



## Rare Clotting Factor Deficiencies

### What are clotting factors?

Clotting factors are proteins in the blood that control bleeding.

When a blood vessel is injured, the walls of the blood vessel contract to limit the flow of blood to the damaged area. Then, small blood cells called platelets stick to the site of injury and spread along the surface of the blood vessel. At the same time, chemical signals are released from small sacks inside the platelets that attract other cells to the area and make them clump together to form what is called a platelet plug.

On the surface of these activated platelets, many different clotting factors work together in a series of complex chemical reactions (known as the coagulation cascade) to form a fibrin clot. The clot acts like a mesh to stop the bleeding.

### What are rare clotting factor deficiencies?

If any of the clotting factors is missing or is not working properly, the chain reaction is blocked. When this happens, the blood clot does not form and the bleeding continues longer than it should.

Rare clotting factor deficiencies are bleeding disorders in which one of the other clotting factors (i.e. factors I, II, V, VII, X, XI, or XIII) is missing or not working properly. Less is known about these disorders because they are diagnosed so rarely.

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