clot. Anticoagulants can stop new blood clots from forming and old ones from growing. They cannot dissolve existing clots. Your body does this by itself over time. Anticoagulants can be given by mouth, by intravenous (IV) access, or by injection. Your caregiver will determine the best program for you.
- Less commonly, clot-dissolving drugs (*thrombolytics*) are used to dissolve a DVT. They carry a high risk of bleeding, so they are used mainly in severe cases.
- Very rarely, a blood clot in the leg needs to be removed surgically.
- If you are unable to take anticoagulants, your caregiver may arrange for you to have a filter placed in a main vein in your belly (*abdomen*). This filter prevents clots from traveling to your lungs.

## HOME CARE INSTRUCTIONS

- Take all medicines prescribed by your caregiver. Follow the directions carefully.
  - You will most likely continue taking anticoagulants after you leave the hospital. Your caregiver will advise you on the length of treatment (usually 3 to 6 months, sometimes for life).
  - Taking too much or too little of an anticoagulant is dangerous. While taking this type of medicine, you will need to have regular blood tests to be sure the dose is correct. The dose can change for many reasons. It is **critically important** that you take this medicine exactly as prescribed, and that you have blood tests exactly as directed.
  - Many foods can interfere with anticoagulants. These include foods high in vitamin K, such as spinach, kale, broccoli, cabbage, collard and turnip greens, Brussels sprouts, peas, cauliflower, seaweed, parsley, beef and pork liver, green tea, and soybean oil. Your caregiver should discuss limits on these foods with you or you should arrange a visit with a dietician to answer your questions.
  - Many medicines can interfere with anticoagulants. **You must tell your caregiver about any and all medicines you take. This includes all vitamins and supplements.** Be especially cautious with aspirin and anti-inflammatory medicines. Ask your caregiver before taking these.
  - Anticoagulants can have side effects, mostly excessive bruising or bleeding. You will need to hold pressure over cuts for longer than usual. Avoid alcoholic drinks or consume only very small amounts while taking this medicine.
- If you are taking an anticoagulant:
  - Wear a medical alert bracelet.
  - Notify your dentist or other caregivers before procedures.
  - Avoid contact sports.
- Ask your caregiver how soon you can go back to normal activities. Not being active can lead to new clots. Ask for a list of what you should and should not do.
- Exercise your lower leg muscles. This is important while traveling.
- You may need to wear compression stockings. These are tight elastic stockings that apply pressure to the lower legs. This can help keep the blood in the legs from clotting.
- If you are a smoker, you should quit.

- Learn as much as you can about DVT.

SEEK MEDICAL CARE IF:

- You have unusual bruising or any bleeding problems.
- The swelling or pain in your affected arm or leg is not gradually improving.
- You anticipate surgery or long-distance travel. You should get specific advice on DVT prevention.
- You discover other family members with blood clots. This may require further testing for inherited diseases or conditions.

**SEEK IMMEDIATE MEDICAL CARE IF:**

- You develop chest pain.
- You develop severe shortness of breath.
- You begin to cough up bloody mucus or phlegm (*sputum*).
- You feel dizzy or faint.
- You develop swelling or pain in the leg.
- You have breathing problems after traveling.

**MAKE SURE YOU:**

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

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