

Deep Vein Thrombosis

- **Introduction**

- Veins return blood to the heart after picking up waste products from the body. They contain oxygen-depleted blood with the exception of the veins coming from the lungs that contain oxygen-rich blood.

- **Coronary Artery Disease**

- Veins are classified into three types named by their function: superficial, deep, and communicating. Superficial veins collect and return blood just beneath the surface of the skin. Deep veins carry the body's blood back to the heart and most are located deep within the muscles. Communicating veins allow blood to travel from the superficial veins to the deep veins. Because veins must return the blood to the heart under low pressure and against gravity, they are equipped with cup-like valves to prevent backflow. Blood moving through the vein pushes the valves up causing them to open and allowing blood to travel through the vein. As blood flow becomes affected by low pressure and gravity, blood travels backward and collects in the valves, causing them to close.

- **Unstable Angina**

- Clot formation inside of a vein is called thrombosis. Deep vein thrombosis can be initiated by: 1) Defects which cause stasis, the slowing of blood flow. 2) An imbalance in the blood between clot-promoting factors and clot-preventing factors. 3) Defects in the vein wall. Clotting begins with activation of factors in the blood and adhesion of platelets to the vein tissue, usually around the area of a valve. A cascade of reactions leads to the formation of a fibrin mesh to reinforce the clot as platelets continue to accumulate and adhere. Red blood cells may also be trapped in the clot. The growing clot may extend up into the vein without blocking it, or it may block the vein entirely.

- **Potential Complications**

- If thrombus completely blocks the flow of blood in a vein, blood below the blockage will back up causing more stasis, excess pressure in the veins and the formation of more clots. Another complication of deep vein thrombosis is embolism. An embolus is part of a thrombus which has broken off and travels in the bloodstream. The embolus may travel to and become lodged in an artery in the lung, blocking off some of the oxygenated blood destined for the tissues. This is called pulmonary embolism.

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