

Breathing Problems may occur because of the extra fluid you receive in the transfusion or because your lungs are damaged by the transfusion. This damage is serious but in most cases it only lasts a couple of days.

Allergic Reactions are usually mild and easily treated. Sometimes breathing problems occur with serious allergic reactions. Rarely this may result in death.

Acute Hemolytic Reactions are caused by damage to red blood cells during a transfusion. Although rare, this could be serious and can even cause death. The most common cause of this is a patient getting blood that does not match their blood type. Checking patient information carefully when the blood sample is taken for *cross matching* and when the blood is given helps to prevent this.

Infection - Canadian Blood Services is very careful when choosing who can donate blood and how they collect and process it. They have up-to-date ways to test donated blood. Because of this, the chances of getting an infection are very low. **There will always be a chance, however, that you can get an unknown infection from a blood transfusion.**

Bacterial - There is a risk of infection in the blood stream or tissue caused by bacteria in the blood product. This may come from the donor or from the handling process in spite of extreme measures to prevent it. Most of these infections are treated with medicine. Death may occur in some patients too sick to fight infections. This is rare.

Viruses and other -

- <1 in 1,000,000 **West Nile Virus:** a virus spread by mosquitoes that can result in death.
- 1 in 1,700,000 **Hepatitis B Virus (HBV):** Hepatitis is swelling of the liver. HBV is a virus that is spread through contact with infected blood, blood products and body fluid.
- 1 in 4,000,000 **Chagas Disease:** Chagas disease is a parasite that causes illness that can result in death.
- 1 in 6,700,000 **Hepatitis C Virus (HCV):** Hepatitis is a swelling of the liver. HCV is a virus that is spread through injection drug use, tattooing, and body piercing.

- 1 in 4,300,000 **Human T-Cell lymphotropic virus HTLV):** a virus that can be spread by exposure to blood or sexual contact, and can cause a form of cancer of the blood.
- 1 in 8,000,000 **Human Immunodeficiency Virus (HIV):** the virus that causes AIDS. HIV attacks the immune system.

If you go home after your transfusion, call your doctor or NP right away:

- If you have a new rash, hives or itching
- If you have nausea and vomiting
- If you have fever/chills
- If you have redness, swelling, discharge or pain where the needle was.

Call 911 or go straight to the nearest Emergency Department:

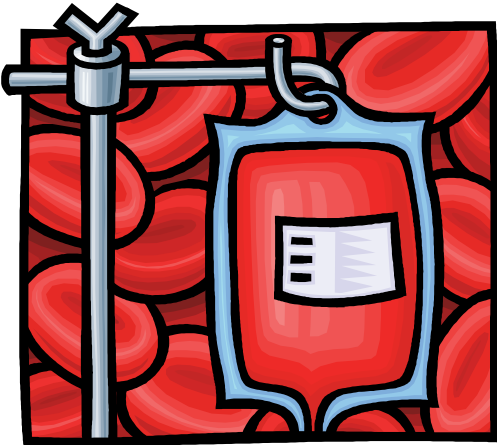
- If you have signs of confusion
- If you have dizziness
- If you have shortness of breath or wheezing
- If you have swelling in your legs, feet, hands, arms or face
- If the white part of your eye turns yellow
- If you have decrease in urine output, or change in color (pink, red or brown)

If you have questions regarding any of this information, please write them down and feel free to ask your nurse or doctor.

If you have a general health question or concern, and have nowhere to turn, call **Telehealth Ontario, 1-866-797-0000**. They can provide experienced health advice 24 hours a day, 7 days a week. It is confidential and there is no need to provide your health insurance number.



Information about Blood Transfusions and Alternatives



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You may need to receive a blood component while you are in the hospital. This is called a transfusion.

Blood is a *living tissue* made up of two parts. The liquid part called plasma, is made of water, salts, and proteins. About half of your blood is plasma. The rest of your blood contains cells such as red blood cells, white blood cells and platelets.

[Hemoglobin](#) makes blood look red. It is a protein in red blood cells that carries oxygen from the lungs to the rest of the body, and brings the waste product, back to the lungs to be exhaled.

[Blood Group](#) Red blood cells have a protein covering that determine each person's blood group. The four major blood groups are O, A, B and AB. The majority of people have a substance on their red blood cells called the "Rh factor". These people are "Rh positive". Everyone else is "Rh negative". This is why a person's blood may be referred to as "A Positive" (group A, Rh positive) or "O negative" (group O, Rh negative).

What are the benefits of transfusion?

Patients receive blood transfusions for many medical reasons. If you have too few red blood cells, organs such as the brain or heart cannot get the oxygen they need to survive. It is also used to improve the life for some people with blood disorders. A loss of clotting factors may mean you will not be able to stop bleeding.

The two most common reasons for blood transfusions are:

1. To replace blood lost during a surgery, or after an accident

Blood loss is normal during certain surgeries. A small amount of blood can be replaced by liquid with types of salts or sugars in it. If a large amount of blood is lost, the doctor may decide a blood transfusion is needed.

2. To treat anemia (lack of red blood cells)

Anemia has a number of causes, but the effects are the same; your body will not have enough red cells to carry the oxygen your body needs. As a result, you may feel tired and short of breath. It is often possible to treat anemia with medicine and vitamins but sometimes, a blood transfusion is needed.

The most common parts of the blood, or *blood components*, that you may need are:

[Red Blood Cells](#) carry oxygen to and from tissues and organs. Red blood cells may be needed during or after surgery. They can also help patients with many types of diseases.

[Platelets](#) help blood to clot. They may help control bleeding in patients with leukemia and cancer. They also help patients during/after surgery.

[Plasma](#) helps blood to clot in patients having surgery, and those with cancer or immune disorders. [Cryoprecipitate](#) is a concentrated part of the plasma with fibers that help blood clot.

What happens when I need a transfusion?

Your doctor/nurse practitioner (NP) will explain why you need a transfusion and which blood product you need.

Cross matching of your blood with donor blood is done to make sure the match is suited for you. Before you get your transfusion at least two people will check to be sure that the blood you get was tested and prepared for you.

Your [vital signs](#) (heart rate, breathing rate, temperature & blood pressure) will be taken before, during and after the transfusion. Transfusing one unit of red cells may take 2 to 4 hours. Other blood components, such as platelets, may take less time to give. Special pumps are often used for this.

Alternatives to blood transfusions

Blood supplies are limited so it is important to use it as little as we can. Many worry about the chance of getting an illness from blood transfusions. For these reasons there may be other options available. These include:

- Using vitamins, minerals and other medicines to increase the amount of blood in your body before surgery
- Learning new ways of doing certain surgeries that result in less blood loss.
- Giving medicines during surgery to reduce blood loss and stop bleeding more quickly.
- New methods of collecting blood lost during surgery in such a way that it can be returned to the patient when needed.

In some cases however, transfusions will still be needed, due to blood loss.

Can I use my own blood?

Some patients feel that it is safer to give their own blood to be stored for their surgery. This is done less and less world wide and is not an option, except in very rare cases, for patients at Waterloo Regional Health Network. Your doctor/NP will tell you if this is needed for you.

What can I do to avoid a transfusion?

If you are going to have a surgery, ask your doctor/NP if you might need a blood transfusion. Ask your doctor/NP or surgeon to check your hemoglobin before your surgery. If it is low, talk to them about what you can do to raise it before your surgery.

Eating foods that are high in iron and taking iron, folic acid and vitamin B12 pills, may help increase the amount of blood in your body. There are medicines that can increase the number of red blood cells your body is able to make. They may not work for everyone so each patient is reviewed carefully. Talk to your doctor/NP about these products.

These methods can take weeks to work and should be considered as far ahead of your surgery as possible; ideally 4-6 weeks.

Are transfusions safe?

Canada's blood supply is one of the safest in the world. Because blood is a *living tissue* there will always be some reaction while your body accepts this new tissue. A *mild reaction* may include hives, itching, rashes, fever, chills, muscle aches or headache. There may be a feeling of heat where you got the transfusion or along the vein. If you experience any of these symptoms, or feel anything unusual, tell your nurse right away.

A Fever may happen especially if you have ever been pregnant or have had a blood transfusion before. These reactions tend not to be severe, you may need to have a sample of blood taken and vital signs may need to be checked more often until the transfusion is done.