

Direct antibody test (DAT) positive

Information for patients, parents and guardians

As part of your routine pregnancy screening, you have had a direct antibody test (DAT). We've given you this factsheet to explain what a DAT involves and what it means if your baby is DAT positive. If you have any further questions, please speak to a member of your healthcare team who will be pleased to advise you.

What is a direct antibody test (DAT)?

During pregnancy, some of the blood between the mother and baby may mix. This mixing of blood sometimes produces antibodies (proteins that are part of your body's natural defences) which may become a problem for the baby.

As part of routine antenatal (pregnancy) screening blood tests, your midwife will record your blood type (blood group) and check whether your blood contains any antibodies that may affect your baby's red blood cells. If the tests find rhesus negative (Rh-) or any other antibodies that could cause problems, we will take a sample of blood from your baby's umbilical cord after you've given birth. This blood sample will then be sent to the laboratory for a direct antibody test (DAT). The test looks for signs of a reaction between the mother's blood group and her baby's. Babies who develop early jaundice in the first 24 hours after being born will also have a routine DAT.

What does DAT positive mean?

The DAT results will tell us whether your baby is DAT positive. If your baby is DAT positive, there is a risk that they could develop anaemia (low number of red blood cells) and/or jaundice.

However, only a small number of DAT positive babies will develop these problems. Babies who are not DAT positive can still develop anaemia and jaundice. A positive DAT simply tells us to look out for any signs of anaemia and jaundice. It does not necessarily mean that your baby will need treatment.

If we find out that you have rhesus negative (Rh-) blood during pregnancy, we may give you an injection called anti-D to stop your body making antibodies against your baby's blood. Occasionally this injection causes the DAT result to come out positive. Babies who are DAT positive for this reason do not usually develop anaemia or jaundice.

What is anaemia?

Anaemia is a very common condition where the number of red blood cells is less than normal. Anaemia can occur in DAT positive babies because their red blood cells are broken down by the antibody from their mother. The anaemia can be present at birth or can develop later.

What is jaundice?

Jaundice is a common and usually harmless condition in newborn babies that causes yellowing of the skin and the whites of the eyes. It is caused by the build-up of bilirubin in the blood. Bilirubin is a yellow pigment produced when red blood cells, which carry oxygen around the body, are broken down. Newborn babies who are DAT positive may have higher levels of jaundice and may need to have treatment.

What happens if my baby is DAT positive?

Your baby will be examined by a member of the neonatal team. Blood tests will also be taken to look for anaemia and jaundice. Your baby may require phototherapy treatment for jaundice.

What is phototherapy?

Phototherapy (light treatment) is the most common treatment for jaundice. We will place your baby in a cot and treat them with a special blue light. This light will be absorbed by your baby's skin. Your baby will be undressed (apart from a nappy) during this treatment so that as much skin as possible is exposed to the light. We will make sure your baby's eyes are covered and protected. We will continue this light treatment until the bilirubin level falls to a safe level, which usually takes a day or two.

What is folic acid?

Folic acid is a vitamin that helps the body to make red blood cells. We will prescribe this for babies whose blood tests show that their red blood cell level has dropped more than expected. We will also show you how to give this to your baby before going home. You should give your baby folic acid every day for six weeks.

How will you monitor my baby?

Most babies who are DAT positive will be able to go home as normal. We will arrange a follow-up appointment for your baby before you go home.

You will need to bring your baby to the butterfly clinic (in the children's outpatient department) for blood tests when they are one week, three weeks and six weeks old. If more tests are required, we will discuss this with you. Your baby's blood results will be reviewed by a member of the neonatal home team and discussed with a neonatal consultant. The neonatal home team will contact you with the result.

The anaemia and/or jaundice may get worse after you have taken your baby home. Please look out for the following symptoms:

- increasing jaundice
- excessive sleepiness
- poor feeding
- fast or difficult breathing
- pale appearance

If your baby has any of the symptoms above or if you're worried about them, please contact the neonatal home team, your midwife or your GP.

Will there be any long-term problems?

Most babies will not have any long-term problems. This is because the mother's blood and baby's blood stop mixing after delivery, so the reaction in the baby's bloodstream ends.

In the 12 weeks after being born, babies also start to produce new red blood cells naturally.

Contact us

If you need further advice or information, please speak to your midwife or contact the neonatal home team.

Neonatal home team
Telephone: **07766 994 816**

If you need a translation of this document, an interpreter or a version in large print, Braille or on audiotape, please telephone **023 8120 4688** for help.

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