

ENVIRONMENTAL RISK FACTORS FOR THROMBOPHILIA

- **Age:** Prior to the age of 40 the risk is approximately 1 in 10,000, while after the age of 75, the risk is 1 in 100. This disparity reflects the increased risk of venous thrombosis from acquired conditions and environmental factors that occur with age.
- **Surgery:** Incidence of DVTs in surgical patients varies based on type of surgery from approximately 6% in general surgery patients to 30% of individuals having knee replacement; these rates significantly increase without optimal thromboprophylaxis (Perry, 2003).
- **Major trauma:** Incidence of DVTs among patients with major trauma exceeds 50%; independent risk factors for DVT following trauma include: older age, blood transfusions, surgery, femur or tibia fracture, and spinal cord injury (Perry, 2003).
- **Periods of immobility:** Bed rest, usually defined at ≥ 3 days in bed, long periods of travel, usually defined at $> 4-5$ hours, or a sedentary lifestyle (Varga, 2007).
- **Cancer:** Malignancies, especially adenocarcinomas, brain tumors, and myeloproliferative disorders, are associated with thrombotic complications; chemotherapy also increases the risk for VTEs.
- **Oral contraceptives:** Higher estrogen content and third-generation progestins are associated with a greater increased risk for DVTs than lower estrogen and second-generation progestins (Perry, 2003).
- **Pregnancy and post-partum period:** Pregnant women have a 5 times higher risk for VTEs than non-pregnant women. The risk for DVT's increases throughout pregnancy, with the greatest risk occurring during the third trimester (Friederich, 1996).
- **Hormone replacement therapy:** Amount of increased risk depends on duration of treatment, dosage, and the hormones that are used.
- **Selective estrogen receptor modulators** (i.e. Tamoxifen & raloxifene): One study found the overall relative risk for DVT while taking tamoxifen is 1.6 and the overall relative risk of sustaining a VTE while taking raloxifene is 3.1 (Cummings, 1999).
- **Smoking:** Increases the risk for pulmonary embolisms more so than the risk for VTEs.
- **Specific Medical Conditions:** Conditions that interfere with blood flow (atrial fibrillation), damage blood vessels (diabetes and hypertension), and affect blood chemistry (cancer, inflammatory bowel disease, obesity, or lupus) increase the risk for VTEs.

References:

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