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Information for Women with Rh D-Negative Blood
Anti-D Injections and your eligibility for Cell Free Fetal DNA testing

Your antenatal screening sample results indicate you have a Rh D-Negative blood type; this leaflet will explain what this means for you and your baby

Blood Groups

Just as every human being is unique, so are the factors in your blood. People can have one of four blood groups: A, B, AB and O, which are formed by substances carried on the red blood cells.

There is another important difference in people's blood called 'Rh factor' or 'D-type', which is a protein found on the red blood cells. Blood group and D-type are inherited from both parents.

People who are **'Rh positive'** have a protein called a **D antigen** on the surface of their red blood cells - they are said to be '**D-positive'**

People who are **'Rh negative'** do not have the D antigen on their red blood cells – they are **D-negative**

You and your baby may have different blood groups**.** If your blood group is D-negative and your baby's blood is D-positive, you are advised to have Anti-D injection(s).

Cell free fetal DNA Test

There is a simple screening test available which can show whether your baby is D-negative. A blood sample is taken from you after 11 weeks + 2 days. **If this shows that your baby is also D-negative, you will not require any Anti-D during your pregnancy.**

What is Anti-D?

Anti-D is an antibody contained in the plasma (fluid part) of human blood. Anti-D is made from pooled blood donors' blood and is given to you by an injection into your muscle.

Why is Anti-D used?

If you **do not** receive Anti-D, there is a chance that your baby's red blood cells will be destroyed due to antibodies made by your own immune system during pregnancy. This may result in the baby becoming anaemic (also known as 'Haemolytic Disease of the Fetus and Newborn' [HDFN] or 'Rhesus Disease'). This problem can become more severe with subsequent pregnancies. The spectrum of disease is wide, and ranges from mild jaundice to a baby dying.

When is Anti-D given?

About 1 in 6 pregnant women has the D-negative blood group.

If you are D-negative, you are advised to have an injection of Anti-D at times when there is a high risk of your blood and that of your baby becoming mixed. For example:

- If there is any bleeding in your pregnancy;
- Unusual abdominal pain;
- Following injury to your abdomen (tummy), such as a fall or blow;
- After miscarriage, ectopic pregnancy or termination of pregnancy;
- After an amniocentesis or chorionic villus sampling (CVS)
- After the birth of your baby (if the baby proves to have a D-positive blood group).

An injection of Anti-D administered within 72 hours of such events helps to prevent the production of your own antibodies. It may even be helpful up to 10 days after the event. **Tell your family doctor or midwife as soon as possible if you have any vaginal bleeding, abdominal pain or a fall or accident during pregnancy**.

Why do I need a routine Anti-D injection?
As well as giving Anti-D injections on all the above occasions, the Department of Health recommends that Anti-D should be given ***routinely*** to all women who have the D-negative blood group.

This is done at approximately 28-30 weeks of pregnancy. This has been shown to reduce the chance of Haemolytic Disease occurring in this and future pregnancies.

What are the benefits of Anti-D injections?
The main benefit of having Anti-D injections is that the risk of this and future pregnancies being affected by Haemolytic Disease in the baby is greatly reduced.

What are the risks of Anti-D?
There may be some localised soreness following the injection.

There has been a lot of research in recent years looking into whether blood products such as Anti-D can cause blood-borne infections such as Hepatitis B, HIV (the AIDS virus) or vCJD (the human form of mad cow disease). **There is no evidence that Anti-D cause any of these infections and they have been used safely for decades around the world**.

All donated blood used in obtaining Anti-D has been tested for Hepatitis B and C and HIV.

If you need further information or advice about Anti-D injections please speak to your midwife, family doctor or hospital staff.

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