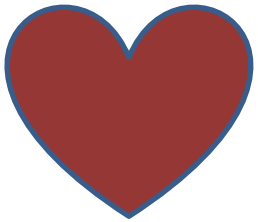
UNDERSTANDING

BLOOD

TRANSFUSIONS

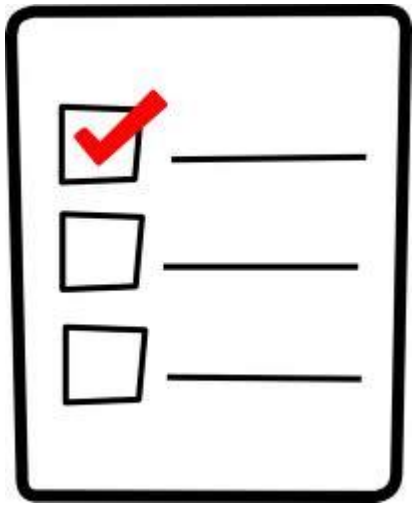
This information aim to help patients understand the blood transfusion process and its possible risks.



KEEPING OUR BLOOD SUPPLY AS SAFE AS POSSIBLE FOR OUR PATIENTS

In Singapore, blood donors come forward to support a life-saving cause without receiving any payment.

SCREENED …



Studies worldwide have shown that voluntary blood donors from low-risk populations are the foundation of a safe and sustainable blood supply. All donors are also carefully screened using a comprehensive health assessment questionaire.

… AND TESTED

Every unit of donated blood is managed under a comprehensive quality system benchmarked against Stringent internationally recognised standards.

All blood are tested for Hepatitis B, Hepatitis C, HIV, and Syphilis, using the most sensitive methods available.

The ABO group (blood type) and Rhesus type (positive or negative) are tested and confirmed on every unit to ensure that the donated blood is given to a patients with a compatible blood type. An antibody screen is also performed on every unit of donated blood, to check for high levels of significant abnormal antibodies in a donor's blood which may result in adverse reactions during blood transfusion.

The decision on which patients require a transfusion and the transfusion amount is ultimately a clinical one made by your doctor. Doctors will carefully weigh the benefits of blood transfusion against the risks, before recommending a transfusion. Nationally, published clinical guidelines are in place to guide clinicians in the prescribing of blood transfusions and these based on international practice.

THE BLOOD TRANSFUSION PROCESS

The flowchart below shows what you can expect before and during a blood transfusion.

1. A blood sample will be taken to confirm your blood group and to screen for unusual protein may react against certain red cells in the blood you will receive during the transfusion. More blood samples may be needed to identify this protein if the screening is positive. You may therefore have to wait for some time for these tests to be completed, but they are necessary to ensure your safety.

2. Before the red cell transfusion is carried out, the donor's blood is tested (called cross-matching) against your own blood sample to ensure that the red cells to be transfused are compatible with your blood.

3 Before the transfusion starts, your identity will be carefully checked against the identity written on the unit of blood assigned.

4 This is why the nurse or doctor will ask you to state your name and identification details when taking a blood sample and and prior to transfusion.

5 A blood transfusion is usually given through a small tube inserted directly into a blood vessal in the arm.

6 On average, it takes about two to three hours for each unit of red cells to be transfused, and about 20 to 30 minutes for each unit of plateles or plasma.

7 Because of the risk of baterial infection or deterioration of the blood components when they are exposed to room temperatures, transfusion of each unit should not take more than four hours.

8

A nurse will monitor your temporature, pulse and blood pressure, and will continue to monitor this several times during the transfusion.

9

If you feel unwell or become uncomfortable during or just after the transfusion, please notify the nurses immediately.

IS BLOOD TRANSFUSION THE ONLY OPTION?

Not all patients have to undergo a blood transfusion for their conditions. Most people cope well with mild anemia. When the blood loss is mild, the body is usually able to regenerate new red blood cells and iron supplements can be given to aid this recovery.

Selected patients going for elective surgery may be suitable for autologous blood donation – a form of blood donation where a patients can pre-store his or her own blood for a short time, to be used during the surgery.

Please discuss any queries or concerns you may have about blood transfusion with your doctor.

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BLOOD TRANSFUSION RISKS

However, in spite of the stringent measures in place, there is still very small percentage of risk of possible complications from blood transfusion.

TRANSFUSION – TRANSMITTED INFECTIONS

These could be due to:

Infection Window Period: In the early stages of infections such as HIV, Hepatitis B and Hepatitis C, there is a window period when the blood is infectious, but the level of virus is too low to be detected by available laboratory tests.

Availability and Sensitivity of Tests: Screening tests for some infections such as malaria, variant Creutzfeld Jakob Disease (vCJD) and dengue are currently either unavailable or are not sensitive enough for detection.

New and Unknown Infectious Agents: These are not detected due to unavailability of tests.

The current risks of contracting major infections through a blood transfusion in developed countries have steadily decreased over the years and are now very low. The current estimated residual risks in Singapore is one per 110,000 donations for Hepatitis B, one per 1.3 million donations for Hepatitis C and one per 1.1 million donations for HIV.

REACTIONS TO BLOOD TRANSFUSIONS AND OTHER COMPLICATIONS

There are patients who may occasionally experience mild reactions or serious complications after undergoing blood transfusions. These may appear during the transfusion or for certain reactions, within six hours after completion of the transfusion.

MILD REACTIONS

Mild reactions usually subside quickly after the transfusion is stopped and can be easily treated with medication. Most reactions that occur are mild in nature. Some examples of mild transfusion reactions are rashes or hives (about 1 to 3% of transfusions) and fever (about 0.1 to 1% of transfusions).

SERIOUS COMPLICATIONS

Serious complications are very rare but may include the following:

Excessive fluid in the body and lungs which leads to shortness of breath (less than 1% of transfusions). Patients with heart or kidney problems may be at greater risks.

Transfusion Related Acute Lung Injury (TRALI) leading to difficulty in breathing (less than 0.02% of transfusions).

Severe life threatening complications arising from transfusion of blood group-incompatiable blood products (less than 0.02% of blood transfusions).

Severe allergic reaction which may be life threatening (less than 0.005% of blood transfusions).

Bacterial infections (less than 0.002% of transfusions) which may be life-threatening and may be unavoidable despite all stringent precautions taken.

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