Manchester University
NHS Foundation Trust

Saint Mary's Hospital

Information for Patients

Blood Transfusions and Other Options for Pregnant Women

Red cells in blood are necessary to carry oxygen around the body. If the number of red cells in your blood is low this is called anaemia. This can be either because you are not making enough red cells (eg. because you do not have enough essential nutrients, like iron, in your diet) or because you are losing red cells (eg. if you are bleeding).

If you are very anaemic, your blood may not contain enough oxygen to allow your body to work properly. This can cause damage to your heart, kidneys and other organs.

Why might I need a blood transfusion?

Most people can cope with losing a moderate amount of blood without needing a blood transfusion and this loss can easily be replaced with other fluids. Your body will make new red blood cells (essential for carrying oxygen throughout the body) over the following few weeks. However, if larger amounts of blood are lost, a blood transfusion may be the only way of replacing blood rapidly.

A blood transfusion may be needed to treat severe bleeding, for example during or after childbirth. A blood transfusion can also be used to treat severe anaemia (a lack of red blood cells).

Are blood transfusions safe?

The biggest risk from receiving a blood transfusion used to be from receiving the wrong blood. This risk has significantly reduced as the process of checking and giving blood is much better now.

You must be correctly identified to make sure that you get the right blood transfusion. Wearing an identification band with your correct details is essential. You will be asked to state your full name and date of birth and the details on your identification band will be checked at the bedside by two qualified members of staff before each bag of blood is given.

If you have previously been given a card which states that you need to have blood of a specific type, please show it as soon as possible to your doctor or midwife and ask them to tell the hospital transfusion laboratory.

Compared to other everyday risks the likelihood of getting an infection from a blood transfusion is very low. All blood donors are unpaid volunteers. They are very carefully selected and tested to make sure that the blood they donate is as safe as possible.

The risk of getting hepatitis from a blood transfusion is currently about 1 in 500,000 for hepatitis B and 1 in 30 million for hepatitis C. The chance of getting HIV or HTLV infection is about 1 in 5 million (HIV is a viral infection that, as it reproduces, damages the body's immune system and the body becomes susceptible to illness and infection. AIDS is the state of advanced HIV infection).

Although the risk of getting variant Creutzfeldt-Jakob Disease (vCJD, sometimes called 'mad cow disease' – a rapidly progressive disease that causes destruction of the nervous system leading to dementia and death) from a blood transfusion is probably low with a single blood transfusion, the risk of any infection will increase with additional blood transfusions. Each year, approximately 2 million units of blood are transfused in England and there have been just a handful of cases where patients are known to have become infected with vCJD from a blood transfusion.

There may be other risks of blood transfusion that we do not yet know about, these risks are constantly being investigated.

How will my blood transfusion be given?

A blood transfusion is usually given through a small tube directly into a vein in the arm. Each bag of blood can take up to four hours to give, but can be safely given more quickly if needed. You may be given more than one bag of blood during your transfusion.

How will I feel during my blood transfusion?

Most people do not feel anything whilst receiving a blood transfusion. You will be observed at regular intervals; if you begin to feel unwell during or shortly after your blood transfusion, you should inform a member of staff immediately. Some people may develop a temperature, chills or a rash. These reactions are usually mild and are easily treated with Paracetamol, or by slowing down the blood transfusion. Fortunately, severe reactions to blood are extremely rare. If they do occur, staff are trained to recognise and treat these.

What if I have any worries about having a blood transfusion?

If you have any concerns you should discuss these with your doctor, nurse or midwife. Most hospitals have specialist staff working in blood transfusion and, if appropriate, they may be able to come and talk to you.

Is a blood transfusion my only option?

Blood transfusion is only needed for a small number of patients. Other options may include:

Iron Supplements (iron tablets)

Iron is essential to make new red cells. As prevention is far better than cure, it is important to maintain adequate iron stores through healthy eating and/or iron supplementation. For this reason your blood count will be checked at your booking appointment, then again at 28 and possibly 36 weeks of pregnancy.

Iron supplementation is usually given as tablets and/or liquid preparations. You can increase absorption by taking these with vitamin C.

Taking iron tablets can give you indigestion type symptoms. If you are unable to tolerate iron tablets you may need to be given iron through a drip into your vein.

Occasionally a medication called erythropoietin is used. This increases the production of red cells in your body. It is generally reserved for women who have medical conditions that affect red cell production. It is also given to women with low blood counts who decline blood transfusion. It is effective in 1 in every 4 women.

If you are told that you might need a blood transfusion, you should ask why it is necessary and whether there are any alternative treatments.

What if I refuse a transfusion of blood and/or blood products?

You do have the right to refuse a blood transfusion, but you need to fully understand the consequences of this before doing so.

The Trust recognises that the decision of an individual to absolutely refuse the transfusion of whole blood and/or its primary components is a personal choice and one that is fully acknowledged and respected.

Here at Saint Mary's we recognise that it is important to have an open discussion with each pregnant woman to establish clearly which (if any) blood and/or blood products are acceptable and in which circumstances. All treatments should be a matter of patient choice. In addition you might wish to seek advice regarding the acceptance of certain products and/or therapies with your community/religious leader.

Products usually acceptable to all women (including Jehovah's Witnesses) if there is severe bleeding:

- Medical therapies – iron infusions, iron therapy, oral iron/folate replacement, erythropoietin, syntocinon, syntometrine, haemobate and/or misoprostol.

- Surgical therapies – Tamponade balloon, B-Lynch compression suture, hysterectomy.

- Volume expanders – Crystalloids and Colloid.

Products which may not be acceptable to women, (particularly Jehovah's Witnesses):

Transfusion of:

- Whole blood.
- Packed red blood cells.
- White cells.
- Platelets.
- Fresh Frozen Plasma (FFP).

What are the alternatives to blood products?

You may wish to consider the possibility of having your own blood rather than blood from a donor. This is called an autologous blood transfusion.

Several options MAY be available:

- **Pre-operative autologous blood transfusion**

  This involves units of blood being drawn from you usually 3-5 weeks prior to a surgical procedure and stored until required. This requires a normal blood count (at least 12g/dl) and no iron deficiency, both of which may not be achieved in pregnancy. This cannot be used in the case of unpredictable blood loss such as bleeding during pregnancy or at the time of emergency surgery or haemorrhage following delivery.

- **Intra-operative haemodilution**

  Blood is collected from you at the start of surgery and this is then stored. Fluids are given to you by a drip to replace that lost fluid volume. If you should then bleed during your surgery, the blood that you lose will not have as many red cells in it. The stored blood is then returned to you after surgery. This process is not feasible in an emergency.

- **Intra-operative or post-operative cell salvage**

  At the time of your operation, blood that you lose from the operation site can be collected. This blood can be washed in a special machine and returned back to you (by way of a closed system for Jehovah Witness patients).

  This procedure is not entirely risk free, however any risk is thought to be low. The Royal College of Obstetricians and Gynaecology endorse the use of cell salvage.

All the above options can be discussed with either your midwife or obstetrician during the antenatal period. Any discussions will be clearly documented alongside any decisions you make ('advanced directive'). This may need updating if and when risks change.

- **Anti-D Immunoglobulin**

  This is offered to all pregnant women who are 'Rhesus Negative' and at risk of carrying a Rhesus Positive baby. 1500IU are given at 28 weeks gestation to guard against sensitisation, that is when you, the mother, make antibodies that can then attack the red blood cells of your baby (see Leaflet Antenatal Prophylaxis with Anti-D).

  Anti-D immunoglobulin is made from the part of the blood that contains no cells, that is, the plasma. This may or may not be acceptable to you and needs to be discussed with your midwife/obstetrician.

- **Active management of third stage**

  Active management of the third stage of labour reduces blood loss and haemorrhage after birth.

The third stage of labour is that period from the birth of your baby until delivery of the placenta (after birth). Muscles of your womb normally contract to stop your blood loss once the placenta separates. If this process does not work efficiently, you can haemorrhage (bleed). When interventions (listed below) are used to reduce bleeding during this time, it is known as active management of the third stage.

A review of trials found that active management of the third stage of labour, including drug administration (syntometrine or syntocinon), early clamping of the umbilical cord and controlled traction (pulling) on this cord was more effective than using none of these and waiting for the afterbirth to separate from your womb on its own. Although some of the medications can cause side effects of nausea and vomiting, there are no risks to the baby by active management.

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