



It is the policy of St. Mary's General Hospital that prior to administering blood or blood products to a patient, the health practitioner proposing the treatment must ensure that a patient has given his/her voluntary and informed consent to the treatment.

*Excellence*

*Compassion*

*Innovation*

**Information about Blood,  
Blood Products,  
Blood Transfusion and  
Alternatives to Blood  
Transfusion**

Approved by Joint

Transfusion Advisory

Committee– January 2011

### Facts about Blood:

- Blood carries oxygen and nutrients throughout our bodies.
- Blood carries carbon dioxide and other waste products back to the lungs, kidneys and liver for removal.
- Blood works to fight against infection and to heal our wounds.

### Most common parts of the blood:

- Red blood cells - carry and deliver oxygen to various parts of the body; may be needed during or after surgery to correct anemia (lack of red blood cells).
- Plasma - liquid portion of blood, supplies proteins that help blood clot and fight disease.
- Platelets - help blood to clot and may help control bleeding in patients having surgery, patients who suffer from diseases such as leukemia and cancer, and blood disorders that interfere with the body's ability to produce its own platelets.

### Blood Transfusion Process:

- Before each transfusion, the patient's blood is tested with the donated blood to ensure compatibility.
- Before each transfusion, at least two people will check to ensure that the blood being given was tested and prepared for the specific patient.
- In the event that you receive a transfusion of blood or blood products during your hospital stay, the hospital will provide you with a 'Letter of notification of Transfusion' for your records.

### Alternatives to Blood Transfusion:

- Supplements (Folate, Vit B12, Iron) - to efficiently produce red blood cells
- Erythropoiesis stimulating agents (ESA's) - man made versions of the hormone produced by the kidney; responsible for regulating red cell production; can be given to boost Hemoglobin level prior to surgery;
- Antifibrinolytics - drugs that can reduce bleeding, e.g. Tranexamic Acid

### References:

Callum, J.L., Pinkerton, P.H. (2006). Bloody Easy 2: Blood transfusions, blood alternatives and transfusion reactions. A guide to transfusion medicine: Sunnybrook Hospital. Chiavetta et al. CMAJ 2003; 169(8):767-773. Kleinman, Chan & Robillard. Transfusion Medicine Reviews 2003; 17(2):120-162

### Risks of Blood Transfusion

Bacterial infection from RBC transfusion	Less than 100,00
Bacterial infection from PLT transfusion	Less than 10,000
Febrile Non-Hemolytic Reactions (fever and/or chills)	1:300
Allergic reactions (itchy skin rash, headache, shortness of breath, wheezing)	1:100
Fluid overload	1:700
Lung injury	1:5,000
Hepatitis B (inflammation of the liver)	1:82,000
Hepatitis C (inflammation of the liver)	1:3,100,000
HIV (virus that causes AIDS)	1:4,700,000
West Nile Virus	Less than 1:1,000,000
Human T-cell lymphotropic virus (HTLV)- virus associated with depression of the immune system and can cause cancer	1:3,000,000