Blood transfusions

The term "transfusion" means donated blood is given to a patient.

Where does the blood used at the hospital come from?

Blood is collected from healthy volunteer donors by the Canadian Blood Services. The blood given by one volunteer is separated into many parts, called blood products. Each part of the blood has a different role. Separating the blood into different parts allows patients to receive only the specific part of the blood that is needed.

How is the donated blood tested?

All donors are carefully tested before they donate blood. They are asked questions about their health and their lifestyle to identify donors whose blood may contain a virus. Only donors who meet specific criteria are allowed to donate.

Each time blood is donated, it is tested to see if there are any viruses present. Donated blood found to have viruses is not used.

Currently, blood is tested for:

- Hepatitis B and Hepatitis C
- HTLV-1 (Human T cell Lymphotropic Virus Type 1)
- HIV 1 and HIV 2 (Human Immunodeficiency Virus, which causes AIDS)
- West Nile Virus

A screening test for Syphilis is also done with each donation and must be negative.

Once all the testing is done, the blood products are then shipped to the Hospital Transfusion Laboratory, where they are carefully stored until required by a patient.

What are the risks of blood transfusion?

The risks of blood transfusion are very low. But, like many medical treatments, a transfusion can never be completely risk-free.

If a transfusion becomes necessary, your baby's doctor will discuss:

- the reasons for the transfusion
- the expected benefits and possible risks of the transfusion

In Canada the risks for each unit of blood transfused are:

Risk of infection

HIV	1 in 7.8 million
Human T-Cell Lymphotropic Virus (HTLV)	1 in 5 million
Hepatitis A	Very rare
Hepatitis B	1 in 153,000
Hepatitis C	1 in 2,300,000
Creutzfeldt-Jacob Disease (variant)	Theoretical risk in Canada Four probable cases in U.K.
Syphilis	Virtually zero risk
Sepsis	Less than 1 in 50,000 serious reaction from platelets 1 in 500,000 serious reaction from red blood cells
West Nile Virus	Less than 1 in 1 million
Cytomegolovirus (CMV)	Very rare with leukodepletion in high risk populations

Other risks

Acute hemolytic reaction	1 in 40,000
Transfusion related acute lung injury	1 in 5,000 to 1 in 100,000
Allergic reaction	Very low for newborn infants

What happens if my baby needs a blood product?

When a blood transfusion is ordered by your baby's doctor, the hospital Transfusion Laboratory carefully selects and prepares the blood product that your baby needs. The laboratory tests your baby's blood to make sure that the donor blood selected for your baby is a good match (compatible) with his or her blood type. This test is called a crossmatch.

When donor blood is used, that unit of blood will be set aside for your baby until the blood is used up, or the blood becomes too old. The blood can be divided into 3 or more small bags of blood for your baby. This is called "single donor" blood. It limits the number of donors for your baby.

What happens during a transfusion?

During the transfusion, your baby will be watched closely. The nurse will monitor your baby's vital signs frequently. The transfusion may be completed within 30 minutes or it may take several hours, depending on what blood product your baby is receiving.

It is very rare for a bay to react to a transfusion. A baby's immune system is not mature enough to create antibodies which cause transfusion reactions.

If you have any questions about blood transfusions, please talk with your baby's doctor or nurse.

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