Saint Mary's Hospital
Manchester Centre for Genomic Medicine

Information for Patients

Non-invasive prenatal sexing using maternal blood sample

What is non-invasive prenatal sexing?

Non-invasive prenatal sex testing is a test that does not need a sample from the unborn baby (fetus) directly. Instead, a sample of blood is taken from the mother during pregnancy. The test is offered when there is an increased chance of having a boy with an X-linked genetic condition, or a condition that affects boys and girls differently (for example, Congenital Adrenal Hyperplasia - CAH). Finding out the sex of the baby using this test may help with decisions about other tests in pregnancy.

How does it work?

During a pregnancy, some genetic material (DNA) from the baby is present in the mother's blood. Only males have a Y chromosome, therefore if the test identifies DNA from a Y chromosome in the mother's blood, the baby is almost certainly male.

When can the test be done?

The test is usually done after 9 weeks. This is when more of the baby's DNA can be found in the mother's blood. In some circumstances the test may be offered between 7 and 9 weeks, although the chance of getting a clear cut result is lower and the test may have to be repeated.

Where would the test be done?

The sample needs to get to the laboratory for analysis as soon as possible after it is taken, so the sample is often taken in the Genetic Medicine Department at Saint Mary's Hospital in Manchester. If arrangements can be made to transport the sample quickly, it may be possible to have the blood sample taken in your local hospital.

What are the risks?

Because the test is non-invasive, there are no direct risks to the pregnancy. Around 16mls of blood is required. Blood sampling is a routine and safe procedure.

What will the results show?

There are three possible outcomes to the test:

1. Y chromosome DNA is detected: the pregnancy is likely to be male.

2. No Y chromosome DNA detected: The pregnancy is likely to be female.

The accuracy of the test result is currently estimated to be more than 96.5%.

3. Insufficient DNA: in a small number of tests there is not enough of the baby's DNA in the mother's blood to be able to do the test. In this situation, there is the option to take a fresh blood sample to repeat the test, and/or to do an invasive test (chorionic villus sampling (CVS) or amniocentesis; see below).

How long does the test take?

Collecting the blood sample itself takes only a few minutes. Results are usually available in 3-5 working days.

Is the test affected by previous male pregnancies?

No. DNA from previous pregnancies disappears from the mother's blood quickly after delivery, so is not detectable in future pregnancies.

What if it is a multiple pregnancy (twins, triplets etc)?

Although the test can be used, if Y chromosome DNA is detected it will not be able to identify how many males are present. In multiple pregnancies, chorionic villus sampling (CVS) or amniocentesis tests can usually be done separately to give individual results.

How do I get the test?

If you want non-invasive testing you need to contact the Genetic Medicine Department as soon as you know you are pregnant, so that this can be arranged. An appointment in the Genetics clinic will be arranged if you want to discuss your options further. You will need to be booked in for an early scan in your local antenatal clinic to confirm your dates, so that the test can be done at the right time.

What other tests are available?

Direct tests, either by CVS (from around 11 weeks) or amniocentesis (from around 15 weeks), are also available. These tests can accurately determine the sex of the baby, although they carry a small additional risk of miscarriage. If a specific genetic test is available this can be carried out on the same sample. The Genetics Department can discuss these tests with you in more detail, and leaflets on CVS and amniocentesis are also available.

For more information

If you need more advice about any aspect of non-invasive prenatal sexing, you are welcome to contact:

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Saint Mary's Hospital
Oxford Road Manchester M13 9WL

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Facsimile: (0161) 276 6145

Department staffed Monday–Friday, 9.00 am to 5.00 pm.

Website: www.mangen.co.uk

Please let us know if you would like this leaflet in another format (e.g. large print, Braille, audio).

Seen in clinic by (doctor): _____

And (Genetic Counsellor): _____

Telephone number: _____

Family reference number: _____