

Blood Transfusions

A blood transfusion is a procedure that gives a patient blood through a peripheral (hand/arm) IV or a central line catheter. Blood is mostly given because of low blood levels or active bleeding. Blood can be given “whole,” but most often, only certain parts of blood are given based on patient needs.

Blood Parts

The most common blood parts are red cells, platelets, plasma, and cryoprecipitate.

- **Red Blood Cells** carry oxygen from the lungs to the tissues of the body. Without enough red blood cells, patients may become anemic, feel tired and look pale.
- **Platelets** help clot blood and stop bleeding.
- **Plasma** also plays a large role in blood clotting. This may be given if a patient is bleeding and has low levels of clotting factors.
- **Cryoprecipitate** is given to control bleeding. This is given to patients who have low blood levels of one or more clotting factors, such as fibrinogen.

Cause

Low blood levels or active bleeding is caused by:

- Injury
- Surgery
- Chemotherapy
- Drugs
- Certain diseases/illness

During the Transfusion

Before the transfusion, your nurse will make sure you have a recent type and screen lab test. This tells us your blood type. If you do

not have a recent lab test on file, your nurse will draw blood and send it to the lab.

Tell your doctor if you have had a transfusion reaction before.

Once the blood arrives, nurses will double check the blood product at the bedside. This makes sure you are getting the right product.

Your vital signs (blood pressure, pulse, temperature, and respiratory status) will be checked often. Your nurse will stay in the room with you for at least the first 15 minutes. This is the most likely time for a reaction to occur.

During transfusion, tell your nurse right away if you have:

- Bleeding, pain, or bruise at IV site
- Severe back or chest pain
- Fever and/or chills
- Nausea/vomiting
- Rash/hives/itching
- Headache/dizziness
- Fast heartbeat
- Trouble breathing/wheezing
- Dark or reddish urine
- Yellowing of the skin or eye

Minor Reactions

We aim to make our blood products as safe as possible. Blood that is given to patients has been carefully prepared and tested. Most blood products are given without any problem. However, problems can happen.

Minor reactions that can happen:

- Rash
- Hives
- Itching
- Fever
- Chills

These symptoms are rarely serious. Nurses and doctors watch for these signs.

Serious Reactions and Infections

Serious reactions and infections are rare.

Symptoms may include:

- Difficulty breathing
- Blue-tinged skin
- Low oxygen in the blood
- Increased heart rate
- Increased rate of breathing
- High or low blood pressure
- Fever
- Coughing
- Fevers or chills
- Nausea
- Vomiting
- Diarrhea
- Confusion
- Swelling of the arms/legs
- Swelling and redness of the mouth/face
- Flushed Skin
- Itching
- Bleeding abnormalities
- Lack of urine
- Blood in the urine
- Back or flank pain

When symptoms occur, the transfusion will be stopped right away. Your care team will treat you immediately.

Transfusion Associated Circulatory Overload (TACO)

TACO occurs when a transfusion causes excess fluid buildup into the bloodstream. A chest x-ray during this reaction may show evidence of fluid buildup in the lungs. Treatment may include removing excess fluid from the body and providing oxygen to help the lungs function.

Transfusion-Related Acute Lung Injury (TRALI)

A transfusion triggers an immune response in the body that causes damage to the lungs. Symptoms occur within 6 hours of transfusion. A chest x-ray may show fluid buildup or damage in the lungs. Treatment may include supportive care such as providing oxygen to help the lungs function.

Anaphylactic Transfusion Reaction

Anaphylactic transfusion reactions occur when a transfusion causes a severe allergic reaction. Symptoms usually occur within minutes of starting transfusion. Treatment may include giving medicines and fluids to help reduce the body's immune response and improve blood pressure.

Acute Hemolytic Transfusion Reaction (AHTR)

AHTR occurs when the body attacks donated red blood cells, causing them to burst. Treatment may include supportive care with medicines to improve kidney function and blood pressure. Additional blood products may be given to treat bleeding abnormalities. Symptoms occur within 24 hours of transfusion. This reaction may also cause abnormal lab values and kidney failure.

Sepsis

Sepsis is caused by a transfusion tainted with bacteria. Treatment may include giving medicines and fluids to support blood pressure and fight the infection. Getting a disease from a blood product is rare, but it can happen.

HIV

The chance of getting HIV (Human Immunodeficiency Virus) is 1 in 2 million units transferred. The virus travels through blood and destroys the body's disease fighting system. It can cause illness and death. All blood donors are tested for HIV.

Hepatitis B and C

Hep B and C affect the liver. The chance of getting hepatitis after a transfusion is very low. The risk is about 1 per 500,000 units transfused for Hepatitis B and 1 per 2,000,000 units transfused for Hepatitis C. If Hepatitis B does occur, it tends to be mild, and patients recover. However, Hepatitis B and C can become chronic.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 8/2025 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#6346