About Deep Vein Thrombosis and Pulmonary Embolism

In deep vein thrombosis, a blood clot develops in a deep vein. The clot, which is called a thrombus, may block blood flow through the vein completely or partially. Deep vein thrombosis may occur wherever there is a deep vein: in the iliac veins, above the knee in the femoral vein, behind the knee in the popliteal vein, or below the knee in a tibial vein.

Causes and risk factors for deep vein thrombosis.
Generally, DVT is caused by a combination of sluggish blood flow through a vessel and a factor that increases the tendency of blood to clot. Lying down or sitting still for a long period of time, as in extended airline travel, can slow blood flow. An increase in the concentration of clotting factors in the blood may occur after an operation or injury, during pregnancy, and in women taking birth-control pills. A greater tendency to clot may result from an increase in red blood cells, severe infection, and certain types of cancer.

Untreated, DVT may cause serious problems.
A clot can grow in size and block other veins. In addition, portions of the clot may break away from the vein wall and travel through the veins into the lung, where it can lodge in a pulmonary artery. This condition is known as pulmonary embolism, and the traveling clot is called an embolus. Pulmonary embolism can be life threatening if the embolus blocks the main pulmonary artery or if there are many clots. Pulmonary embolism can be treated with drugs that dissolve the clot and restore normal blood flow. You should get medical help immediately if you experience any symptoms of pulmonary embolism.

RISK FACTORS

- Surgery > 60 minutes
- Obesity
- History of inflammatory bowel disease
- Infection < one month
- Oral contraceptive or hormone replacement therapy
- < 1 month postpartum
- Varicose veins/ Swollen legs (current)
- Immobile < than 3 days
- CHF/ Acute MI /Irregular heart beat
- COPD/ Pneumonia
- General anesthesia greater than 2 hours
- Arthroscopic surgery
- Immobilization > 3 days
- Malignancy/cancer
- Spine surgery
- Family history of thrombosis
- Stroke/Paralysis/Coma
- Smoking
- Blood abnormalities

To prevent Deep Vein Thrombosis (DVT) and Pulmonary Embolus (PE) patient education should be addressed at every level of care, up to and including discharge instructions and the post-op phone call.

SIGNS AND SYMPTOMS OF DEEP VEIN THROMBOSIS (DVT)

- Usually occurs in one leg, above or below the knee
  - Swelling – one calf or thigh may be larger than the other.
  - When swollen area is pressed with a finger, a depression may remain
  - Swelling along the vein of the leg
  - Feeling of increased warmth in the area of the leg that is swollen or painful
  - Leg pain, which may increase when standing or walking
  - Tenderness of the leg that may be confined to one area
  - Change in leg skin color (bluish or red)

SIGNS AND SYMPTOMS OF PULMONARY EMBOLUS (PE)

- Chest pain that gets worse with deep breath, coughing, or chest movement
- Shortness of breath or difficulty breathing
- Coughing up blood
- Rapid breathing
- Rapid heart rate
- Sweating
- Lightheadedness

Patients who believe they may be experiencing the signs and symptoms of DVT or PE should seek medical help immediately by calling 911.