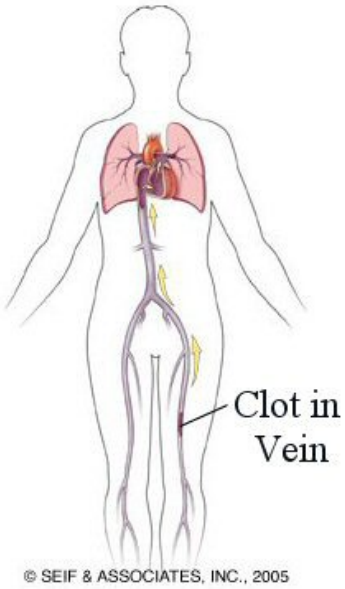
Venous Thromboembolism, Prevention

A venous thromboembolism is a blood clot that forms in a vein. A blood clot in a deep vein is called a deep venous thrombosis (DVT). A blood clot in the lungs is called a pulmonary embolism (PE). Blood clots are dangerous and can cause death. Blood clots can form in the:

- Lungs.
- Legs.
- Arms.



CAUSES OF BLOOD CLOTS

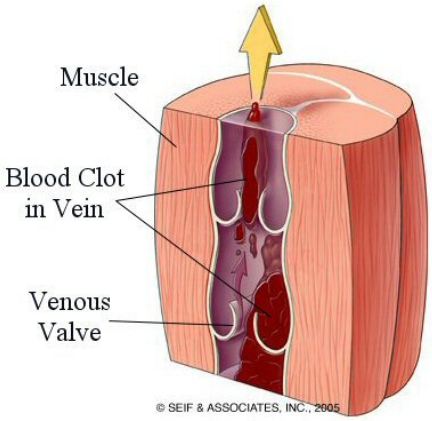
Blood clots can form in a vein from not moving (immobility) or poor blood circulation. When blood is not circulated well and blood "pools" in a vein, clotting factors in the blood can form a blood clot. Conditions that may increase your risk of a blood clot are:

- Recent orthopedic or general surgery such as hip, knee or belly surgery.
- Sit or lie still for over one hour during travel or are confined to a bed or chair most of the time. (for example, during long distance travel, paralysis, or recovery from an illness or an operation).
- Have had a stroke, heart attack, heart failure or are paralyzed.
- Have a broken a bone such as a leg, hip or pelvis.
- Have had cancer or are being treated for it.
- Have a history of blood clots or have a family history of blood clots.
- Take hormones, especially for birth control or hormone replacement therapy.
- Are overweight (obese).
- Are over 60 years of age or are male.
- Smoke.
- Have an implanted vascular access device.
- Have blood circulation problems.

SYMPTOMS

Symptoms of blood clot depend on where the clot is located:

- Signs of a clot in a leg or arm vein may include:
  - Swelling of the leg or arm, especially on one side.
  - Warmth and redness of the leg or arm.
  - Pain in an arm or leg (worse when standing or walking).
- Signs of a clot in the lungs can include:
  - Difficulty breathing or shortness of breath.
  - Chest pain. Pain is often worse with deep breaths.
  - Coughing.
  - Coughing up blood or blood tinged phlegm.
  - Rapid heartbeat.
  - Fainting.



A blood clot in the lungs (PE) is a medical emergency. Get immediate help if you have problems breathing.

GENERAL PREVENTION TIPS FOR VENOUS THROMBOEMBOLISM

- Exercise regularly. Take a brisk 30 minute walk every day. Staying active and moving around can help prevent blood clots.

- Avoid sitting or lying in bed for long periods of time. Change your position often, especially during a long trip.
- Women, especially those over the age of 35, should consider the risks and benefits of taking estrogen medications. This includes birth control pills and hormone replacement therapy.
- Do not smoke, especially if you take estrogen medications. If you smoke, talk to your caregiver on how to quit.
- Eat plenty of fruits and vegetables. Ask your caregiver or dietician if there are foods you should avoid.
- Maintain a weight as suggested by your caregiver.
- Wear loose-fitting clothing. Avoid constrictive or tight clothing around your legs or waist.
- Try not to bump or injure your legs. Avoid crossing your legs when you are sitting.
- Do not use pillows under your knees unless told by your caregiver.
- Take all medicines that your caregiver prescribes you.
- Wear special stockings (compression stockings or TED hose) if your caregiver prescribes them.
  - Wearing compression stockings (support hose) can make the leg veins more narrow. This increases blood flow in the legs and can help prevent blood clots.
  - It is important to wear compression stockings correctly. Do not let them bunch up when you are wearing them.

TRAVEL:

Long distance travel can increase the risk of a blood clot. To prevent a blood clot when traveling:

- You should exercise your legs by walking or by pumping your muscles every hour. To help prevent poor circulation on long trips, stand, stretch, and walk up and down the aisle of your airplane, train or bus as often as possible to get the blood moving.
- Do squats if you are able. If you are unable to do squats, raise your foot on the balls of your feet and tighten your lower leg muscles (particularly the calve muscles) while seated. Pointing (flexing and extending) your toes while tightening your calves while seated are also good exercises to do every hour during long trips. They help increase blood flow and reduce risk of DVT.
- Stay well hydrated. Drink water regularly when traveling, especially when you are sitting or immobile for long periods of time.
- Use of drugs to prevent DVT during routine travel is not generally recommended. Before taking any drugs to reduce risk of DVT, consult your caregiver.

SURGERY AND HOSPITALIZATION:

- People who are at high risk for a blood clot may be given a blood thinning medication when they are hospitalized even if they are not going to have surgery.
- A long trip prior to surgery can increase the risk of a clot for patients undergoing hip and knee replacements. Talk to your caregiver about travel plans before your surgery.
- After hip or knee surgery, your caregiver may give you blood thinners to help prevent blood clots.
  - Blood thinning medications (*anticoagulant's*) may be given to people at high risk of developing thromboembolism, before, during or sometimes after surgery, including people with clotting disorders or with a history of past thromboembolism.

TRAVEL FOLLOWING SURGERY:

- In orthopedic surgery, the cutting of bones prompts the body to increase clotting factors in the blood. Due to the size of the bones involved in hip and knee replacements, there is a higher risk of blood clotting than other orthopedic surgeries.
- There is a risk of clotting for up to 4-6 weeks after surgery. Flying or traveling long distances can increase your risk of a clot. As a result, those who travel long distances may need additional preventive measures after their procedure.
- Drink only non-alcoholic beverages during your flight, train or car travel. Alcohol can dehydrate you and increase your risk of getting blood clots.

SEEK IMMEDIATE MEDICAL CARE IF:

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

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