

Blood Transfusions

What: A blood transfusion is a safe, common procedure in which blood is given to you through an intravenous (IV) line in one of your blood vessels.

Why: Blood transfusions are done to replace blood that was lost due to injury or surgery or to provide blood when illness prevents your body from making blood properly.

How: During a blood transfusion, a small needle is used to insert an IV line into one of your blood vessels. You will receive healthy blood through this line. The procedure usually takes 1 -4 hours, depending on how much blood you need.

The Transfusion Procedure

- A blood sample is needed every time you receive red blood cells. When your blood type is known, a new sample may not be needed before a platelet transfusion.
- If you have a history of reactions, your doctor may prescribe medicine to take before the transfusion to help prevent them.
- A nurse will watch you carefully during your transfusion – particularly for the first 15 minutes when acute reactions are most likely .
- After a blood transfusion, your vital signs are checked (such as your temperature, blood pressure, and heart rate). The intravenous (IV) line is taken out. You may have some bruising or soreness for a few days where the IV was inserted.
- You may need blood tests that show how your body is reacting to the transfusion.
- Your nurse will let you know about signs and symptoms you should watch out for and report. See “When to Call” on back page.

About Blood

- Your heart pumps blood through your blood vessels (arteries and veins), and brings oxygen and other nutrients to your body's organs and tissues and carries away waste products.
- Blood is made up of cells (red blood cells, white blood cells, and platelets) and fluid (plasma).
- The most commonly given components are red blood cells, platelets, and plasma. The type of blood transfusion you need depends on your situation.
 - **Red Blood Cells** are the most commonly transfused part of the blood. These cells carry oxygen from the lungs to your body's organs and tissues. They also help your body get rid of carbon dioxide and other waste products.
 - **Platelets** help stop bleeding. Some illnesses and medications harm your body's ability to make platelets, which increases your risk of bleeding and bruising.
 - **Plasma** is the liquid part of your blood. It's mainly water, but also contains proteins, clotting factors, hormones, vitamins, cholesterol, sugar, sodium, potassium, calcium, and more.

There are four blood types: A, B, AB, or O and everyone's blood is either Rh-positive or Rh-negative. Your blood type is given as both the ABO and Rh e.g. A positive. Group O red blood cells may be given to anyone. Rh negative red blood cells may be given to those who are Rh negative and positive. Red blood cells are selected so that the unit is either an identical ABO type, or group O. Platelets and plasma do not need to be as carefully matched because they do not contain red blood cells.

All blood products are collected from volunteer blood donations, including those made at the [Donor Center](#), located on the ground floor of Roswell Park's main hospital.

Risks

Most blood transfusions go very smoothly. Mild complications can occur and, very rarely, serious problems occur.

- **Allergic reactions** can be mild or severe A nurse or doctor will stop the transfusion at the first signs of an allergic reaction and determine what treatments are needed.
- **Fever/chills:** Some people get a fever or chills during or within a few hours of the infusion. It is usually a reaction to white blood cells, platelets, or plasma in the transfusion. Ask your doctor what you can take if you get a fever.
- **Iron Overload:** Getting many blood transfusions can cause too much iron to build up in your blood, which can, over time, damage your organs. Iron overload can be treated with iron chelation therapy.
- **Viruses:** The risk of catching a virus from a blood transfusion is very low. Blood banks carefully screen all donated blood for possible infectious agents such as HIV, hepatitis B & C, West Nile and Zika viruses, babesia (parasite), and syphilis.
- **Lung Injury:** Although unlikely, transfusions can damage your lungs and make it hard to breathe. This usually occurs within 6 hours of transfusion. With treatment, most patients recover in a few days.
- **Acute or delayed hemolytic reactions:** Most common in patients with a previous transfusion.
 - *Acute immune hemolytic reaction* occurs when your body attacks the transfused red blood cells, which then produce substances that harm your kidneys. It is very serious but very rare. Your transfusion is stopped at the first sign of this reaction.
 - *Delayed hemolytic reaction* occurs when your body destroys red blood cells so slowly that the problem goes unnoticed until your hemoglobin/red blood cell level goes back to the level you had before the transfusion.

When to Call

Call Roswell Park at **716-845-2300 right away** if you have signs of a reaction or an infection such as: fever of 100.4 °F (38 °C) or higher, chills, , flushed (red/warm) face, nausea, dark urine, shortness of breath, or pain in lower back.

If you have chest pain, call 911 or go to the nearest hospital emergency department right away.