NHS
Blood and Transplant

Receiving a Blood Transfusion

Information for patients and their families, carers and guardians

The Infected Blood Inquiry Report 2024 highlighted the importance of involving patients in decisions about blood transfusion. This includes sharing information about the need for a blood transfusion, possible alternatives, and any associated risks of transfusion.

This leaflet provides information for any individuals who may need, or have had, a blood transfusion — including red cells, platelets, plasma, or granulocytes. It can also be used with families, carers, or guardians to help them understand the process and support informed decision-making.

If you have any questions or concerns at any stage of the transfusion process or require additional details about your transfusion — please speak with a member of your healthcare team.

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Why might I need a blood transfusion?

Blood is made up of several different cells and plasma, each playing an important role in the body.

- **Red blood cells** carry oxygen around the body; a lack of healthy red blood cells is called anaemia. This can be caused by the body not making enough red blood cells or because of blood loss. In some cases, anaemia can be managed by treating the cause with medicines such as iron; in other cases a blood transfusion may be the best, or only treatment.
- **Plasma** is the liquid part of blood and contains different substances called clotting factors to help stop bleeding. 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) and cryoprecipitate which is mainly used to provide a clotting factor called fibrinogen.
- **Platelets** are cells in the blood which prevent bleeding and along with clotting factors help the blood to clot. A platelet transfusion may be required to prevent or to treat bleeding by increasing the number of platelets in your body or by replacing platelets which are not working properly.

The body continually makes new blood cells and plasma but needs good levels of vitamins and minerals to do so. Most people who are anaemic do not require a transfusion. However, if larger amounts of blood are lost during major surgery, following accidents or emergencies, or during childbirth, a transfusion may be the best way of replacing it rapidly.

Sometimes the bone marrow, which produces blood cells, does not work properly - this may be due to disease or because of treatments such as chemotherapy. Bone marrow function may be affected temporarily or longer term. In this case, a treatment plan will be devised to meet your specific transfusion requirements.

Informed consent and shared decision-making

Like all medical treatments, a blood transfusion should only be given when necessary and with your informed consent. The risks associated with having a transfusion will be balanced against the risks of not having one.

Your Right to Choose

- Your healthcare team will provide information about the risks and benefits of transfusion and any alternative treatments (if available). This ensures you can make an informed decision about your treatment.
- Your healthcare team will answer any questions you have and together you will make a shared decision based on your individual needs.
- It is your choice whether to agree (consent) to transfusion or not; if you choose not to your healthcare team will inform you of any possible consequences.

Support for families, carers, or guardians

For children, and patients who find it difficult to understand the information provided, the healthcare team will fully inform and support the patient and appropriate family members, carers or guardian(s), to ensure decisions are made in the patient's best interests.

Those who have had a blood transfusion where informed consent could not be obtained

You may have received a transfusion without it being possible to discuss this with you in advance and gain your informed consent at the time (e.g. in an emergency). After considering the risks and benefits, the healthcare team caring for you will have decided it was in your best interest to have the transfusion. If this has happened, a member of the healthcare team will discuss the reasons for the transfusion with you as soon as possible and advise you of its implications. You are encouraged to ask any questions that you may have.

For further information, please visit https://www.shotuk.org/news/download-the-my-transfusion-app/

Are there any alternatives to a blood transfusion?

Alternatives to blood transfusion might be available depending on the situation. These could include:

- **Iron and other supplements:** Anaemia due to low iron can be treated with iron supplements. You can also help by ensuring you regularly eat enough foods containing iron. Iron might also be given if you have lost a significant amount of blood (for example during surgery or childbirth) to help you make new blood cells.
- **Cell salvage:** During an operation it may be possible to collect and give you back your own blood by cell salvage.
- **Medicines which improve blood clotting**, such as tranexamic acid, can sometimes be used to reduce blood loss and reduce the need for transfusion.

What should I tell my healthcare team before my blood transfusion?

If you have a card that states you need to receive a blood component with a specific requirement or if you know this from your medical history, inform the healthcare team caring for you or show them the card as soon as possible. Your healthcare team will also ask questions to identify if you have specific requirements.

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

- Normally a transfusion is given through a tube directly into a vein in the arm.
- Staff will carry out careful identification checks to make sure you get the right blood component.
- Your healthcare team should record your weight to help determine the amount of blood that you need.
- You may be given more than one unit.
- It may take up to 4 hours to transfuse a unit of red cells but your clinician may decide it is safe to transfuse over a shorter period of time.
- Routine platelet and plasma transfusions generally take between 30 minutes and 1 hour for each unit.
- As a minimum, your temperature, pulse rate, respiratory 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, but it is important to know that if you have been transfused (since 1980 until present) you can no longer donate blood. Death due to transfusion is extremely rare. Most patients who receive a transfusion experience no complications or problems. However, there are associated risks which fall into four main categories:

1. Reactions

It is important that you inform a member of staff if you develop any symptoms during or after the transfusion such as:

- Fever
- Chills
- Feeling flushed
- A rash (usually due to allergy)
- New itching or swelling
- Chest or back pain
- Feeling breathless
- Seeing blood in your urine
- Skin or eyes turn yellow

Breathing difficulties

You will be monitored throughout the transfusion for any difficulties with your breathing. This symptom is taken very seriously as it may indicate transfusion-associated circulatory overload (TACO), a condition where excess fluid can put pressure on your body. Steps will be taken before the transfusion to assess and reduce your risk of TACO. You must inform your healthcare team immediately if you have any trouble breathing, so that treatment can be given urgently.

Some reactions may occur hours, days or weeks after a transfusion. Severe reactions to transfusions, such as serious allergic reactions, are very rare, but if they do occur, staff are trained to recognise and treat them.

2. Patient identification errors

If your identity is not confirmed properly there is a risk of receiving the wrong blood, which can be harmful. The identity checks are in place to keep you safe.

Except in an emergency situation, a blood sample is taken before a transfusion to determine your blood group to ensure you receive the best matched component. 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 transfusion. Just before you receive the transfusion you will be asked to give your full name and date of birth again. This information will be checked against your identification band, the blood unit and the authorisation (prescription). Tell staff if any of the details 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.

3. Infection

Blood is donated by healthy, unpaid volunteers who complete a health questionnaire every time they donate. Every blood donation is tested for a range of infections, including hepatitis B, C and E, and HIV. This makes the chance of transmitting any infection very low. However, some risk remains, including from new or emerging infections that may not yet be detected by current tests.

Anyone who has received a blood transfusion of any blood component since 1980 is currently unable to donate blood. This was originally introduced to reduce the risk of variant Creutzfeldt - Jakob disease (vCJD) being transmitted by transfusion.

Between 2020 and 2024 there were 4 Transfusion Transmitted Infections (TTIs) reported in the UK; in the same period over 10.8 million blood components were issued by the 4 UK Blood Services to hospitals to use for transfusion.

For further information on the number of TTIs, please visit the Serious Hazards of Transfusion (SHOT) webpage: https://www.shotuk.org/resources/transfusion-safety-and-risks-in-the-uk/

4. 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 disorder or bone marrow disorders. Repeated transfusions can make patients more vulnerable to complications such as iron overload and antibody development. The healthcare team responsible for your care can advise how these risks can be reduced and talk to you about any available treatments.

After your transfusion

If you are going home after your transfusion, ask your healthcare team for information about what to look out for and who to contact for advice should you develop any symptoms. Information about your transfusion including blood components administered and any reactions or complications should be included in your record and discharge letter.

Please remember you can no longer be a blood donor.

Can I donate blood to family?

There are serious risks associated with blood donated from a relative of the recipient. These risks make such transfusions less safe than receiving blood from an unrelated donor. For this reason, individuals are unable to donate blood to be given to their child or relative.

Can I request specific blood?

The transfusion laboratory providing blood for your blood transfusion will select units of a suitable blood group and will ensure any specific transfusion requirements are met. Hospitals are unable to provide information about whether a donor has been vaccinated, as this is not recorded by UK Blood Services and does not affect the safety or quality of your transfusion.

Concerns specific to you

Your healthcare team should discuss any other risks or concerns that are specific 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.
- Special blood components based on factors related to your treatment or your condition e.g. irradiated blood to prevent a rare complication called transfusion associated graft versus host disease.

Please discuss any concerns with your healthcare team before giving your informed consent to receive a transfusion. It is important to understand why you need the transfusion and to feel comfortable asking questions.

Duty of Candour

The UK Blood Transfusion Services practise Duty of Candour. 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. In England, Wales and Scotland this is covered specifically in the law by Duty of Candour legislation. Please ask your healthcare team for further information or access the following website:

- https://www.gov.uk/government/publications/nhs-screening-programmes-duty-of-candour/duty-of-candour

Further information

SHOT My Transfusion APP https://www.shotuk.org/news/download-the-my-transfusion-app/

Contact us

This leaflet was prepared by the UK and Ireland Blood Transfusion Network on behalf of the 4 UK Blood Services.

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