

Possible risks of Transfusion

Blood transfusions have many benefits and are often lifesaving; however, they also have a few risks. Possible risks include:

Transfusion reactions: may occur within the first 15 minutes of the transfusion. Some reactions can occur at anytime during the transfusion and up to 24 hours after transfusion. In rare cases they may occur up to a week later. Immune system reactions, such as red cell sensitization reactions, may affect future transfusion, organ transplants and pregnancies.

- a) Risk for type of reaction:
- Red cell sensitization (immune reaction) – 1 in 13
 - Fever – 1 in 100 units for platelets, 1 in 300 units for red blood cells
 - Allergic reaction – 1 in 100 units for minor allergic reactions, 1 in 40,000 units for serious allergic reaction.
 - Circulatory overload – 1 in 100 (per episode)
 - Lung injury – 1 in 10,000
 - Delayed hemolytic reaction – 1 in 2,500 (per patient transfused)
 - ABO incompatible transfusion – 1 in 354,000 units
 - Death due to transfusion (possibly, probably or definitely)– in the USA 1 in 400,000 per unit transfused reported in 2019

Infection disease transmissions: infection is passed from the donor's blood to the recipient. This risk is small because Health Canada's Blood Regulations enforces strict guidelines on the collection, testing, storage, and use of blood.

- a) Risk for type of disease:
- Bacterial infection – 1 in 10,000 units of platelets, 1 in 250,000 units of red blood cells
 - West Nile virus - <1 in 1,000,000 units
 - Hepatitis B – 1 in 2,000,000 units
 - Hepatitis C – 1 in 27,100,000 units
 - HIV – 1 in 12,900,000 units

Infection at the transfusion site: Infection at the IV insertion site may occur. Symptoms may include any of the following

- Redness
- Swelling
- Pain
- Bleeding
- Pus

When to seek medical attention following a transfusion

Watch for symptoms that might be showing a transfusion reaction as outlined below. You can have a transfusion reaction even if you have had transfusions in the past without a reaction. If you do not feel well once you get home, call 811 to talk with a registered nurse 24/7

Go to the nearest Emergency Department or your Health Centre right away if you have any of these symptoms following a transfusion of blood or a blood product within the 10 days after a transfusion:

- Severe nausea and/or vomiting
- Severe back, chest, or head pain
- Trouble breathing
- Blood in your urine

**Do not drive yourself.
Tell the Emergency Department staff that you have recently had a blood transfusion.**




NORTHWEST TERRITORIES
Health and Social
Services Authority

Blood Transfusion Information for Patients

Use this information sheet to find out the following:

- What a blood transfusion is
- Why is a transfusion needed
- Where does the blood come from
- How the transfusion is done
- What are the risks?
- Can you refuse a transfusion?
- What are the alternatives?
- When to seek medical attention following a transfusion

What is a blood transfusion?

A blood transfusion is when you receive a **blood product** that is made from someone else's blood (a donor). You may receive one or more types of blood products depending on your condition.

The main blood products are:

Red Blood Cells: carry oxygen from your lungs to the rest of your body

Platelets: cells that the body needs to help form clots to prevent and stop bleeding

Plasma: liquid part of the blood which has proteins, called clotting factors, that help your blood clot if you are bleeding

Albumin: a protein in plasma can be used to replace fluids your body has lost

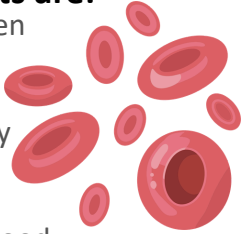
Immune globulins: made from plasma and can help your immune system

Coagulation Factors: made from plasma and can prevent bleeding if you have a blood disorder

Why would I receive a transfusion?

You may need a blood transfusion after losing blood from an injury, surgery, an illness that causes bleeding, or an illness that destroys blood cells. Your body needs to have the right amount of each part of your blood to be healthy. If your body cannot make or replace these parts quick enough, then a blood transfusion may be required. Some people may only need one blood transfusion. Others may need many transfusions for long-term treatment. Your doctor will review your health record to determine if they feel it is appropriate treatment for you.

A blood transfusion will only be given if needed.



What to expect during your transfusion:

Before your transfusion, You will be given a red identification band containing your Blood Bank identification number (BBID) when you have your blood taken for testing. This band must be worn until it expires and is removed by the nurse, or when your doctor or nurse has confirmed a transfusion is no longer needed.

You and two members of your health care team will check the components together to confirm your identify and ensure you are receiving the correct transfusion.

To receive the transfusion, you need a needle and tube put into your arm, known as an intravenous (IV) catheter which is inserted into a vein. This will be connected to the bag containing the blood product which is on a hanging stand beside you. The blood product then flows slowly into your vein. Transfusions last anywhere from an hour up to a maximum of 4 hours per product.

You are monitored before, during and after the transfusion to watch for reactions.



Where does the blood come from?

Canadian Blood Services and Héma-Québec are the blood suppliers for Canada. All volunteer donors are required to go through a screening process to ensure their blood is safe to donate. Donor blood is tested for diseases such as Syphilis, Hepatitis B and C, HIV (AIDS) and West Nile Virus. Some products also go through a process to remove possible bacteria and viruses. Blood used for transfusion in Canada is very safe, it is rare to get a disease through a blood transfusion because of the screening and testing performed on the blood when it is collected from the donor.

Can I refuse a transfusion?

As a patient, you have the right to accept or refuse blood transfusions. If you have any objection to having a blood transfusion, it is very important to discuss this with your health provider.

What are the alternative treatments to transfusions?

There are some alternatives, such as medications, which may or may not be useful in your particular health condition. Discuss options available to you with your health provider.

After the transfusion, you will be given a *Notification of Transfusion* letter that states you received a transfusion. It is suggested you keep it in your personal medical file.

Please tell your nurse if you start to feel unwell at any point during a blood transfusion or after a transfusion, such as the following signs or symptoms:

- Severe chest or back pain
- Nausea, vomiting
- Dizziness, headache
- Fever, chills
- Rash, hives, itching
- Fast heartbeat, palpitations
- Trouble breathing, wheezing
- Pain at IV site
- Red urine
- Feeling unease or different than prior to transfusion start

If these symptoms occur, you must tell your nurse right away and the transfusion may be slowed down or stopped.