

RH-NEGATIVE

How Your Rh Factor Blood Type Affects Your Pregnancy

Usually your Rh factor blood type isn't an issue. But during pregnancy, being Rh-negative can be a problem if your baby is Rh-positive. If your blood and your baby's blood mix, your body will start to make antibodies that can damage your baby's red blood cells. This could cause your baby to develop anemia and other problems.

Each person's blood is one of four major types: A, B, AB, or O. Blood types are determined by the types of antigens on the blood cells. Antigens are proteins on the surface of blood cells that can cause a response from the immune system. The Rh factor is a type of protein on the surface of red blood cells. Most people who have the Rh factor are Rh-positive and those who do not are Rh-negative.

How do I know if I am Rh negative or Rh positive?

As part of your prenatal care, you will have blood tests to find out your blood type. If your blood lacks the Rh antigen, it is called Rh-negative. If it has the antigen, it is called Rh-positive. When the mother is Rh-negative and the father is Rh-positive, the fetus can inherit the Rh factor from the father. This makes the fetus Rh-positive too.

Problems can arise when the fetus's blood has the Rh factor and the mother's blood does not. You may develop antibodies to an Rh-positive baby. If a small amount of the baby's blood mixes with your blood, which often happens, your body may respond as if it were allergic to the baby. Your body may make antibodies to the Rh antigens in the baby's blood. This means you have become sensitized and your antibodies can cross the placenta and attack your baby's blood.

They break down the fetus's red blood cells and produce anemia (a condition that happens when the blood has a low number of red blood cells). This condition is called hemolytic disease or hemolytic anemia. It can become severe enough to cause serious illness, brain damage, or even death in the fetus or newborn. Sensitization can occur any time the fetus's blood mixes with the mother's blood.

It can occur if an Rh-negative woman has had:

How can problems be prevented?

A blood test can provide you with your blood type and Rh factor.

Antibody screen is another blood test that can show if an Rh-negative woman has developed antibodies to Rh-positive blood.

An injection of Rh immunoglobulin (RhIg), a blood product that can prevent sensitization of an Rh-negative mother.

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RhIg is used during pregnancy and after delivery:

If a woman with Rh-negative blood has not been sensitized, her doctor may suggest she receive RhIg around the 28th week of pregnancy to prevent sensitization for the rest of pregnancy.

If the baby is born with Rh-positive blood, the mother should be given another dose of RhIg to prevent her from making antibodies to the Rh-positive cells she may have received from their baby before and during delivery.

The treatment of RhIg is only good for the pregnancy in which it is given. Each pregnancy and delivery of an Rh-positive child requires repeat doses of RhIg.

Rh-negative women should also receive treatment after any miscarriage, ectopic pregnancy, or induced abortion to prevent any chance of the woman developing antibodies that would attack a future Rh-positive baby.

What are some other reasons RhIg may be given?

If and when amniocentesis is conducted, fetal Rh-positive red blood cells can mix with a mother's Rh-negative blood. This would cause her to produce antibodies, therefore making it necessary for RhIg to be given.

A Rh-negative mother may receive RhIg after birth, even if she decides to have her fallopian tubes tied and cut to prevent future pregnancies for the following reasons:

The woman may decide later to try to have the sterilization reversed. There is a slight chance the sterilization may fail to prevent pregnancy. In case there is a need for a blood transfusion in the future, the treatment will prevent her from developing antibodies.

What happens if antibodies develop?

Once a woman develops antibodies, RhIg treatment does not help. A mother who is Rh sensitized will be checked during her pregnancy to see if the fetus is developing the condition. The baby may be delivered on time, followed by a blood transfusion for the baby that will replace the diseased blood cells with healthy blood. For more severe cases, the

baby may be delivered early or given transfusions while in the mother's uterus.

How common is the Rh-negative factor?

More than 85% of people are Rh-positive.

of people are Rh-positive. The Rh factor does not affect a person's general health.

Problems can occur during pregnancy when the baby's blood has the Rh factor and the mother's blood does not, however it can be prevented in most cases with the medication called immunoglobulin (RhIg).

Compiled using information from the following sources:

1. Mayo Clinic Complete Book of Pregnancy & Baby's First Year. Johnson, Robert V., M.D., et al, Ch. 11.
2. Danforth's Obstetrics and Gynecology Ninth Ed. Scott, James R., et al, Ch. 18.

Reference

[Handbook of Adolescent Development Research and Its Impact on Global Policy](#)

[Geographies of Campus Inequality: Mapping the Diverse Experiences of First-Generation Students](#)