



An tOspidéal Náisiúnta Máithreachais  
The National Maternity Hospital

## **CHORIONIC VILLUS SAMPLING (CVS) INFORMATION LEAFLET**

Chorionic villus sampling (CVS) is a test usually carried out to examine a baby's chromosomes. The decision to have a CVS is always voluntary and the information below may help you decide whether or not to have this test.

### **What is a CVS?**

CVS involves removing some cells from the developing placenta (afterbirth). This is in contrast to amniocentesis where the fluid from around the baby (amniotic fluid) is examined. Both the baby and placenta come from the same cell so the chromosomes present in the cells of the placenta are usually the same as the baby. Normally, in each human cell, there are 46 chromosomes. A missing or an extra chromosome causes many changes in the way an unborn baby develops.

### **How is a CVS performed?**

A CVS sample is obtained by inserting a fine needle into the uterus to the placenta to obtain a small amount of tissue. The needle is carefully observed with the ultrasound scan to ensure that it is in the correct position. This can be taken trans-abdominally or trans-vaginally. The doctor will decide which way it should be performed after a scan to locate where the placenta is lying. You may receive an injection with local anaesthetic to numb the area if the test is performed through the abdomen (tummy). If the test is taken through the vagina, a speculum would be inserted and a small device guided by ultrasound through the cervix to obtain the sample from the placenta.

The test would take an average of 10 minutes from start to finish. A 3ml maternal blood sample is taken and is sent with the CVS sample to the laboratory. If your blood group is Rhesus negative you will require an injection of Anti-D to prevent blood incompatibility developing between you and the baby as a result of the CVS test.

### **What should I expect after CVS?**

For the first 24 hours you may experience some abdominal discomfort, period like pain or a little bleeding. These symptoms are relatively common and in the vast majority of cases the pregnancy continues uneventfully. You may find it helpful to take some simple pain relief like paracetamol (this is safe in pregnancy). If there is a lot of pain or bleeding, please seek medical advice by contacting the fetal medicine midwives or go to the maternity triage assessment unit.

### **When can I expect the results?**

Depending on the reason for the test there can be differing reporting times. Your doctor or midwife will let you know when to expect results, some may be reported in 3-5 working days, others can take 2-3 weeks. After the CVS we will make an arrangement to contact you with the results as soon as we obtain them from the genetics laboratory. Most people are happy to receive the results over the phone but if you wish to come and obtain the results in person this can be organised. The full result will also tell whether you are expecting a girl or a boy – so you may want to give some thought whilst awaiting the result as to whether you would like to have this information or not. If you have not heard from us after 3 weeks, please get in contact with us.

### **What information will I get from a CVS?**

Chorionic Villus Sampling allows us to assess the genetics of the baby. This can sometimes help explain why a pregnancy is affected by a particular problem.

There are a number of laboratory tests including **QF-PCR** (a rapid test checking for conditions such as Trisomy 21, Trisomy 18 and Trisomy 13), **Karyotype** (counting and looking at the basic structure of the chromosomes of the baby) and **Microarray** (a newer, more detailed examination of the chromosomes). Sometimes the laboratory test will reveal a cause for the problem found on ultrasound and sometimes it will not. Occasionally, the laboratory test will reveal a difference in the genetic code of the baby. Sometimes the significance of this is not clear and may require further testing and investigations during the pregnancy or after birth.

Rarely, in <1% of cases, the result from the placenta differs from that of the baby (which is called confined placental mosaicism) and this may come to light only with the full CVS karyotype result or from a later test such as amniocentesis. Occasionally, in <1% of cases, a result is not obtainable from the test if the villi do not grow in the laboratory. In this instance the test may need to be repeated.

### **What are the risks associated with this test?**

The risk of miscarriage from the test is approximately 1 to 2%, whilst the risk with amniocentesis is about 1%. If you were to miscarry due to the test this would happen usually within 14 days of the test. Some studies have shown that when CVS is done before 10 weeks there is a small risk of limb defects in the baby. To avoid this risk, CVS is performed after 11 weeks. For Down syndrome and other chromosome problems the result will clearly state whether the baby is affected or not, with a high degree of accuracy i.e. 99%. A result that says that the baby does not have a chromosome problem does not guarantee that the baby is entirely normal. If there were, coincidentally, a genetic condition such as cystic fibrosis, or a cardiac or spinal defect, these may not be detected on this type of CVS test.