




Despite screening of all blood donations, the risk of transferring infectious agents (virus, bacteria) cannot be ruled out completely. The risk is low.


- Hives 1 in 100
- Heart Failure 1 in 100
- Fever 1 in 300
- Lung Injury 1 in 10,000
- Hepatitis B 1 in 7,500,000
- West Nile < 1 in 1,000,000
- Hepatitis C 1 in 13,000,000
- HIV 1 in 21,000,000


Reference: *Bloody Easy 4 (2016)*

What are the alternatives to transfusion?

As blood transfusion is not risk free, it is important for you and your doctor to consider alternatives to transfusion and ways of reducing the amount of blood transfused.

 Detect and treat anemia before scheduled surgery. Medications may be used (i.e. iron).

 Autologous donation – provide your own blood before surgery. Discuss this option with your surgeon.

 Directed Donation – donating blood for a relative. In Canada, this program is limited to a parent or legal guardian donating for their

BLOOD TRANSFUSION CHECKLIST

- Do you understand why you need a blood transfusion?
Your doctor should explain why a transfusion has been recommended.
- Have the risks of transfusion been explained?
The risks and benefits of transfusion for your condition should be clearly explained.
- Have alternatives been discussed?
Alternatives to transfusion should always be considered and discussed with you by your doctor.
- Have all your questions been answered?

Knowing More About Blood Transfusions



Information for Patients and Family

Disclaimer: This fact sheet is for your educational purposes only. It should not be used to guide and/or determine actual treatment choices or decisions. Any such decisions should be made in conjunction with advice from your treating physician.

When is a blood transfusion necessary?

Blood transfusion is important in the treatment of many medical problems such as cancer and blood disorders, and in the treatment of some injuries and major surgical procedures when blood loss has occurred.

What is a blood transfusion?

A blood transfusion is when donated blood is given to you intravenously, directly into your bloodstream. It is not whole blood but a blood component.

Red blood cells contain hemoglobin which carries oxygen to your body tissues and organs. Your doctor will decide if you need a transfusion by considering the cause and severity of your anemia (low hemoglobin), your medical condition and symptoms.

Generally if your hemoglobin is



Below 70 g/L – a transfusion is often needed



Between 70 and 100 g/L – transfusion may be necessary with signs and symptoms



Above 100 g/L – transfusion is not usually required

Platelets help the blood to clot. A platelet transfusion may be needed when your platelet numbers are too low or when your platelets don't work properly.

Plasma works with platelets to clot blood and seal wounds. It is often used in emergencies to help stop bleeding.

Where does donated blood come from?

The Canadian Blood Services collects blood from people who are screened and determined to be in good health. Many precautions are taken to ensure that the blood supply is as safe as possible. Some plasma fractions are imported.

How is the donated blood tested?

Every blood donation is tested to see if any viruses are present. Donated blood found to have viruses is not used. Testing includes:

- Hepatitis B
- Hepatitis C
- West Nile Virus
- HIV (AIDS)

Once the testing is done, the blood components and plasma are shipped to the hospital transfusion laboratory where they are carefully stored until required.

At present, it is not possible to inactivate viruses in cellular blood components (red blood cells and platelets). Every blood donation is processed to remove white blood cells which may carry viruses and bacteria. During processing, different chemical or heat processes are used which are effective in inactivation of many viruses.

What happens if I need a blood product?

Your healthcare provider will decide the type of blood product you need and the laboratory will carefully select and prepare the component(s) that has been prescribed for you.

What reactions may occur during my transfusion?

During your transfusion, you will be watched closely and your vital signs will be monitored. Some patients do have a mild reaction such as skin rash, fever or feeling cold. Rarely, a reaction causes red cells to be destroyed; this is called a hemolytic reaction which is more serious.

What are the risks?

Although Canada's blood supply is very safe, blood transfusion is **not risk free**, and complications can occur, as they can with all medical procedures.



Severe reactions to blood transfusions are very uncommon, but can result in major consequences and rarely, even death.



Immune or allergic reactions may occur. There may be a risk of increased post-operative infection and longer length of hospital stay for surgical patients.



Mild skin reactions or fever occur occasionally. Patients who receive regular transfusions are more at risk.