

What is a blood transfusion?

A blood transfusion (say: trans-FYOO-shun) is when your child is given a blood product. The transfusion helps to replace the part of blood that is missing.

What are the benefits of getting a transfusion?

Your body must have the right amount of each part of blood to be healthy. Some reasons that a transfusion may be needed are listed below:

- blood loss as a result of a surgery or medical condition
- a blood disorder
- to support the body through cancer treatment
- to support babies who are born too early

What are blood products?

Blood is made up of different parts. **White blood cells** help fight infections. **Red blood cells** give the blood its red colour and carry oxygen around the body. All organs in the body (especially the heart, brain, and kidneys) need oxygen to work properly. **Platelets** are small, sticky cells that help to prevent and/or stop bleeding. **Plasma** has many kinds of proteins. Some of these proteins help the blood to clot and to fight infection.

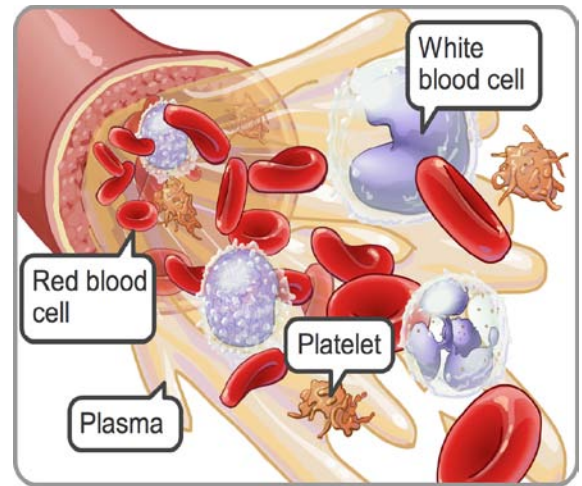
Whole blood is donated by blood donors. The whole blood can be separated into the different parts of blood. These different parts are called blood products.

Types of blood products

- Red blood cells
- Platelets
- Plasma
- Cryoprecipitate (say: CRY-oh-pre-SIP-a-tate)

Plasma may also be made into different protein products. These include:

- albumin
- clotting factor concentrates
- immune globulins



Your child will only receive the specific blood part or parts that your child needs.

What are blood groups?

There are different blood types or groups. The most common are the ABO system and the Rhesus (Rh) system.

Your child will only receive donor blood that matches your child's blood.

Where does donor blood come from?

Canadian Blood Services (CBS) collects blood from volunteer donors throughout Canada. Some plasma products may come from screened donors in the United States

Is transfusion safe?

Canada has one of the safest blood supplies in the world. Blood donors are asked many questions about their health and lifestyle before they give blood. If the donor is found to be unsuitable, the donation will not take place. After the blood is collected it is tested for the infectious diseases listed below:

- HIV 1 and HIV 2: human immunodeficiency viruses that cause AIDS
- hepatitis B and hepatitis C, which are infections of the liver
- human T-cell lymphotropic (lim"fo-trop'ik) virus type 1 (HTLV-1), which causes a rare form of leukemia
- syphilis, an infection a person can get from sexual contact

Donated blood that does not pass these and many other tests is destroyed.

What are the risks of transfusion?

Like any medical treatment, a blood transfusion has some risks. A common concern is the risk of infection from transfusion. The chance of getting an infection is very small.

- The chance of getting HIV (AIDS) is less than 1 in 8 million.
- The chance of getting hepatitis C is less than 1 in 6.7 million.
- The chance of getting hepatitis B is less than 1 in 1.7 million.
- There is also a very small chance of getting HTLV-1, West Nile virus and other rare infections.

Note: *The more units of blood a person receives, the greater the risk. A transfusion of 10 units increases the risk 10 times.*

Your doctor will only advise you to have a transfusion if it is absolutely necessary.

Transfusion Reactions

Some patients have reactions to blood transfusions.

Most reactions occur during or shortly after the transfusion. Your child will be closely monitored for signs of a reaction during and after the transfusion. Your child may receive medication to relieve symptoms of a reaction.

You will be given information on transfusion reactions and what to do if your child has a transfusion reaction after you leave the hospital. Please let your doctor know if you think your child has had a transfusion reaction in the past.

Allergic reactions are common and usually mild. Your child may have a rash/hives and itching. The transfusion will be stopped and your child will be given medication and if the rash and itching go away the transfusion may be restarted.

Serious allergic reactions are very rare and may cause breathing problems or swelling to lips or eyes as well as a rash and itching. The transfusion will be stopped.

Febrile (fever) reactions are common especially for patients who have many transfusions. Your child may feel hot or have chills (feel cold). The transfusion will be stopped.

Hemolytic reactions are very rare but serious reactions. This happens when red blood cells break up after transfusion. Your child may feel feverish or have chills and may feel sick or vomit. The transfusion will be stopped.

Transfusion-Associated Circulatory Overload and **Transfusion Related Acute Lung Injury** are serious reactions that cause problems with breathing. The transfusion will be stopped.

Transfusion Associated Graft Versus Host Disease (TA-GVHD) is a very serious and rare complication of blood transfusion. Patients with very low immunity or patients who receive blood from a close relative are at risk. Blood for these patients is irradiated before it is transfused to prevent TA-GVHD.

All transfusion reactions receive an in-depth review by health care professionals.

What are the alternatives to transfusion?

Your doctor will only advise you to have a transfusion if it is absolutely necessary and advise you if there are any alternatives to transfusion.

You may also ask your doctor if there are any alternatives to transfusion that may work your child.

Can I donate for my child?

Family members sometimes ask if they can donate blood for their child. This is called a **Directed Donation**. Directed donations can only be given by parents or legal guardians if their child:

- is less than 17 years old
- is having a surgery that is not an emergency
- is very likely to need blood

Canadian Blood Services (CBS) will collect blood from parents or legal guardians only. They will not collect blood from other family members or from friends. The donor must meet all CBS donor requirements. Directed donation can take up to 2 weeks.

Note:

Directed donation may not meet the transfusion needs of your child or may not be suitable for your family.

Do you need to give consent before receiving blood?

Yes. Before a transfusion your doctor should talk with you about:

- the reason for the transfusion
- the blood product to be transfused
- the benefits of the transfusion
- the risks of the transfusion
- the consequences of refusing the transfusion
- the expected outcome of the transfusion
- the transfusion process

You should have had an opportunity to ask questions and time to make your decision. If you decide to go ahead with the transfusion, you will be asked to sign a consent form.

If you decide to refuse the transfusion, you will be asked to sign a "Refusal to Consent" form.

What happens when you need a transfusion?

Before your child is given a transfusion a blood sample is taken. This sample is tested to find out your child's blood type and match it to donor blood. The donor blood is then labeled with your child's name and blood type.

The transfusion is usually given through a small tube in the arm and lasts about 1 to 4 hours. Your child will be closely monitored during and after the transfusion.

To make sure that your child is given the right blood you will be asked to state your child's full name and date of birth before the blood sample is taken and before the transfusion. Two nurses will carefully check that the details on the blood pack match the details on your child's identity band/card before they start the transfusion.

How will I know if my child has received a blood transfusion?

You will be given a "Notification Tag" if your child receives a blood transfusion. Do not worry if you lose this tag as there is a permanent record of all transfusions in BC.

Where can you get more information?

Please talk to your doctor if you want more information or have questions.

The following websites have more information about blood and blood transfusion. If you need help to find information on line please ask for help at the Family Support and Resource Centre.

Canadian Blood Services: <http://www.blood.ca>

Transfusion Ontario website has a more detailed patient information booklet on blood called "Blood Transfusion - A Patient's Perspective" this can be found at this website:

http://transfusionontario.org/en/cmdownloads/categories/patient_booklet/

Health Link BC has information on blood transfusions and transfusion reactions: <http://www.healthlinkbc.ca/>

You can also phone BC Health at **8-1-1** from anywhere in British Columbia any time of the day or night.