

Predicting your baby's sex using of non-invasive prenatal testing (NIPT)

Information for women who are carriers of X-linked conditions

This leaflet gives you information about the fetal sex prediction test now available during pregnancy to women who are carriers of X-linked conditions.

This test is non-invasive and can help identify the sex of the baby (fetus) early in pregnancy without the need for an invasive test which poses a small (1 in 200 pregnancies) risk of miscarriage.

Introduction

Genes contain the DNA that determines many of our characteristics, including whether we are male or female. We now know that some of the fetal DNA circulates in the mother's blood during pregnancy. We call this cell-free fetal DNA (cffDNA).

This cffDNA can be tested and the fetal sex predicted by taking a sample of your blood during pregnancy. This is a standard blood test taken from your arm.

The test can only tell us the baby's sex, not whether the baby is affected by a particular condition.

How is the test done?

You will be offered the test by a member of the fetal medicine team or clinical genetics team. The test works best from 9 weeks of pregnancy.

First, you will have an ultrasound scan to find out how many weeks pregnant you are and to see if there is more than one baby in the womb. You can only be offered the test if there is one baby.

The test is performed on a sample of your blood. About 10mls of blood is drawn into a special tube.

The blood test should be performed from approximately 9 weeks pregnant, usually this is enough for the test to be accurate, however, sometimes a repeat blood sample is required around 1 week later.

How accurate is the test and what will the results show?

The accuracy of the test is currently around 98% and there are three possible outcomes:

1: Y chromosome DNA is detected: the pregnancy is **likely to be male** as females do not have a Y chromosome. In this case, further testing is available to determine if the baby is affected by the condition of concern.

2: No Y chromosome DNA detected: the pregnancy is **likely to be female**. Fetal sex will be confirmed at your 20-week anomaly scan due to a very small risk of an inaccurate result.

3: Test Failure: e.g. insufficient DNA. In a few cases the lab may not be able to demonstrate the presence of fetal DNA. In this situation, the test could be repeated, or you may wish to discuss the option of an invasive test (chorionic villus sampling or amniocentesis).

4: Repeat sample requested: The laboratory asks for repeat samples if an inconclusive result is generated.

How safe is the test?

As this is a blood test taken from your arm, the test carries no significant risk to you or your baby.

How long does it take to get the test results and how will I get them?

It usually takes around 2 weeks to get the results. Your doctor, fetal medicine midwife or genetic counsellor will discuss this with you, including how you will get your test results.

What happens next?

What happens next depends on the results of the fetal sex prediction test.

If your baby is predicted to be male, you might decide to have an invasive test (Chorionic Villus Sampling (CVS) or an amniocentesis) to determine if the baby has the condition you are concerned about. A separate leaflet describing these tests is available.

Alternatively, you might decide to continue with the pregnancy without any further testing.

If your baby is predicted to be female, the fetal sex would be confirmed at your detailed anomaly scan at 20 weeks of pregnancy.

Contact details and further information

Your local genetic service:

South East of Scotland Clinical Genetics
Institute of Genetics and Cancer
Western General Hospital
Crewe Rd South
Edinburgh
EH4 2XU
Telephone 0131 537 1116

Fetal Medicine Team (Edinburgh):

Simpson Centre for Reproductive Health
Royal Infirmary of Edinburgh
51 Little France Crescent
Old Dalkeith Road
Edinburgh
EH16 4SA
Telephone 0131 242 2659

Fetal Medicine Team (Fife):

Fetal Medicine
Maternity Ultrasound Department
Victoria Hospital
Hayfield Road
Kirkcaldy
KY2 5AH
Telephone 0159 272 9087

