



Getting a Transfusion

What is blood?

Blood is made up of four components:

- **Red blood cells**, which carry oxygen to the body's tissues and organs
- **Platelets**, the smallest blood cells, help stop bleeding when you are injured
- **Plasma** contains water, nutrients, proteins and clotting factors that work with platelets to stop bleeding
- **White blood cells** that help fight infection



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As blood circulates, it carries cells and nutrients throughout the body. There is no substitute for blood, and volunteer donors are the only source of blood for patients who need a transfusion.

Blood transfusion is among the top 10 procedures performed in hospitals. It is important that you know and understand the risks and benefits of getting a transfusion.

Today in the U.S., blood for transfusion is the safest it has ever been. In general, other healthcare-related problems (e.g. hospital-acquired infection or surgical complication) occur more often than infections from a blood transfusion. However, blood transfusions are not without risk. Knowing what is involved when getting a transfusion, including the risks and benefits, allows you to make an informed choice for your health care.

What is a blood transfusion?

A transfusion is one of the most common medical procedures where donated blood is given to a patient. For most people a transfusion refers to getting red blood cells (RBCs), but other parts of the blood, such as platelets or plasma, may also be transfused.

Types of Transfusions:

- **RBCs** are given to patients who are bleeding or have a low red blood cell count (anemia).
- **Platelets** are given to stop or prevent bleeding.
- **Plasma** is given to patients who are bleeding or need clotting factors to prevent bleeding prior to a surgical procedure.

All blood products are collected and stored in special bags that are labeled with information about the product.

Why would I need a transfusion?

Transfusions may be given to replace blood lost during surgery or from a serious injury. Some medical conditions (e.g. sickle cell disease) or treatments like chemotherapy may cause a person to have fewer RBCs, known as anemia, or have a low platelet count. A transfusion may help raise the low counts and improve symptoms.

Your doctor will decide which type of blood product and the number of units you need based on your medical condition or diagnosis. Your healthcare team will discuss the risks, benefits and possible alternatives for the transfusion with you.

Is blood safe?

The risk of getting an infection from a blood transfusion is extremely rare. Blood is collected using sterile needles and bags. Screening and testing of each donation has reduced the risk of infectious diseases from a blood transfusion. Versiti tests each donation for infectious diseases as required by the FDA, including HIV, Hepatitis B and C, West Nile Virus, and more. We also test for other infectious agents, including those that cause syphilis and Chagas disease, and Babesiosis in areas where this organism is found.

What can I expect if I need a transfusion?

A transfusion can be given while you are in the hospital or as an outpatient. Your doctor will explain the reason and risks and ask if you agree to the transfusion.

Before getting a transfusion, a sample of your blood will be taken. The sample is tested to determine your blood type and to check for any antibodies to red blood cells (RBC). Most people do not have antibodies; however, if you have been pregnant or transfused in the past, you may have developed RBC antibodies. Additional time may be needed to complete the testing and find suitable units for your transfusion, which could delay it.

A second sample may be collected to verify your blood type if you have never received a blood transfusion.

Once a unit has been selected for you, it is labeled with your name and hospital identification number.

Before starting the transfusion, your nurse will explain the steps. The unit of blood will be given through an intravenous (IV) line. A transfusion can take up to four hours to complete.

Steps of transfusion include:

- Confirming your name and identification before starting
- Checking information on the unit
- Monitoring your temperature, heart rate, breathing and blood pressure before, during, and after the transfusion
- Watching you closely for the first 15 minutes of the transfusion and often during the transfusion
- Asking how you are feeling, including if you have any signs of a reaction

If you are going home after the transfusion, the IV will be taken out and you can return to your normal activities.

What are the risks of a transfusion?

Most transfusions are given without any problems, but some patients may experience mild side effects including fever, chills, itching, or rash during or shortly after receiving a transfusion. While rare, signs of a more serious reaction may include difficulty breathing, chest or back pain, sudden uneasy feeling, loss of consciousness, or dark-colored urine.

Are there alternatives to blood transfusion?

Depending on the reason for your blood transfusion, there may be alternatives or medications that can reduce the need for one. For patients who are actively bleeding or have lost a lot of blood due to injury or a surgical procedure, transfusion may be the best or only option. It is important that you get the "right" blood product and only the amount needed to improve your symptoms.

When you discuss an upcoming surgery with your doctor, ask about blood transfusions and if any alternatives are available. Developing a plan is the best approach. For more information see *Preparing for Elective Surgery: Minimizing the Need for Transfusion*.

If you have more questions about getting a blood transfusion, talk to your provider.

Use the section on back to write down any questions to ask your health care team:

Relative Risk of Adverse Transfusion Reactions (per units transfused)

Adopted from: Goel R, et al. Blood 2019; 133(17):1831-1839. Busch MP, et al. Blood 2019;133(17):1854-1864.

Complication	Estimated Risk (per transfusions)
Fever	1 in 900
Hives/Itching	1 in 1,200
Fluid Overload	1 in 9,000
Lung Injury	1 in 60,000
Severe Infection (from platelets)	1 in 100,000
Incompatible Blood Transfusion	1 in 200,000
Human Immunodeficiency Virus (HIV)	1 in 2 Million
Hepatitis B and C	1 in 2 Million
West Nile Virus and Zika	1 in 3 Million
Non-Transfusion Risk Event:	
Death from car accident	1 in 10,000
Death by Lightning Strike/Airplane Crash	Less than 1 in 1 Million

Use this section to take notes before talking to your doctor.

About Versiti

Versiti was founded with the belief that by working together, our blood centers can better serve people's urgent need for life-saving healthcare. That we can strengthen and restore the health of our communities while conducting groundbreaking research. That we can integrate scientific innovation, medicine, and service in ways that no other blood health organization can match.



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