



THROMBOSIS: DISEASE STATE OVERVIEW

Updated – March 3, 2008

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What is Thrombosis?

Thrombosis is the formation of a blood clot or “thrombus” inside a blood vessel, obstructing blood flow through the circulatory system.

The formation of a thrombus is usually caused by an injury to the vessel's wall, either by trauma or infection, or by the slowing or stagnation of blood flow past the point of injury.

There are two distinct forms of thrombosis: venous and arterial thrombosis. Venous thromboembolism (VTE), which is comprised of deep vein thrombosis (DVT) and pulmonary embolism (PE), and thoracic outlet syndrome are examples of venous thrombosis. Stroke, heart attack, and peripheral arterial disease are examples of arterial thrombosis.

Thrombosis Facts

Venous thromboembolism (VTE) occurs for the first time in about 100 persons per 100,000 each year in the United States. About one-third of patients with symptomatic VTE manifest pulmonary embolism (PE), whereas two-thirds manifest deep vein thrombosis (DVT) alone.¹

It is estimated that over 200,000 new cases of VTE occur annually. Of these, 30% die within 30 days, one-fifth suffer sudden death due to PE, and about 30% develop recurrent VTE within 10 years.²

VTE Risk Factors:

- Cancer
- Prior VTE (DVT/PE)
- Hypercoagulability (genetic predisposition for blood clots)
- Surgery
- Advanced age (>70 years of age)
- Obesity (BMI >29)
- Bed rest, or prolonged immobility
- Oral contraceptives or hormone replacement therapy

(NEJM 2005;352:969-977)

Heart Attack: Each year, more than one million Americans experience a heart attack, and nearly half of them are fatal.³

Heart Attack Risk Factors:

- High Blood Pressure
- Diabetes
- Smoking
- High Cholesterol
- Age
- Hormone Replacement Therapy
- Obesity
- Gender (men are at greater risk than women)

(SIPP; MMWR Morb Mortal Wkly Rep 2001;50:120-125.)

Stroke is a leading cause of serious, long-term disability in the U.S.⁴ Of all strokes, 87 percent are ischemic (restricted blood flow); intracerebral and subarachnoid hemorrhage strokes make up the remainder.⁵ The estimated direct and indirect cost of stroke in the United States for 2007 is \$62.7 billion (AHA computation).

- Each year about 700,000 people experience a new or recurrent stroke.
- About 500,000 of these are first attacks, and 200,000 are recurrent attacks.
- Every 45 seconds someone in the United States has a stroke.
- Every 3 to 4 minutes someone dies of a stroke.

(GCNKSS, FHS, ARIC, AHA, NHLBI.)

Stroke Risk Factors:

- High blood pressure
- Diabetes
- High cholesterol
- Age (risk doubles for each decade over 55 years of age)
- Family history of stroke
- Smoking
- Oral contraceptives
- Atrial fibrillation
- Heart failure
- Excess alcohol
- Prior stroke or heart attack
- Race: Blacks have almost twice the risk of first-ever stroke compared with whites. (ARIC)
- Gender: Each year, about 46,000 more women than men have a stroke. (GCNKSS)

(SIPP; MMWR Morb Mortal Wkly Rep 2001;50:120-125.)

Peripheral arterial disease (PAD) is the most common form of peripheral vascular disease (PVD). It affects 12-20% of Americans age 65 and older.⁶

1 in 5 people over the age of 70 have PAD, and less than half of these patients are aware they have PAD. Patients with PAD are 3 to 6 times more likely to have a heart attack or stroke than patients without PAD.⁷

PAD Risk Factors:

- Smoking
- Diabetes
- High blood pressure
- High cholesterol
- Advanced age (>70 years)

(Circulation 2005;111:e169-e172)

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