

## Clotting Disorders and Other Risk Factors for Venous Thromboembolism

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The full report is titled “The Pathogenesis of Venous Thromboembolism: Evidence for Multiple Interrelated Causes.” It is in the 5 December 2006 issue of *Annals of Internal Medicine* (volume 145, pages 807-815).

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### What is the problem and what is known about it so far?

Venous thromboembolism (VTE) is blood clots in leg veins that break off, travel through the blood, and block lung arteries. Risk factors can be internal or external. The main internal risk factors are inherited clotting disorders; external risk factors include surgery, trauma, pregnancy, and use of birth control pills. It is thought that inherited clotting disorders and external risk factors must both be present for VTE to develop in most cases.

### Why did the researchers do this particular study?

To better understand to what degree inherited clotting disorders and external risk factors contribute to a person’s risk for VTE.

### Who was studied?

468 people who were related to a person who had VTE with a clotting disorder and who had a clotting disorder themselves.

### How was the study done?

The researchers tested participants for 10 clotting disorders in addition to the one they were already known to have. They evaluated participants for the occurrence of VTE. They then compared the risk for VTE by the number of clotting disorders and by exposure to external risk factors.

### What did the researchers find?

Risk for VTE increased with the number of clotting disorders and with exposure to external risk factors. It was more common in participants with 1 or more clotting disorders and an external risk factor than in participants with either factor alone.

### What were the limitations of the study?

Not all participants were tested for all clotting disorders. Also, there were too few occurrences of VTE for the researchers to be able to measure VTE risk associated with specific disorders.

### What are the implications of the study?

The risk for VTE increases with the number of clotting disorders and with exposure to external risk factors. The study confirms that a combination of clotting disorders and external risk factors increases risk more than either factor alone.