# **Mini-Medical School**



# Hemophilia 血友病(英文)

## What is hemophilia?

Hemophilia is a bleeding problem. People with hemophilia do not bleed any faster than normal, but they can bleed for a longer time. Their blood does not have enough clotting factor. Clotting factor is a protein in blood that controls bleeding.

Hemophilia is quite rare. About 1 in 10,000 people are born with it.

#### Types of hemophilia

The most common type of hemophilia is called hemophilia A (deficiency of clotting factor VII), and a less common type is hemophilia B (deficiency of clotting factor IX).

The result is the same for hemophilia A and B; that is, they bleed a lot longer time than normal person.

#### How do you get hemophilia?

People are born with hemophilia. They cannot catch it from someone like a cold.

Hemophilia is usually inherited, meaning that it is passed on through a parent's genes. Genes carry messages about the way the body's cells will develop as a baby grows into an adult. They determine a person's hair and eye colour, for example.

Sometimes hemophilia can occur when there is no family history of it. This is called sporadic hemophilia. About 30% of people with hemophilia did not get it through their parent's genes. It was caused by a change in the person's own genes.

# Severity of hemophilia

The severity describes how serious a problem is. The level of severity depends on the amount of clotting factor that is missing from a person's blood.

Level	Percentage of normal factor activity in blood	Number of international units ( IU ) per millilitre ( ml ) of whole blood
normal range	50%-150%	0.50–1.5 IU
mild hemophilia	5%-40%	0.05–0.40 IU
moderate hemophilia	1%-5%	0.01–0.05 IU
severe hemophilia	less than 1%	less than 0.01 IU

# Symptoms and diagnosis

The signs of hemophilia A and B are the same:

- Big bruises
- Bleeding into muscles and joints
- Spontaneous bleeding ( sudden bleeding inside the body for no clear reason )
- Prolonged bleeding after getting a cut, removing a tooth, or having surgery.
- Bleeding for a long time after an accident, especially after an injury to the head.

Bleeding into a joint or muscle causes :

- an ache or "funny feeling"
- swelling
- pain and stiffness

• difficulty using a joint or muscle

#### Treatment

Treatment for hemophilia today is very effective. The missing clotting factor is injected into the bloodstream using a needle. Bleeding stops when enough clotting factor reaches the spot that is bleeding.

Bleeding should be treated as quickly as possible. Quick treatment will help reduce pain and damage to the joints, muscles, and organs. If bleeding is treated quickly, less blood product is needed to stop the bleeding.

With an adequate quantity of treatment products and proper care, people with hemophilia can live perfectly healthy lives. Without treatment, most children with severe hemophilia will die young. An estimated 400,000 people worldwide are living with hemophilia and only 25% receive adequate treatment. The World Federation of Hemophilia is striving to close this gap.

### **Treatment products**

Factor concentrates are the treatment of choice for hemophilia. They can be made from human blood (c alled plasma-derived products ) or manufactured using genetically engineered cells that carry a human factor gene ( called recombinant products ). Factor concentrates are made in sophisticated manufacturing facilities. All commercially prepared factor concentrates are treated to remove or inactivate bloodborne viruses.

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