



ANTI-D PROPHYLAXIS FOR RHD NEGATIVE MOTHERS

- INFORMATION FOR RHD NEGATIVE PREGNANT MOTHERS

HOW DOES A MOTHER'S RHD NEGATIVE BLOOD GROUP AFFECT PREGNANCY?

It is common for a baby's red blood cells to enter the mother's bloodstream during delivery. If the baby has inherited an RhD positive blood group from the father, the immune system of an RhD negative mother may start producing anti-D antibodies against the blood group factor. This is called immunization.

In addition, in the second half of pregnancy, small numbers of fetal red blood cells often cross the placenta to the mother's bloodstream without causing any symptoms. Some procedures and complications during pregnancy can also lead to immunization. Blood group immunization does not usually cause any problems to the unborn baby in the first pregnancy, but in subsequent pregnancies it can lead to the haemolytic disease of the fetus and newborn.

Anti-D antibodies are the main cause of the severe haemolytic disease of the fetus and newborn. When mild, the disease is asymptomatic but if left untreated the more severe forms of the disease can lead to disability in the fetus or newborn or even death. Because of modern treatment methods, the prognosis for the disease is usually good, but the prevention of immunization with anti-D immunoglobulin is still the most important means of reducing disabilities and deaths caused by the disease.

WHAT IS ANTI-D PROPHYLAXIS?

The production of anti-D antibodies can be prevented by giving the mother anti-D immunoglobulin as injections. Anti-D immunoglobulin works by destroying the baby's red blood cells that enter the mother's bloodstream before the mother's immune system has time to launch a reaction against them.

WHEN IS AN RHD NEGATIVE MOTHER GIVEN ANTI-D IMMUNOGLOBULIN?

Always after delivery if the fetus/newborn is RhD positive

- The RhD blood group of the fetus is determined using the mother's blood sample at 24–26 weeks of pregnancy
- If information of fetal blood group is not available, the baby's blood group is determined after delivery.
- The mother is given an anti-D injection at the maternity hospital within 72 hours of delivery before leaving the hospital.

If not given anti-D immunoglobulin after delivery, 16 % of RhD negative mothers become immunized. The post-delivery anti-D injection has been in use in Finland since 1969.

Between 28 and 30 weeks of pregnancy to RhD negative mothers if the fetus is RhD positive or fetal blood group is not known

- To avoid giving anti-D immunoglobulin unnecessarily, the baby's RhD status can be checked from the mother's blood sample between 24 and 26 weeks of pregnancy when a sample is taken at the maternity clinic for the blood group antibody screening.
- To prevent immunization at the later stages of pregnancy.
- The injection is given at the maternity clinic during a regular check-up.
- The injection is given even if the mother has been given anti-D immunoglobulin during the pregnancy for reasons mentioned below.

To RhD negative mothers whose fetus is RhD positive or fetal blood group is not known in situations that involve an increased risk of bleeding

- Chorionic villus sampling, amniocentesis or external cephalic version (a procedure performed to turn a breech baby to a head-down position)
- Abdominal trauma or bleeding during pregnancy
- Miscarriage, termination of pregnancy or ectopic pregnancy

Anti-D immunoglobulin is given either at the hospital or the maternity clinic depending on the place of treatment even if the mother has received an injection at the maternity clinic between 28 and 30 weeks of pregnancy.

CAN ANTI-D IMMUNOGLOBULIN BE HARMFUL?

The injection site may be sensitive or red for a couple of days but serious allergic reactions are rare. Anti-D immunoglobulin is not harmful to the fetus. Anti-D immunoglobulin can show up in the blood group antibody screening test even after several months, therefore information on the injection must be indicated on the laboratory referral.