



Rh Negative Blood and Pregnancy

What does it mean to be Rh negative?

Humans have four different blood types (A, B, AB, and O). There is also a protein called the Rh factor. If you have the Rh factor on your cells, you are Rh positive. If you don't have the Rh factor on your cells, you are Rh negative.

There is a 15 percent chance that you are Rh negative. Being Rh negative has no effect on general health, but it can cause problems if it is not monitored. Testing for Rh status is routine in early pregnancy.

How does being Rh negative affect pregnancy?

People who are Rh negative can make antibodies if exposed to Rh positive blood. This can happen during pregnancy or with a blood transfusion.

If a woman is pregnant, small amounts of the baby's blood can mix with the mother's blood (this is normal). If this happens, the mother's body may make antibodies. Antibodies are proteins the body makes to protect itself when it reacts with something that is foreign.

If a woman is pregnant and Rh negative, and either genetic parent of the baby (i.e. father, egg or sperm donor) is Rh positive, she is at risk for making Rh antibodies.

What can happen to my baby if I have Rh antibodies?

If you are pregnant and Rh negative and your baby is Rh positive, antibodies can form. Antibodies can cross the placenta and cause a serious problem for your baby, called hemolytic disease of the newborn (HDN). HDN can cause:

- low hemoglobin (anemia)
- toxins in the blood (jaundice)
- brain damage
- death

HDN can be prevented in 99.9 percent of Rh negative women with injections of Rh Immunoglobulin (known as Rhlg, WinRho or Rhogam).

What is Rh immunoglobulin?

Rh immunoglobulin is a blood product made from part of blood plasma (liquid). It prevents antibodies from forming. It is recommended whenever there is a chance of an Rh negative woman forming antibodies. This could happen with:

- pregnancy
- a miscarriage
- an abortion
- an amniocentesis or chorionic villus sampling (CVS)
- trauma (e.g., a car accident) during pregnancy
- a blood transfusion
- any other type of risk (such as vaginal bleeding in pregnancy)

When and how is Rhlg given?

Rhlg is given around 28 weeks of pregnancy or when there is a chance of antibodies forming. After delivery, blood is taken from the umbilical cord to determine the baby's blood group. If your baby is Rh positive, you will be given another dose of Rhlg.

Rhlg is given by injection into the muscle of your arm or hip.

Do I need Rhlg every time I get pregnant?

Rhlg is recommended with each pregnancy. It will help protect your baby and any future pregnancies. Once your body makes antibodies, they do not go away. Once your body has made antibodies, every time you get pregnant, the risk to your baby is more serious.

What are the risks of Rhlg?

Rhlg (WinRho[®] in Canada) is a blood product. These steps are taken to make it safe:

- all donors are tested for viruses (e.g., HIV, Hepatitis B, Hepatitis C)
- the product is filtered and treated to kill viruses
- WinRho[®] has been used since 1968 in Canada with very few serious effects reported.

If you have questions, talk to your midwife.

What are the side effects of Rhlg?

Most people who get Rhlg have no side effects.

Rarely, Rhlg can cause:

- pain at the injection site
- fever (temperature over 38.5 °C or 101.3 °F)
- feeling weak and unwell (malaise)
- a headache
- an allergic reaction (e.g., hives), which is usually not serious and goes away quickly

Is there any other way to prevent HDN?

Rhlg is the only way to prevent HDN caused by the Rh factor. Without this treatment there is a 12% risk of developing antibodies that can harm your baby.

When is Rhlg not used?

Rhlg is only used as a preventative measure. If your blood already has Rh antibodies, you will not be given Rhlg. You will have blood tests to monitor the strength of the antibodies and may need other treatment.

Will Rhlg hurt my baby?

No. Rhlg is given in such small amounts that even if it crosses into the baby's blood it will not cause harm.

What do I need to do?

Your midwife will ensure that you receive Rhogam at the right time and will help to arrange the necessary testing and appointments.

- You will need an appointment to get your Rhlg injection around 28 weeks of pregnancy.
- Shortly (up to 72hrs) before this appointment you will need to have your blood tested to make sure that no antibodies have developed.
- You will need to give your consent (verbally or by signature) to receive Rhlg since it is a blood product.

After delivery, you may or may not need another dose of Rhlg. If you do, you will receive it within 72hrs of the birth.

If you have any questions or concerns, talk to your midwife.

Sources:

Transfusion Medicine Safety Program, Alberta Health Services <https://myhealth.alberta.ca/Alberta/Pages/when-you-need-rh-immune-globulin.aspx>

Mount Sinai Hospital Maternal Infant Program <http://womensandinfantshealth.ca/wp-content/uploads/2012/11/rh-factor-and-rhig.pdf>