

The Rh Factor

What is the Rh factor?

The term Rh is the abbreviated form specifying the Rhesus blood group system. The Rh system contains several factors or antigens – the most commonly referenced being the D antigen. If the D antigen is present, a person is identified as Rh positive. If the D antigen is absent, the person is said to be Rh negative. About 85 per cent of Canadians are Rh positive, the remaining 15 per cent are Rh negative.

What is hemolytic disease of the newborn?

Hemolytic disease of the newborn develops when a baby's blood is incompatible with its mother's. One blood group system in which this occurs is the Rh system. This happens, for example, when the baby is Rh positive, but the mother is Rh negative. It can occur with other blood group (type) differences too.



What role does Canadian Blood Services play in preventing this disease?

Rh Immune Globulin, distributed by Canadian Blood Services in Canada, is manufactured from specifically chosen donors from various sites in North America. These sites are supervised by Canada's Cangene Corporation, the product's manufacturer.

In some provinces, blood samples from expectant mothers are tested in Canadian Blood Services' laboratories.

How does hemolytic disease of the newborn develop?



An Rh negative mother and an Rh positive father may have an Rh positive baby.

During pregnancy or delivery, some of the baby's Rh positive blood may enter the mother's Rh negative circulation through the placenta. The mother's blood then forms an antibody. A baby from a first pregnancy may not be affected by these maternal antibodies, however, in a future pregnancy, if the baby is Rh

positive, this antibody could pass from the mother's bloodstream through the placenta to the baby's bloodstream and destroy the baby's red blood cells. The chance of an Rh positive baby having hemolytic disease of the newborn increases with each successive pregnancy.

Depending on the amount of antibody in the mother's blood, a baby may develop anemia, jaundice or heart failure. The baby could also be born with a massively swollen body, or be stillborn.

Can the disease be prevented?

Hemolytic disease of the newborn can be prevented through good medical care. Any woman planning to conceive should ask her doctor about blood tests to determine her Rh blood type. This is normally done during the first prenatal checkup.

If a pregnant woman is Rh negative, her doctor will test her blood for Rh antibodies throughout the pregnancy. If she has no Rh antibodies, and the baby's father is (or could be) Rh positive, she should receive an injection of Rh Immune Globulin when she is at

28 weeks of her pregnancy, and again within 72 hours after delivery. The Rh Immune Globulin prevents the formation of Rh antibodies.

If the pregnant woman has already developed Rh antibodies, the doctor will take steps to increase the baby's chances of survival. Close medical surveillance is necessary to determine if any interventions would be required during the pregnancy. The doctor may perform an exchange transfusion (replacement of the baby's blood with Rh negative blood after birth), or an intrauterine transfusion (a transfusion of Rh negative blood to the baby, while it is still in the womb). Treatment depends on how fast the antibodies are increasing in the mother's blood.



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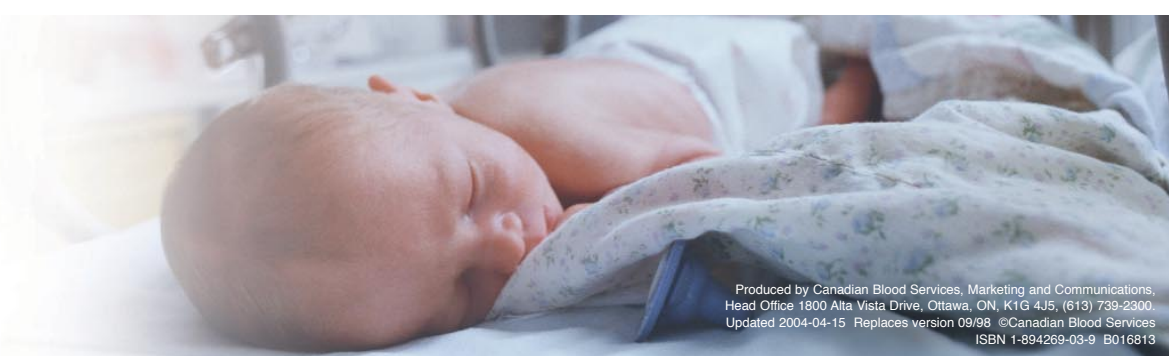
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Thanks to advances in treatment, Rh hemolytic disease of the newborn is rare in Canada.

For more specific information about Rh hemolytic disease of the newborn, please contact your doctor.

Please note that the information in this pamphlet is subject to change.



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