What types of blood clots in the veins should I be concerned about?
There are two types of abnormal blood clot formation in the veins: a blood clot that forms in a vein usually in the leg or pelvis is known as a deep vein thrombosis or DVT; when the clot breaks off and travels from the leg up to the lungs, it is known as and a pulmonary embolism or PE, which is a medical emergency that can be life threatening if not treated immediately. Together, DVT and PE are known as a condition called venous thromboembolism or VTE, which is the third most common cause of cardiovascular death worldwide.

How common are clots in the leg and lungs?
VTE – deep vein thrombosis (DVT) and pulmonary embolism (PE) combined – occurs at an annual incidence of about 1 per 1000 adults. Rates increase sharply after age 45 years, and are slightly higher in men than women in older age.

How are blood clots in the leg and lungs diagnosed?
The signs and symptoms of blood clots are common with other disorders so medical tests are necessary to confirm diagnosis. These tests include:

• Ultrasound (duplex ultrasonography), which uses high frequency sound waves to produce images of the interior of blood vessels
• Venography, in which a contrast agent is injected into a vein and the physician is able to take an X-ray of the blood vessels
• D-dimer assay, which measures a compound released when blood clots dissolve; high levels of d-dimer may indicate deep vein thrombosis

A physician or other health care professional will usually ascertain a person’s general health and screen for risk factors such as family history of clots that may place a person at more risk for VTE before these tests are performed.

Can blood clots in the leg and lungs be prevented? How?
Yes, abnormal blood clot formation in the leg and lungs can be prevented. The majority of cases occur in hospital; in fact blood clots are the leading cause of preventable hospital death. Upon being admitted to the hospital, individuals should be assessed for their risk of developing blood clots and, if deemed appropriate, preventive therapy (called “prophylaxis”) should be administered. While in the hospital, patients should walk as soon and as often as possible to help reduce risk. Also, importantly, at hospital discharge, patients should be assessed for potential of recurrence and the patient should be given instructions for at-home care if needed. Care may include frequent walks and medicines to prevent blood clotting.

How are blood clots in the leg and lungs treated?
Patients with blood clots in the leg, or deep vein thrombosis (DVT), usually receive injectable anti-clotting (“anticoagulant”) medications such as heparin and low molecular weight heparin followed by oral medications such as warfarin, which may be used for up to six months. A new generation of oral medicines, including apixaban, dabigatran and rivaroxaban, are now available. In some cases, simple mechanical devices such as compression socks can be worn. Patients experiencing pulmonary embolism (PE) may need to have the blood clot in the lungs “dissolved” with a medicine called a thrombolytic therapy, the most common of which is t-PA.

Which medical specialties are concerned with blood clots in the leg and lungs?
A blood clot in the leg or lung is one of the unique medical conditions that touches nearly every medical specialty. Every health care professional, regardless of his or her area of practice, needs to “think blood clots” while managing patients. For example:
Surgeons and hospitalists (physicians whose primary professional focus is on the general medical care of hospitalized patients) certainly have to be mindful of blood clot risk among surgery and post-surgery patients.

Oncologists must be aware of the dangers inherent in cancer and chemotherapy.

OB/GYNs must be mindful of links with pregnancy.

Pulmonologists may be called upon to treat pulmonary embolisms.

General practitioners also play a role, as they can counsel patients about their general level of risk.

Did you know?

Thrombosis is the one disorder that causes the world’s top three cardiovascular killers and is a major contributor to non-infectious disease globally.

Worldwide cardiology organizations have set a goal of reducing cardiovascular death by 25 percent by 2025. This target will be difficult to achieve without reducing deaths caused by blood clots in the leg and lungs.

Obesity can lead to a two to three times higher risk of a blood clot in the leg or lungs.

Previously it was thought that Asians had lower rates of developing abnormal blood clots than people in Western countries. But new studies show that the rates of hospital-triggered and post-operative blood clot development are the same in Asia and the West.

Almost three-quarters of clot-related deaths in the EU are from those acquired during a hospital stay. Blood clots are the leading cause of preventable deaths in hospitals and the second leading cause of all hospital deaths.

For more information, go to WorldThrombosisDay.org.