

# Blood transfusion

Information for the public

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[www.nice.org.uk](http://www.nice.org.uk)

## About this information

NICE gives advice to doctors, nurses and other staff working in health and social care about how to look after people with different conditions.

This information is about the care that NICE says works best for adults, children and young people who need a blood transfusion. It tells you what you should expect and helps you ask questions about transfusions. It doesn't tell you what it is like to have a blood transfusion or why you may need one. There is a list of other places you can find out about this in [sources of advice and support](#).

There is also more information in a version of this advice [for doctors and nurses](#) about when and how to give people blood transfusions.

Your healthcare team should know about what NICE has said.

## Who should read it

NICE's advice on blood transfusions is for anyone older than 1 who may need a transfusion

because:

- they have a condition that stops their blood working properly, such as anaemia (a shortage of red blood cells)
- they are having an operation and might lose a lot of blood

It does not cover emergency blood transfusions, for example after an accident.

## What is a blood transfusion?

A blood transfusion is when blood is taken from one person (a 'donor') and given to someone else. Donors give some of their blood in advance, and it is stored until it is needed.

To give you a blood transfusion, your healthcare team will put a drip (a short plastic tube attached to a bag of blood) into a vein in your arm, and the blood will slowly enter your body. It may take up to 4 hours, but some transfusions can happen faster. There are some risks with having a transfusion (such as allergic reactions), but overall they are safe to have.

## Different types of blood transfusion

There are different types of blood transfusion, and each one replaces different parts ('components') of your blood. The type used depends on the reason you need a blood transfusion.

### Red blood cell

Cells that carry oxygen round your body. Red blood cell transfusions can help with anaemia.

### Platelet

Cells that work with 'clotting factors' in the plasma to make your blood clot (to stop a cut or wound from bleeding). Platelet transfusions can help with clotting problems.

## Plasma

The liquid part of your blood. It is normally frozen to preserve the clotting factors in it, and you may hear it called 'fresh frozen plasma' or 'FFP'. Plasma transfusions can help with [clotting problems](#).

## Cryoprecipitate

A blood component made from plasma that contains lots of clotting factors. Cryoprecipitate transfusions can help with [clotting problems](#).

## Prothrombin complex concentrate

A blood product made from plasma. It contains specific clotting factors that help [people who are taking medicines that make it difficult for their blood to clot](#).

## Who will I see?

You will have a team of people looking after you. There will be doctors and nurses involved in giving you a blood transfusion.

If your healthcare team think you might need a blood transfusion, they should explain why you need it, how they will give it to you, and if there are any [alternatives](#). They should also tell you about what this means for you in the future (for example, if you have had a blood transfusion you won't be able to donate blood). Your healthcare team should explain this before you have a transfusion, or after you have recovered if you need a transfusion unexpectedly (for example, if you have serious bleeding during an operation). Your healthcare team should encourage you to ask any questions you have about blood transfusions before and after you have a transfusion. These discussions should be written in your medical records.

To make sure you don't have any problems when having a blood transfusion (such as allergic reactions), your healthcare team should check your 'vital signs' (for example, your pulse, temperature and breathing rate) and how well you are before, during and after any transfusions you have. This should be done in a part of the hospital that has the staff needed to identify and treat any problems you have.

Your healthcare team should give you written information explaining any transfusions you have had and why you had them. This information could be included in the notes they give you when you leave hospital (your 'discharge summary'). They should also tell your GP you've had a transfusion.

If you're under 16, your parents or carers will usually be involved in your care. If you don't want your parents or carers involved and it's clear you understand all the information, you and your healthcare team can decide what care you should have.

**Some treatments or care described here may not be right for you. If you think that your care does not match this advice, talk to your care team.**

## Alternatives to blood transfusions for people having an operation

For people having an operation, there are often ways to try and avoid the need for a blood transfusion.

### Iron

If you are having an operation and have anaemia caused by a lack of iron, you should be offered iron to treat this. You will usually be given iron tablets, although you may also be given iron that you can put into liquid and drink. If these kinds of iron don't work for you (for example because they give you an upset stomach), you may be offered iron injections into your veins.

### Tranexamic acid and cell salvage

Blood clots form to stop you bleeding when you are injured, for example by a cut to your skin or during an operation. Tranexamic acid is a medicine that helps your blood to clot better. This can stop you losing too much blood during an operation. The operating team can also use special equipment to collect any blood you lose, so that your own blood can be given back to you. This is called 'cell salvage'.

Depending on how much blood your healthcare team thinks you could lose during your operation, you might be offered tranexamic acid. If you are likely to lose a lot of blood (such as in an operation on your heart) you may also be offered cell salvage.

You shouldn't normally be offered cell salvage without tranexamic acid, as it doesn't work as well on its own.

## Erythropoietin

Erythropoietin is a medicine that helps your body to make more red blood cells. You shouldn't normally be offered erythropoietin, because it doesn't work well at helping people who are having an operation to avoid the need for a blood transfusion. However, you may still be offered erythropoietin if you cannot have a blood transfusion because it goes against your beliefs, or because the type of blood you need is not available.

## Transfusions for anaemia

If you have anaemia, you may be offered a transfusion of [red blood cells](#). If you have serious bleeding, anaemia that has gone on for a long time ('chronic' anaemia) or heart disease, then your healthcare team should take this into account when deciding whether you need red blood cells.

## Transfusions for clotting problems

In some people, blood doesn't clot as well as it should, and they may bleed for longer than normal. You may be offered a transfusion of [platelets](#), [fresh frozen plasma](#), or [cryoprecipitate](#) to help with clotting problems:

- If you have a condition called thrombocytopenia (a shortage of platelets) and you are bleeding.
- If you are bleeding very heavily (but it's not life-threatening) and your blood tests show your blood is clotting too slowly.
- If you are having an operation, and your blood tests show your blood is clotting too slowly.

Some people who are at high risk of bleeding may be offered a transfusion to stop problems from starting (a 'prophylactic' transfusion). This includes:

- people with certain types of thrombocytopenia
- people with clotting problems who are having an operation.

## People taking warfarin

If you are taking warfarin (a medicine that stops your blood from clotting), you should be given a transfusion of prothrombin complex concentrate straightaway if you are bleeding heavily or if you have had a head injury that might have caused bleeding in your brain.

You may be given a transfusion of prothrombin complex concentrate straightaway if you are taking warfarin and need to have an emergency operation.

## Questions to ask about blood transfusions

These questions may help you discuss blood transfusions with your healthcare team.

### Finding out what's wrong (diagnosis)

- Do I have a condition that means I will need regular blood transfusions?

### About blood transfusion

- Can you tell me more about blood transfusions?
- How many blood transfusions will I need to have?
- Will having a blood transfusion affect me later in life?
- Are there any support organisations in my local area?
- I can't have some/any types of blood transfusions because they go against my beliefs. What alternative treatments can I have?

## Treatments

- Why have you decided to offer me this particular type of treatment?
- What are the pros and cons of this treatment?
- What will it involve?
- How will it help me? What effect will it have on my symptoms and everyday life? What sort of improvements might I expect?
- How long will it take to have an effect?
- Are there any risks with this treatment?
- Are there other treatments I could have instead?
- Where can I (and my family/carers) find more information?

## No treatment

- What will happen if I choose not to have the treatment you have offered?

## Side effects

- What side effects might I get?
- What should I do if I get any side effects? (For example, who should I contact?)
- Are there any long-term effects of having this treatment?

## For family members, friends or carers

- What can I/we do as carer(s) to help and support the person who needs a blood transfusion?
- Is there any additional support that I/we as carer(s) might benefit from or be entitled to?

## Following up on your treatment

- When should I start to feel better and what should I do if I don't start to feel better by then?
- Does the length/dose of my current treatment need to be changed?
- Can I still donate blood and organs after I have had a blood transfusion?

## Sources of advice and support

- The Diamond Blackfan Anaemia Charity, 0845 094 1548  
[www.diamondblackfan.org.uk/what-is-dba/blood-transfusion-therapy](http://www.diamondblackfan.org.uk/what-is-dba/blood-transfusion-therapy)
- The ITP Support Association  
[www.itpsupport.org.uk/treatmentsummary.htm](http://www.itpsupport.org.uk/treatmentsummary.htm)
- MDS UK Patient Support Group, 020 7733 7558  
[www.mdspatientsupport.org.uk/what-is-mds/information-material](http://www.mdspatientsupport.org.uk/what-is-mds/information-material)
- UK Thalassaemia Society, 020 8882 0011  
[www.ukts.org](http://www.ukts.org)

You can also go to [NHS Choices](#) for more information.

[NHS Blood and Transplant](#) also has information for patients having a blood transfusion.

NICE is not responsible for the quality or accuracy of any information or advice provided by these organisations.

Adults may also like to read NICE's information for the public on [patient experience in adult NHS services](#). This sets out what adults should be able to expect when they use the NHS. We also have more information on the NICE website about [using health and social care services](#).

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## Accreditation

