

What is a Blood Product Transfusion?

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A blood product transfusion is the transfer of donated blood products to a person. Examples of blood products are red blood cells, white blood cells, plasma, platelets, albumin, and other specialized blood products (e.g., clotting factor, gamma globulin). Whole blood contains all of these. Different blood products can be transfused separately or together via a narrow tube placed within a vein in your arm to treat various conditions.

Why is a blood product transfusion needed?

This procedure is most commonly used to replace blood or blood products lost due to serious injury or surgery. Other factors such as, chemotherapy, certain cancers, and/or blood disorders may also prevent your body from making blood or some of your blood’s components correctly. Your healthcare team will tell you what kind of transfusion you need.

The table below gives important information about blood products.

Blood Product	What It Does	Why This Transfusion Is Needed
Red Blood Cells	Carry oxygen and nutrients to tissues throughout the body. Tissues and organs need oxygen to survive.	<ul style="list-style-type: none"> • To prevent damage to the body’s organs from lack of oxygen • To improve symptoms related to anemia such as fatigue, dizziness and shortness of breath • To replace blood loss due to surgery or injury
Platelets	Helps your blood clot properly to prevent or stop bleeding.	<ul style="list-style-type: none"> • To raise low platelet levels or if platelets are not functioning properly • To stop or prevent bleeding
Plasma	Liquid part of whole blood. It contains proteins that helps blood to clot.	<ul style="list-style-type: none"> • To replace missing proteins that help with clotting

What are the benefits of a blood product transfusion?

Blood products can be life saving. The benefits of blood transfusions are carefully weighed against the risks before any blood products are used.

How can I be sure the blood product is safe?

Blood collection facilities have taken great care to make sure that the blood you receive is safe. All blood donors are questioned about their health and lifestyle before they can give blood. They are not able to donate if they appear to pose any risk to you. All blood is tested carefully for the presence of diseases. Any blood that

does not pass these tests will be destroyed. New screening tests are constantly being developed as new diseases are identified. Even with these safeguards, there is a very small risk of getting an infection.

What are the risks of blood product transfusion?

The risk of getting an infection is much smaller than the risk of not being transfused.

The table below gives information about blood product transfusion risks:

Allergic reactions	These are usually mild and easy to treat (i.e., itching, hives).
Fever	Usually seen in patients who have been transfused before or who have been pregnant.
Hemolytic reactions	Your immune system attacks the donated transfused red cells. These reactions are very rare, but can be serious.
Infection	All donors are carefully questioned to identify any potential risky behavior or illness. All blood is carefully tested to minimize the risk of infection.

What are the risks of not having a blood product transfusion?

A lack of red blood cells may result in parts of the body not getting enough oxygen or nutrients. This may cause permanent damage to vital organs such as the heart and brain. A lack of platelets can cause excessive bleeding and could be life threatening. A transfusion may be needed to prevent such damage. Your healthcare team will tell you when a transfusion is needed.

Are there alternatives to a blood product transfusion?

- Although there is a great deal of research going on, there is still no effective artificial blood available.
- For some patients, a treatment with blood enhancing medicine such as iron or erythropoietin may be given.
- During surgery, medications can be used to decrease bleeding.
- In some cases, it is possible to collect blood that is lost during surgery and transfuse it back to the patient.
- Some patients undergoing elective surgery may be qualified for the autologous blood program. Blood is collected from patients before surgery, stored safely, and used only for that patient if needed.
- Others may wish to be given a transfusion from someone of their choosing (direct donation). Many patients choose direct donation, but there is no evidence that this is safer than getting blood from a volunteer community donor.

What Happens When I Need A Transfusion?

If you need a transfusion, your healthcare team will explain why the transfusion is needed and what blood or blood products you will receive.

Preparing for a Blood Product Transfusion

Cross-matching

Before your transfusion, your blood will be drawn for cross-matching. During cross-matching, a sample of your blood is mixed with a sample from a blood donor. If the blood cells do not clump together, your blood is compatible (matches), and the transfusion can be given.

Identity verification

When your blood is drawn for cross-matching, a special name band will be placed on your wrist. Two nurses will check this name band before your transfusion begins. Please do not remove the name band until after your transfusion.

Informed Consent

Before you get your transfusion, you will be asked to sign a consent form for blood transfusions. Your signature confirms that you have read and understand this form explaining why the transfusion is needed, as well as the risks and benefits.

What happens during a blood transfusion?

- The transfusion will be given in the Rutgers Cancer Institute of New Jersey Adult Outpatient Infusion area. The Blood Bank staff at Robert Wood Johnson Barnabas Health have a verification system in place (i.e., correct patient, correct blood type). Before you get your transfusion, two nurses will confirm that the blood you receive was tested and prepared for you. They will verify the blood compatibility, your name, and hospital ID number. The transfusion will be given through an intravenous catheter placed in your arm, or through a central venous device, if you have one.
- Your vital signs (pulse, respiration, blood pressure, temperature) will be taken before, during, and after the transfusion. Thirty minutes before your transfusion, you may be given medication (acetaminophen (Tylenol®) or cetirizine (Zyrtec®)) to prevent a reaction.
- Unless you are on a special diet, you may eat or drink what you like during the transfusion. You may also get up and move around. Just make sure to keep your movements slow and easy so that the intravenous catheter and intravenous tubing do not come loose.
- If you feel any discomfort from the intravenous catheter, please let your nurse know right away. Transfusing one unit of red blood cells takes about 1 ½ to 2 hours, but other products, such as platelets or plasma, transfuse quicker.

Reactions to the transfusion

During, or right after a transfusion, some patients have a transfusion reaction. Symptoms may include:

- Heavy feeling or pain in your chest
- Fast or shallow breathing
- Back pain
- Yellow colored skin (jaundice)
- Chills
- Oral temperature of 100.5°F or greater
- Nausea
- Vomiting
- Rash
- Itchiness
- Hives
- Shortness of breath
- Fast heartbeat
- Headache

If you have any of these symptoms or feel anything unusual, tell your nurse right away. If you have had a transfusion reaction in the past, please let your healthcare team know before you get a transfusion.

After the transfusion

After the transfusion, you may resume your normal activities. Though it is uncommon, delayed transfusion reactions can occur days or weeks after the procedure. Symptoms of a delayed transfusion reaction are:

- Chills
- Oral temperature of 100.5°F or greater
- Nausea
- Vomiting
- Rash
- Hives
- Shortness of breath
- Heavy feeling or pain in your chest
- Fast or shallow breathing
- Back pain
- Fast heart beat
- Headache
- Muscle aches
- Dark urine

If you have any of these symptoms or think you are having a delayed reaction to your transfusion, notify your healthcare team right away at the number in the box below.

If you are in need of immediate assistance, please call 732-235-2465 and select the option that best meets your needs.

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