

Nuchal Translucency Scan (NTS) Information



This is an ultrasound test done between 11 weeks 3 days and 13 weeks 6 days of pregnancy. The aim of the test is to determine if you are at high risk of having a baby with a chromosome abnormality, most commonly, Down Syndrome. This is a screening test and does not diagnose an abnormality but merely finds those who are at greater risk and who may opt for further testing.

How Common is Down Syndrome?

Down Syndrome occurs in about 1 in every 700 births and the chance of having a baby with this condition increases with maternal age. For example the risk at age 20 is approximately 1:1500 but at age 40 is about 1:100.

What is a Nuchal Translucency?

All babies have a fluid collection within the skin at the back of the neck and this is called the Nuchal Translucency (NT). The larger the measurement of the translucency, the higher the chance the baby will have Down Syndrome. This fluid often disappears by 15 weeks.

How is it Measured?

The nuchal translucency is measured by using ultrasound, usually through the abdomen. Occasionally a transvaginal approach may be required.

Ultrasound is the passage of inaudible sound waves into the body which reflect off the internal structures and then bounce back to the machine where they are converted into a picture. Ultrasound is considered safe in pregnancy and will not harm your baby.

The ultrasound picture may be clearer if you have a full bladder, this is why we ask you to drink 2 glasses of water an hour before your appointment. However, there is no benefit in being painfully uncomfortable so if your scan is delayed please feel free to make yourself comfortable, trying not to completely empty your bladder.



How do we Calculate the Risk for Down Syndrome?

The nuchal translucency measurement, the length of the baby from head to bottom (Crown Rump length) and your date of birth are entered into a computer program and your adjusted risk is calculated. This risk assessment is based on data from well over 100,000 pregnancies studied by the Fetal Medicine Foundation in UK. All operators in our unit have been accredited by the Fetal Medicine Foundation to perform this test.

What is High Risk?

Risk is a very individual thing, however, it is generally accepted that a risk greater than 1 in 300 is considered high and further testing may be appropriate.

How Do I get the Result and How Accurate is it?

You will be given the result as soon as the measurements have been taken and transferred to the computer program. You will be told your age related risk of having a baby with Down Syndrome and your **adjusted** risk according to the Nuchal Translucency measurement. The **combined** risk assessment may be available if 1st trimester serum screening is performed prior to the ultrasound and results are available on the day of the NTS.

Can I Improve the Result of the Nuchal Translucency test?

Your doctor can give you a request form for a blood test can be taken about a week before the scan (>11 weeks). This measures two hormones, Free Beta HCG and PAPP-A in the mother's blood. When the blood test is performed prior to the NT scan the results are usually available on the day of the scan so that a combined risk assessment is available immediately. Alternatively this can be done on the day of the scan

A Nuchal Translucency scan, properly performed, has been shown to pick up about 80% - 85% of babies with Down syndrome.

It is now reported that using the NT scan and the 1st trimester serum screening blood test together increases the detection rate of Down Syndrome to around 90%.

More recently, the detection of the fetal nasal bone has been added to this test to give further reassurance.

What Next?

After the results are explained to you, you will be given several options.

1. Do nothing more – you are happy with your new low risk
2. Invasive testing by either Amniocentesis or Chorionic Villus Sampling (CVS)

What if I want a Definite Answer?

If you want a definite answer or if your adjusted risk is high there are two tests available which will give you a definitive result.

CVS – performed from 11 weeks onwards. Under ultrasound guidance placental cells are removed and tested. This test carries a 1% (1:100) chance of miscarriage.

Amniocentesis – performed from 14 -15 weeks onwards. Under ultrasound guidance a small amount of amniotic fluid is taken from around the baby and the cells contained in the fluid are cultured and examined. This test carries a 0.5% (1:200) risk of miscarriage.

Both of these tests are carried out in the Fetal Medicine Unit and the testing is done in the Cytogenetics Department of the Canberra Hospital. You will be bulk billed for these tests.

Do I Need Another Ultrasound?

The NT scan at 11⁺³ – 13⁺⁶ weeks may be too early to detect many other abnormalities so another scan should be carried out at 20 weeks to look for structural anomalies. Remember that a normal ultrasound does not guarantee a normal baby. There are a number of conditions that may be apparent after birth but are not detectable by ultrasound.

If you have any questions regarding this test please do not hesitate to ask the person performing your ultrasound.

We wish you a happy and safe pregnancy.