

Patient Information Leaflet

Haemolytic Disease of the Newborn (HDN)



As a teaching hospital, we conduct education and research to improve healthcare for our patients. During your visit students may be involved in your care, or you may be asked to participate in a clinical trial. Please speak to your doctor or nurse if you have any concerns.

Chief Executive: Joe Harrison
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Haemolytic Disease of the Newborn (HDN)

makes the baby's red blood cells break up more quickly than usual. It affects babies in the first few weeks to months after birth.

The most common form of HDN is Rhesus disease, where the mother's blood group is Rhesus negative and the baby's is Rhesus positive. Another common cause is ABO Incompatibility, where the mother's blood group is O and the baby's is A, B or AB. However, there are other factors that can cause breakdown of red blood cells.

Your midwife or the health professional looking after your baby will be able to explain more about the specific reason that has caused your baby to have HDN.

Why does it happen?

A small amount of baby's blood leaks into the mother's blood circulation during pregnancy. When the blood group of the mother and baby are different, the mother's immune system produces antibodies.

Some of the antibodies are able to cross the placenta and enter the baby's blood circulation and this causes the red blood cells to break up more quickly.

The antibodies only stay in circulation for a few months, so the condition usually resolves within the first 3 months of life.

How is it diagnosed?

One of the tests that is useful to diagnose HDN is a Direct Antibody Test (DAT).

If the mother's blood test during the pregnancy showed that the baby is at risk of developing HDN, a test for DAT is done at birth from the cord blood. If cord blood DAT is positive, a sample will be taken from baby to confirm the result.

If there was no risk noted in pregnancy and the baby becomes jaundiced after birth, this test will be done on baby's blood.

What to look for?

HDN causes the baby's red blood cells to break up more quickly than usual. This breakdown produces a waste product called "bilirubin". When bilirubin levels are high, it can cause **jaundice**. This shows as a yellow discolouration of the skin and the whites of the eyes.

Breakdown of red blood cells can cause Anaemia, which is a condition in which the number of red blood cells or the haemoglobin concentration within them is lower than normal.

Haemoglobin is needed to carry oxygen around the body. When the red blood cells break up quicker than usual, they can no longer carry enough oxygen and this can cause the baby to become **tired, breathless or to have an increase in their effort of breathing.**

It is very important to get medical advice if you notice these symptoms.

HDN can cause serious complications such as liver and brain damage **if not treated.**

How is it treated?

Babies severely affected with HDN will need treatment with phototherapy (light treatment) for symptoms of jaundice in the first few days of life until their bilirubin levels are normal.

Sometimes a baby with HDN may not require 'light treatment' but may still be at risk of developing anaemia. These babies may need further blood tests. The health professional looking after your baby will tell you if this is necessary.

Babies with HDN will be prescribed a vitamin called folic acid which helps the body to make new red blood cells. This vitamin is given by mouth daily and continued until the baby is 3 months old. Two weeks supply of folic acid will be given at discharge, further supply must be obtained from your GP. A prescription request for folic acid will be sent to you along with the first clinic appointment letter, please take the prescription request to the GP for repeat prescription.

Feeding Information

Breastfeeding is the best way to feed your baby as breast milk provides the optimal nutrition and protection against illness for your baby and also many non-nutritional benefits to both baby and mother. Where exclusive breast feeding is not possible, a suitable breast milk substitute would be a standard infant formula designed for birth onwards.

Further follow up?

If the health professional looking after your baby feels that your baby requires further blood tests, you will be given an appointment to attend the Haemolytic clinic.

A blood sample will be taken to check the haemoglobin level. A test for jaundice level can also be done if necessary. The blood sample will be taken by performing a heel prick. The sample will be put directly into a machine and we will be able to give you the result of the haemoglobin immediately. Sometimes, it may be necessary to send a sample of blood to the lab and you will be informed of the result.

At each clinic appointment, you will be advised on your baby's next appointment depending how quickly the levels are falling.

Please attend these appointments as they are important for your baby's health.

References:

What is Haemolytic Disease of the Newborn? Information for you. By NHS, Ayrshire & Arran. March 2010

NICE guidelines for Management of Neonatal Jaundice May 2010, available at: <https://www.nice.org.uk/guidance/cg98/evidence/full-guideline-245411821>
(Accessed on 03/10/2018)

Palmer J (2016) ABO Incompatibility in Newborns available at: <http://www.pregnancy.com.au/resources/topics-of-interest/postnatal/abo-incompatibility-in-newborns.shtml> (Accessed 31/03/16)

Wagle S (2016) Haemolytic Disease of the Newborn Treatment and Management from <http://emedicine.medscape.com/article/974349-treatment>
(Accessed 31/03/16)

Neonatal Community Nurses Contact number: 01908 996517

We work Monday to Friday 08.30—16.30.

If no-one answers the call, please leave a message and we will get back to you.

We ask for information about you so that you can receive proper care and treatment. This information remains confidential and is stored securely by the Trust in accordance with the provisions of the Data Protection Act 2018/GDPR. Further guidance can be found within our privacy notice found on our Trust website: www.mkuh.nhs.uk

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