We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site.

For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

Guidance on the use of routine antenatal anti-D prophylaxis (RAADP) and postnatal care for RhD negative women
**What is NICE Guidance?**

The National Institute for Health and Care Excellence (NICE) is a part of the NHS. It produces guidance for both the NHS and patients on medicines, medical equipment, diagnostic tests and clinical and surgical procedures including where they should be used. This patient information leaflet is based on current NICE guidance (2008) for the care of RhD negative pregnant women.

**What does RhD negative mean?**

Just as every human being is unique, so are the characteristics of your blood. People can belong to one of four blood groups: A, B, AB & O. They are also either RhD positive or RhD negative. In the UK around 85% of people are RhD positive and 15% RhD negative. People who are RhD negative do not have the D antigen on their red blood cells. Whether a person is RhD positive or RhD negative is determined by their genes, that is, it is inherited from their parents.

**Why does RhD status matter?**

Rhesus status matters if you are RhD negative and become pregnant with a baby who is RhD positive. This can only happen if your baby’s father is RhD positive, but not all children who have a RhD positive father will be RhD positive because the father may have both RhD positive and RhD negative genes.

During pregnancy it is possible that your baby’s blood cells could enter your bloodstream in an event known as a feto-maternal haemorrhage (FMH). Should a large enough amount of blood cells from a RhD positive enter your blood, you will react to the D antigen in your baby’s blood as though it is a foreign substance and antibodies will be produced against it.

**References**


The Rosie Hospital (Maternity) Guidelines, 2019. *Care of RhD negative women in pregnancy and the postnatal period including anti-D administration. Policies and Procedures*.

A blood sample also needs to be taken from you, usually within two hours of the birth, to identify the amount of foetal blood cells that may have crossed into your blood during the birth (FMH). Laboratory processing of these samples can take a few days but as all RhD negative mothers with a RhD positive baby will be given routine postnatal anti-D prophylaxis this will not delay you going home.

If the results of this blood test show that the FMH is larger than the standard postnatal anti-D dose can deal with, then you will be contacted by one of the hospital midwives and a time arranged with you to come back to the hospital as soon as possible for further anti-D. A follow-up blood sample will also be needed to ensure that no foetal blood cells remain in your circulation.

The most common time for your baby’s blood cells to get into your blood is at the time of birth. However, it can happen at other times during pregnancy, for example during a miscarriage or abortion, or following a procedure such as amniocentesis, chorionic villus sampling or external cephalic version (this involves turning a breech baby to a head down position). It can also occur following an episode of vaginal bleeding or abdominal trauma. An event that could cause you to produce antibodies against the D antigen is called a ‘potentially sensitising event’.

Once sensitisation has occurred it is irreversible. This can cause problems later during the pregnancy and in future pregnancies because the antibodies now present in your blood can cross the placenta and attack the blood cells of a RhD positive baby. This can cause babies to have a condition called haemolytic disease of the fetus and newborn (HDFN). HDFN is sometimes very mild but can still cause jaundice. This is treatable but requires a longer postnatal stay for your baby and in some cases a blood transfusion. However, HDFN can be very serious and lead to severe anaemia and jaundice which can cause babies to be stillborn, die after birth or have severe, permanent disabilities.

Nowadays HDFN is uncommon because the condition can be easily prevented through administration of prophylactic anti-D which this leaflet will go on to explain. You should always inform your healthcare professional without delay if you experience vaginal bleeding or abdominal trauma. You will be assessed to check whether you need additional anti-D. Below 12 weeks of gestational age (or if you’ve not yet had your dating scan) you should call the Early Pregnancy Unit on 01223 217636. After 12 weeks you should call the Maternity Assessment line on 01223 217217.
What is anti-D prophylaxis?
Prophylaxis is the word given to a medicine that is used to prevent something happening. Anti-D prophylaxis means giving special antibodies that recognise the D antigen to prevent your body from producing your own antibodies against RhD positive blood cells (known as a ‘sensitisation’) and in turn preventing the development of HDFN. These special antibodies are taken from part of the blood called plasma that is collected from non-UK blood donors whose plasma have high levels of anti-D. The production of these anti-D antibodies is very strictly controlled and processed to ensure that the chance of a known virus being passed from the donor to the person receiving them is extremely low. As with all medications and blood products, there is a very low risk of allergic reaction therefore if you receive anti-D you should wait in the clinic where it was given for at least 20 minutes afterwards to ensure you don’t experience an adverse reaction.

Routine antenatal anti-D prophylaxis (RAADP)
Your blood group and RhD status are identified at the beginning of your pregnancy from a blood group sample taken with the routine ‘booking’ bloods. If you are found to be RhD negative you will be sent a letter informing you of the result and an appointment to attend clinic 21 for RAADP at 28 weeks’ pregnancy.

At the Rosie hospital RAADP is given to all pregnant women who are RhD negative as a single injection of 1500 international units of Rhophylac 300® (a brand of anti-D approved by NICE). This is administered intramuscularly into the upper arm. To be effective this must be given between 28-30 weeks of pregnancy as the risk of sensitisation is highest in the third trimester.

If you are RhD negative and you have a potentially sensitising event during any stage of pregnancy (such as an abdominal trauma, vaginal bleeding or invasive antenatal testing) a blood test will be taken and you will be offered additional anti-D prophylaxis at the time of the event. It is vital that you still attend your appointment for RAADP at 28-30 weeks even if you have been given anti-D earlier in pregnancy.
For women with bleeding disorders anti-D may be administered by intravenous routes.

Postnatal anti-D prophylaxis
If you are RhD negative, after you have given birth, a blood sample is taken to test your baby’s blood group and RhD status. This sample is usually taken from the part of the umbilical cord that is attached to the placenta. Occasionally, when this is not possible, a neonatologist or midwife caring for your baby will ask your permission to take a small blood sample directly from your baby, usually from the heel of the foot. If your baby’s blood group is found to be RhD positive, you will be offered a further injection of anti-D. This is known as postnatal anti-D prophylaxis. This dose is the same as the antenatal dose - 1500 international units of Rhophylac 300® administered intramuscularly into the upper arm within 72 hours of the birth.