



# 10

## SHAREABLE RESOURCE

by James A. Peterson, Ph.D., FACSM

# Ten Things People Should Know About Blood Clots

**1 A MIXED MESSAGE.** Blood clots are gel-like clumps of blood. Sometimes, they serve a useful purpose; other times, not so much. When they prevent someone from bleeding too much when they hurt (cut or injure) themselves, they are helpful. On the other hand, when they form inside a vein or artery when a person hasn't been injured, they can be dangerous because they can result in a life-threatening blockage.

**2 A NATURAL NECESSITY.** Blood clots — good and bad — occur for a reason. The *good* clots form when blood cells, called platelets, rapidly move to an area of the body that has been cut deep enough to pierce the wall of a blood vessel. The proteins in the blood (*i.e.*, the liquid part referred to as plasma) make platelets that stick to the hole in the skin resulting from the cut and form a sticky plug that prevents the blood from further flowing out.

**3 BUMMER.** The *bad* blood clots form when damage occurs to the lining of a blood vessel, either a vein or an artery. Blood also will start to clot either if it stops moving and becomes stagnant or if the person experiences a disease that causes the blood to clot abnormally. In addition, blood clots can form in the upper chamber of the heart (atrium) if the heart does not beat in a normal (regular) manner.

**4 OMINOUS SIGNS.** The symptoms of a blood clot depend on where the clot is located in an individual's body. For example, a clot in the leg is typically characterized by pain, redness, swelling, tenderness in the calf, and warmth. In the lung, the indicators are an accelerated heart rate and chest pain that is exacerbated by breathing, coughing, and shortness of breath. In the abdomen, the cues are severe pain, vomiting, and diarrhea. In the brain (*i.e.*, a stroke) symptoms include dizziness, loss of vision, sudden and severe headache, trouble speaking, and weakness in the face or limbs. In the heart (*i.e.*, a heart attack), the common symptoms are chest pain, left arm numbness, lightheadedness, nausea, and sweating.

**5 CONSIDERING THE ODDS.** Individuals have an increased likelihood of getting a blood clot if they have one of the following conditions: atherosclerosis (the plaque that builds up in the arteries can break off), diabetes (plaque buildup), heart failure (the blood does not pump as efficiently as it should), obesity/overweight (plaque buildup), vasculitis (blood vessels swell and become damaged), and irregular heartbeat (blood pools).

**6 LIFESTYLE MATTERS.** How people conduct their lives can impact whether they suffer a blood clot. Among the lifestyle factors that can increase the risk of clotting are having an excessive level of body fat, smoking tobacco, being pregnant, sitting for prolonged periods, laying in bed for prolonged periods, and using therapies that modify body hormones.

**7 AVOIDING TROUBLE.** Prevention is key in clot formation. Although not all blood clots can be prevented, a number of them can. Two essential steps in that regard are for individuals to minimize their risk by giving lifelong attention to the factors that lead to plaque buildup (*e.g.*, smoking, elevated blood pressure, high cholesterol, diabetes, etc.) and to be particularly vigilant if they have a family history of heart attack or stroke.

**8 NOT TO BE TAKEN LIGHTLY.** Once a blood clot forms in any blood vessel in the body, it can break away and travel to other areas of the body. This turn of events can lead to serious health-related complications once the flow of blood is disrupted to vital organs. In addition to a heart attack and a stroke, among the other potential complications are pulmonary embolism (a blood clot lodges in a pulmonary artery in one of the lungs, resulting in low oxygen levels in the blood), kidney failure (fluids and waste buildup), and deep vein thrombosis (a clot that can break away forms in a deep vein in an arm or leg).

**9 HELPING NATURE TAKE ITS COURSE.** Individuals who experience a blood clot typically are given anticoagulant medicine (*aka*, *blood thinners*). These medicines don't actually dissolve the clot. They do, however, stop the blood clots from forming or growing. Over time, the body naturally absorbs the clot.

**10 GRAVE NUMBERS.** Statistics indicate that as many as 900,000 people are affected by deep vein thrombosis/pulmonary embolism annually — killing up to 100,000. Approximately 10% to 30% of these individuals will die within the first month of their diagnosis. In fact, sudden death will be the first symptom that approximately one fourth of the people who experience this relatively obscure condition will experience.

**James A. Peterson, Ph.D., FACSM,** is a freelance writer and consultant in sports medicine. From 1990 until 1995, Dr. Peterson was director of sports medicine with StairMaster. Until that time, he was professor of physical education at the United States Military Academy.