

## **Information for Women Who are Rhesus Negative**

### ***HOW MIGHT BEING RHESUS D NEGATIVE AFFECT MY BABY?***

If your baby is Rhesus D negative, like you, there will be no problems at all. (Over one third of babies born to Rhesus D negative mothers are also Rhesus D negative).

If your baby is Rhesus D positive, problems can sometimes develop if a small amount of your baby's blood leaks through the placenta and mixes with your blood. Your blood cells may react to the baby's positive blood cells and produce antibodies that attack and destroy these 'foreign' cells. This is an immune reaction called 'sensitisation' or 'iso-immunisation'. If you become sensitised, the Rhesus D antibodies remain in your blood permanently and can increase rapidly in number if your blood mixes with Rhesus D positive blood again, as in another pregnancy where the baby is Rhesus D positive.

It is very rare for problems to develop in a first pregnancy. The most common time for the baby's and mother's blood to mix is around the time of the birth. In this case, the baby who has just been born is not affected but if antibodies are produced they will remain in your blood and can affect any Rhesus D positive babies you have in the future.

If you develop Rhesus D antibodies, they can cross the placenta into the baby's blood and destroy some of the baby's blood cells. This can result in a condition called Haemolytic Disease of the Newborn (HDN), which may cause jaundice, anaemia and sometimes heart failure or even stillbirth. (Before 1969, when the preventive treatment was introduced, it was not unusual for babies to be born with this condition and they were called 'Rhesus babies', or 'blue babies' because they had heart failure).

Our aim is to prevent you developing antibodies in the first place, to prevent your baby becoming seriously ill with HDN. However, there are now some highly specialized treatments available and most affected babies are successfully treated.

### ***HOW DOES PREVENTATIVE TREATMENT WORK?***

The Treatment is an injection of "Anti-D". Anti-D is obtained from Rhesus D negative male blood donors who have been given Rhesus D positive blood to stimulate them to produce antibodies. The injection Anti-D destroys any of your baby's Rhesus D positive cells that may have leaked into your blood, so that you will not need to produce your own antibodies and sensitisation will not occur. The Anti-D is absorbed and disappears within about 8 weeks.

### **WHEN IS ANTI-D GIVEN?**

An injection of Anti-D is recommended for all Rhesus D negative women:

- At 26-28 weeks
- At 34 weeks
- Within 72 hours of birth, if the baby is found to be Rhesus positive

Anti-D is also recommended for Rhesus D negative women in the following situations (called Sensitising events) where there is a particular risk that the baby's blood may leak across the placenta:

- vaginal bleeding after 12 weeks
- injury to the abdomen (including seat belt injury)
- amniocentesis, chorionic villus sample, any surgery inside the uterus
- external cephalic version (turning a breech baby)
- stillbirth
- miscarriage treated by an operation, ectopic pregnancy
- termination of pregnancy

If you have any of the above, you should tell the midwife or doctor that you are Rhesus D negative.

Blood tests are offered at 26-28 weeks, 34 weeks and immediately after the birth, to check whether you have produced any antibodies. After the birth, your blood will also be tested to measure any leakage of your baby's blood cells in your blood (Kleihauer test).

#### **HOW EFFECTIVE IS THE PREVENTIVE TREATMENT?**

If you have Anti-D injections routinely during pregnancy and after the birth of a positive baby, the risk of developing antibodies is very small – less than 2 in a thousand pregnancies.

If you only have Anti-D after the birth (if the baby is found to be a Rhesus D positive), and if you have a sensitising event and do not have the routine injections during pregnancy, the risk of developing antibodies is about 1 in a hundred pregnancies. This approach has reduced the death rate in babies from 1.2 per thousand births to 1.6 per hundred thousand births.

#### **ARE THERE ANY RISKS IN HAVING ANTI-D?**

As Anti-D is a human blood product, the risk of getting an infectious disease (including those which have not yet been discovered) from a blood donor cannot totally be ruled out.

To reduce the risk of infection, all donors are regularly tested for infections carried in the blood (HIV-1, HIV-2, hepatitis B, hepatitis C, syphilis) and donated blood is treated to inactivate viruses. The Anti-D product we offer comes from paid donors in the USA and Canada. This is to avoid the theoretical possibility of transmission of new variant CJD.

There have been cases of hepatitis C infection from Anti-D in Ireland and Germany, but there are no documented cases of any viral infection from Anti-D in the UK or North America since its introduction, over 30 years ago. Other possible side effects include:

- pain and swelling at the injection site
- occasionally, fever, skin reactions, chills
- in rare cases, allergic reactions including anaphylactic shock

If you have had a previous bad reaction to blood transfusion or blood products, or if you have any blood clotting disorder, please tell your doctor before you have Anti\_D.

Anti-D will interfere with the response to some vaccinations, including rubella and chickenpox. Vaccinations should be given 3 weeks before, or three months after Anti-D.

Small amounts of Anti-D do cross the placenta to the baby, but there are no known harmful effects on the baby. However, effects on the immune system of the baby have not been systematically studied.

### **CAN I FIND OUT MY BABY'S BLOOD TYPE?**

We do not test for your baby's blood type during pregnancy.

Immediately after the birth, a sample of your baby's blood is taken from the cord or placenta, to check the blood group and type. You should get the result the following day and have an Anti-D injection as soon as possible if your baby is Rhesus D positive.

If your baby's father is Rhesus D negative, your baby will also be negative, and you will not need Anti-D. If your baby's father is Rhesus D positive, your baby could be either positive or negative.

We do not provide blood tests for partners – if your baby's father wishes to find out his blood type, he could consider becoming a blood donor (telephone 0345 711 711) or arrange to have a test done privately. (About one in six people are Rhesus D negative).

### **SPECIAL NOTE FOR INTRAVENOUS DRUG USERS**

Each time you share a needle with somebody who is Rhesus D positive (five out of six people), you are at risk of developing Rhesus D antibodies. If your partner is Rhesus D positive, there is a 70% chance that you will have a Rhesus D positive baby together, which could be affected by HDN if you develop Rhesus D antibodies.