Information for patients and their families, carers and guardians

Receiving a Blood Transfusion

Important information for all patients who may need a red cell, platelet or plasma transfusion.

Additional supplementary information for individual blood components, specific patient groups and younger children can be accessed via your local transfusion service.

This leaflet explains why you may be advised to have a transfusion of a blood component such as red cells, platelets or plasma.

Like all medical treatments, a transfusion should only be given when it is absolutely necessary and only after careful consideration. The risk of you having a transfusion will be balanced against the risk of not having one.

In an emergency, it may not have been possible to discuss all options at the time. If this happens, your doctor will talk to you about the transfusion you have had as soon as they can.

If you have a card that states you need to have blood of a specific type, or if you know this from your medical history, please show the card as soon as possible to a member of the team caring for you and ask them to tell the hospital transfusion laboratory.

Why might I need a blood transfusion?

Blood is made up of several different cells and substances:

- Red cells carry oxygen around the body; a lack of healthy red blood cells is called anaemia. A red cell transfusion is usually given because of a shortage of red blood cells in the blood, either because the body lacks the raw materials, is not making enough of them or because of blood loss. In some cases, anaemia can be treated with medicines such as iron; in other cases a blood transfusion may be the best, or only, option
- Platelets are cells in the blood which prevent bleeding and help the blood to clot. A platelet transfusion may be required to either increase the number of platelets in your blood or to replace platelets which are not working properly to treat or prevent bleeding
- Plasma is the liquid within blood that carries the blood cells around the body. A plasma transfusion may be required to treat or prevent bleeding if you have a lack of clotting factors. Plasma components include fresh frozen plasma (FFP), which contains many different clotting factors, and cryoprecipitate, which mainly contains a clotting factor called fibrinogen.

Most people can cope with losing a moderate amount of blood without needing a blood transfusion, as over time the body will make new blood cells and plasma to replace what was lost.

However, if larger amounts of blood are lost, a blood transfusion may be the best way of replacing blood rapidly. Blood components may be used to replace blood lost during major surgery, following accidents and for emergencies during childbirth.

Sometimes the bone marrow, which produces blood cells, fails to work properly. This may be due to disease or because of treatments such as chemotherapy or radiotherapy. This may be temporary or longer term. In this case, a treatment plan will be devised to meet your specific requirements.

Is a blood transfusion the only option?

Your doctor or nurse will explain why you need a transfusion and will discuss the risks, benefits and if any alternative treatments are available. It is important you understand why a transfusion is required and that you have an opportunity to ask any questions.

If your anaemia is due to low iron levels in the blood, receiving an iron supplement may reduce the need for blood transfusion. Please discuss with your doctor if this is a valid option for you.

As adults you have the right to refuse a blood transfusion, but you need to understand the consequences of doing so. Some medical treatments or operations cannot be safely carried out without a transfusion. In children, and patients who find it difficult to understand complex medical information, the medical team will work with the patient and their families or guardians, to make decisions that are in their best interests.

If you are having an operation a blood transfusion may be needed, but it may be possible to recycle your own blood during the operation by a process known as cell salvage. Ask your healthcare team if this process is available and, if so, whether it would be suitable for you.

Also, medicines which improve blood clotting, such as tranexamic acid, can sometimes be used to reduce blood loss and therefore reduce the need for transfusion.

What can I do before an operation to reduce the need for a blood transfusion?

If you are planned to have an operation where you might lose some blood, you should have a check to determine if you are anaemic. You may be advised to take iron supplements in the few weeks before your surgery – ask your doctor at the clinic or your GP if this applies to you. You can also help by ensuring you eat enough foods containing iron. A varied and balanced diet should normally provide an adequate iron intake.

If you are on warfarin or other anticoagulants, aspirin or other antiplatelet agents (all these may be referred to as "blood thinning" medicines) check with your doctor if you should stop these before your operation. Stopping these drugs may reduce the amount of bleeding, but may put you at increased risk of other problems. You must check with your doctor before stopping any medication.

How will my blood transfusion be given and how will I feel?

A transfusion is usually given through a tube directly into a vein in the arm. In some cases, a transfusion can be given via a central venous catheter, particularly if you have had one of these inserted as part of the treatment of your condition.

In order to determine the right amount of blood for you, it is recommended that your weight is recorded. You may be given more than one bag of blood as part of your treatment. It may take up to 4 hours to transfuse a bag of red cells but it can be safely given more quickly if needed. Routine platelet and plasma transfusions generally take between 30 minutes and 1 hour for each bag.

Observations such as temperature, pulse rate and blood pressure will be recorded before, during and after the transfusion and you will be carefully monitored throughout. Most people do not feel anything unusual during a transfusion.

Risks associated with a blood transfusion

Blood transfusions are common procedures that can save and improve lives and death due to transfusion is extremely rare. Most patients who receive a blood transfusion experience no complications or problems.

However, there are associated risks, which fall into four main categories:

Patient identification error

There are many checks in place to make your transfusion as safe as possible. Staff carry out careful identification steps to make sure you get the right blood component that is safe for you.

Before a blood transfusion, a blood sample is taken to match the blood. Your identification details must be put on the sample tube in your presence. You will be asked to confirm your full name and date of birth and this will be checked against an identification band (for all hospitalised patients) and the blood request form or equivalent. This check is to confirm the sample is being taken from the right person.

Wearing an identification band is essential for all patients about to receive a blood transfusion. Just before you receive the blood you will be asked your full name and date of birth again. This information will be checked against your identification band, the blood component bag and the prescription. Tell staff if any of the details or spellings on your identification band are incorrect.

Correct identification is crucial - Please feel comfortable in reminding the member of staff to ask you for this information if they do not do so.

Reactions

Most people do not feel any different during their transfusion. Your healthcare team will tell you what to expect. It is important that you inform a member of staff if you develop any symptoms during or after the transfusion. Some reactions may occur hours to days after a transfusion. Severe reactions to blood transfusions are very rare but, if they do occur, staff are trained to recognise and treat them.

Some people may experience a slight fever, chills, feel flushed or develop a rash, which is usually due to a mild immune reaction or allergy. This is easily treated, for example by giving paracetamol or giving the transfusion more slowly.

The healthcare team will also assess to see if you are at risk of a build-up of fluid in your circulation, so that measures can be taken to prevent this. You will be monitored throughout the transfusion for any symptoms of breathlessness. This symptom is taken very seriously, so you should inform a member of staff immediately if you have any trouble breathing, so that treatment can be given at the earliest opportunity.

If you are going home after your transfusion, ask your healthcare team for information about what to look for and who to contact for support and advice if you develop any symptoms.

Infection

Blood components are donated by healthy, unpaid volunteers and the risk of an infected unit getting into the UK blood supply is extremely low. Donors complete a health questionnaire every time they donate and blood donations are tested every time for a range of potential infections, including hepatitis B, C and E, and HIV. This makes the chance of transmitting any infection very low, but the risk can never be removed completely.

- The risk of testing failing to detect a blood unit carrying a significant viral infection is less than 1 in a million (Hepatitis B less than 1 in 1 million; HIV and Hepatitis C less than 1 in 10 million)

- The chance of contracting variant Creutzfeldt-Jakob Disease (vCJD) from a transfusion is very small; nevertheless, we exclude donors who may be at a higher risk of vCJD**. For this reason, anyone who has received a blood transfusion or any other blood component since 1980 is currently unable to donate blood or blood components**

- Bacteria could contaminate red cells and other components of blood. This could cause a dangerous reaction in any patients who receive contaminated units. We work hard to prevent this happening and the risks are now similar to the other infections listed above.

Complications of long-term transfusion

Some patients are dependent on blood transfusion for long periods of time. This may include patients with thalassaemia, sickle cell disease or bone marrow failure. Repeated transfusions can make patients more vulnerable to complications such as iron overload and antibody development. Your medical team can provide information on how the risks of these can be reduced and any available treatments.

Can I donate my blood for my child or relative?

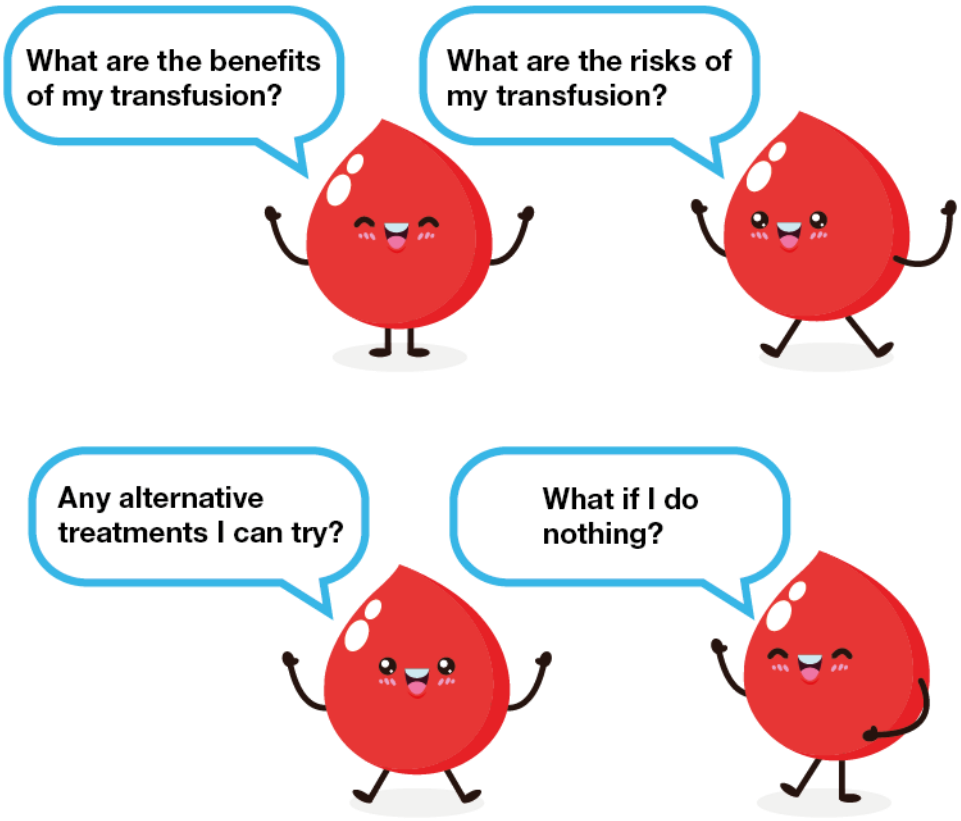
No, you cannot, because there are specific risks connected to blood transfusions from relatives which make such donations more dangerous than receiving blood from someone unrelated.

Concerns specific to you

Your healthcare team should discuss any other risks or concerns that are important particularly to you.

These may include:

- the impact on your other health problems
- the impact on future treatment options
- religious and other non-health-related considerations
- fear of needles, worries about feeling squeamish at the sight of blood or having had a bad experience in the past with a blood transfusion
- your healthcare team having recommended special blood components based on several factors related to your treatment or your condition.



Before you give your consent to receive a transfusion, **do you understand why you need the blood transfusion?** And do you know the answers to these questions?

Please tell your healthcare team about any concerns you may have. It is important to share those worries or concerns; they will not think that these fears are trivial or of no importance.

Duty of Candour

The UK Blood Transfusion Services comply with Duty of Candour legislation. This means we will act in an open and transparent manner where an unexpected or unintended event has occurred, which appears to have caused harm or death in direct relation to transfusion. Please ask your healthcare team for further information or access the following website:-Duty of candour - GOV.UK (www.gov.uk)

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