



## Neonatal Blood Transfusion Information for Parents and Relatives

### INTRODUCTION

Like all medical treatments, a blood transfusion should only be given if it is essential. Your doctor or nurse will balance the risk of your baby having a blood transfusion against the risk of not having one. They will explain to you why your baby needs a blood transfusion, but please ask if they do not. They should also explain the risks and any possible alternatives before gaining consent for the procedure.

### WHY DO BABIES NEED A BLOOD TRANSFUSION?

Newborn babies frequently become anaemic (have a reduced number of red blood cells), particularly if they are born early, the main cause of anaemia of prematurity which is an immature bone marrow which cannot make red cells to replace those lost i.e. when the red cells naturally die. This may be because of medical problems, or because babies who are unwell require a large number of blood tests to monitor their progress and this needs to be replaced. Occasionally, babies who are very jaundiced or anaemic (mainly because of interaction with Mother's blood or Antibodies) need to have blood removed as well as transfused; this is called an exchange transfusion. If your baby needs an operation, a blood transfusion may be needed to replace any blood lost during surgery. There are other medical conditions that may require your baby to have a transfusion such as abnormal bleeding or low platelet count. These reasons are best explained by the doctor in charge of your baby's care.

### RISKS ASSOCIATED WITH A BLOOD TRANSFUSION?

The risk that a blood transfusion will cause severe harm or even death is very low but this should be discussed with the doctor or nurse caring for your baby. One of the most important checks for a safe transfusion is to make sure your baby gets the right blood. To ensure this happens, staff carry out careful identification checks of both your baby and the blood that will be given. This is why it is important that your baby wears an identification band. If you are with your baby, you may also be asked to confirm your baby's full name and date of birth.

Compared to other everyday risks, the likelihood of getting an infection from a blood transfusion is very low. All blood donors are unpaid volunteers and the risk of an infected unit entering the Irish blood supply is extremely low. Before giving blood donors must answer questions about their health and risk factors for infection. Only a person who is in good health can donate blood. Blood from each accepted donor goes through extensive testing and screening. All donations are tested for evidence of HIV, hepatitis B, C and E thus reducing the risk of transmitting these viruses via blood products to negligible levels. However it is not practical or even possible to screen all donations for all infections, therefore, there will always be a small risk associated with having a blood transfusion.

After donor screening and testing the estimated residual viral risks are as follows:

- HIV: less than 1 in 9 million donations
- Hepatitis C: less than 1 in 12 million donations
- Hepatitis B: less than 1 in 5 million donations

There is very small risk of developing a bacterial infection from a blood transfusion (especially platelets). Careful selection, handling and storage of blood products minimises this risk.

Variant CJD (vCJD) is a degenerative neurological disease which is the human equivalent of BSE disease of cattle (mad cow). In Ireland, the chances of an individual developing this disease due to eating infected beef is estimated to be very small due to the lower amount of BSE infected cattle here. It is now known that vCJD can be transmitted through blood transfusion although the risks are believed to be extremely low. Four cases of transmission by transfusion have been reported to date in the UK (where the risk of vCJD was vastly greater) and none since 2008. There have been no cases reported related to transfusion in Ireland. There is no test currently available for vCJD but the IBTS have introduced substantial precautions to reduce the risk of transmission. More information on vCJD can be found on the Irish blood transfusion service website: [www.giveblood.ie](http://www.giveblood.ie)

The most significant risk is of receiving the incorrect blood component, particularly the incorrect blood group of red cells ("ABO incompatible"). This can only be prevented by robust methods to match patient sample to blood unit. One of the most important steps is correct identification of the patient when blood samples are being taken. Therefore, the staff member taking blood samples will ensure they have the correct baby by checking the Baby's identity band.

### **HOW WILL THE BLOOD BE PREPARED FOR MY BABY?**

Before a blood transfusion is given, a blood sample will be taken from the baby to match the baby's blood with blood from a suitable donor. Prior to starting the transfusion, it is very important to ensure that both baby and the unit of blood prepared for the baby are correctly identified. As part of the identification procedure, the midwife, nurse, doctor or phlebotomist will check your baby's armband before taking the blood sample and again before starting the transfusion.

### **HOW IS BLOOD GIVEN?**

A blood transfusion is given through a small drip directly into a vein. The blood will usually be given using a syringe attached to a pump. The amount of time each transfusion takes will depend on a variety of factors; your baby's doctor or nurse will be able to tell you more about this. Your baby will be monitored closely during the transfusion by checking temperature, heart rate, breathing and oxygen levels. If your baby needs to be given more than one transfusion, it is normally arranged for the blood to come from the same donor. One donated unit of blood assigned to an infant will be split into a number of aliquots. If your baby requires another transfusion before this unit expires, this means that it will come from the same donation and donor.

### **HOW WILL MY BABY FEEL DURING THEIR BLOOD TRANSFUSION?**

Most babies will not feel anything unusual during their blood transfusion. Your baby will be closely observed before, during and after the blood transfusion; but please inform staff if you have any concerns about your baby during or after the transfusion. Most babies will continue feeding as normal throughout the transfusion unless there is a medical concern which would mean feeds are stopped for the duration of the transfusion and recommenced soon after the transfusion is completed. Severe reactions to blood are extremely rare. If they do occur, staff are trained to recognise and treat them.

### **CAN I DONATE MY BLOOD FOR MY BABY?**

No. This is common question but there are good reasons why this is not done. There is an increased risk of some types of serious reactions following blood transfusion from relatives. Unless blood from a close relative is specially treated with X-rays there is a risk that the transfused blood can escape the baby's immune system and bone marrow, resulting in bone marrow failure. It is better to avoid this risk. What if you have other worries about blood transfusion? If you are worried or have any questions, please talk to your baby's doctor or nurse.

Please encourage your relatives and friend to become blood donors.



*This leaflet was designed for your information and prepared by the NMH Blood Transfusion Committee*

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