

Rhesus factor is the name given to a protein attached to red blood cells in the bloodstream; about 15% of people do not have the protein and are called Rhesus negative; 85% do have the protein and are called Rhesus positive.

During pregnancy and delivery it is possible for a small amount of the baby's blood to enter the mother's circulation. If a Rhesus negative mother is giving birth to a Rhesus positive baby, and some of the baby's blood passes into the mother's bloodstream, the Rhesus negative mother's immune system produces a protein called antibodies in an effort to destroy the foreign Rhesus positive baby cells in her circulation.

If in the next pregnancy the baby is again Rhesus positive, the mother's immune system remembers the previous event and will produce antibodies in large numbers, which may cross the placenta and damage the baby's Rhesus positive red blood cells, causing the baby to become anaemic and in some cases to require a blood transfusion before birth

If you have any questions before your appointment please contact us:

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Further information about the Fetal Medicine Centre and our annual report can be found on our website:

www.fetalmedicinebirmingham.co.uk

The Fetal Medicine Centre

*Information for patients on
Fetal Blood Transfusion
and Fetal Anaemia*



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The Treatment of Fetal Anaemia

Your doctors have referred you for investigations and/or treatment for the anaemia which may be developing in your baby. The most common cause for this condition are Rhesus antibodies, although other antibodies and, rarely, viral infection can cause similar problems.

During pregnancy your antibody levels will be measured by taking samples of your blood, and the baby will be monitored by ultrasound scan. Should these tests give any indication that your baby is at risk of becoming anaemic we can take a sample of blood from the baby in the womb to measure the fetal haemoglobin, an indicator of the level of anaemia in your baby.

Fetal anaemia is a serious condition, and without treatment the baby would not survive. It is possible to correct the anaemia by giving a blood transfusion to your baby in the womb. It may be necessary to give more than one transfusion, depending on the level of anaemia in your baby and at what stage it develops.

The procedure of fetal blood transfusion unfortunately carries a risk of losing the baby in about 1% of transfusions undertaken. This risk increases if the baby is in poor condition due to the anaemia at the first transfusion.

Treatment is carried out by specialist doctors, nurses and midwives in the fetal medicine team. One of the nurse specialists in the team will meet you before the procedure begins, they will explain the procedures and co-ordinate your care through this time.

They will also liaise with your own doctors and midwives, and are available in the Fetal Medicine Centre or by phone during weekdays if you have any problems, or wish to talk to them for any reason.

Fetal Blood Transfusion

The day of the procedure

The laboratory needs to have samples of your blood, which is necessary to prepare suitable blood for transfusing your baby. We will make arrangements with you to have this done on the morning of the blood transfusion.

We will have made arrangements for you to be admitted to one of our antenatal wards, you will need to be there about 2 hours before the transfusion.

You will be given a single dose of antibiotic. If you choose to have sedation a light sedative tablet, which will make you feel drowsy, is available to you.

The transfusion will be done in the Fetal Medicine Centre and you will be brought down in your bed when we are ready to begin. In most cases you should expect to be back on the ward within an hour. Your partner or another relative or friend may be with you if you wish.

Procedure

The two clinicians performing the treatment will wear sterile gowns and gloves and you will be covered with sterile drapes to minimise any risk of infection. We will also clean the skin of your abdomen with spirit. Ultrasound scan will be used to enable us to find a suitable site and to monitor the procedure throughout.

When the doctor has identified a suitable blood vessel in the baby's circulation, he will pass a needle through your skin, into the womb and into the blood vessel.

Depending on the position of the baby, it may take more than one attempt before the needle is correctly sited.

Now we are able to take a small sample of your baby's blood and measure the haemoglobin. Depending on this reading, the doctor will determine how much of the specially prepared blood the baby will need. The blood is given through the needle by syringe, further small samples of baby's blood being taken to measure the haemoglobin as the transfusion progresses. When a satisfactory haemoglobin level has been reached, the needle will be removed and the transfusion is complete.

After your procedure

You will then be taken back to the ward in your bed. We will arrange for you to have an ultrasound scan later the same day or the following morning. If another transfusion is needed we will make arrangements before you go home.

A brief note on Rhesus antibodies

It is perfectly normal for mothers to have a different blood group from their baby's, would not expect this to present a problem. However, if there are differences between mother and baby on the Rhesus factor, then problems may arise.