

The RCSI Fetal Medicine Centre is based at the academic Department of Obstetrics and Gynaecology of the Royal College of Surgeons in Ireland, and is located on the campus of The Rotunda Hospital, Dublin.

The Department is recognised as a leader in undergraduate and postgraduate training in obstetrics and gynaecology, as well as innovative clinical research and advanced patient care services in this specialty.

Current areas of research interest include:

- Optimal combinations of screening tests for chromosomal abnormalities
- Ultrasound diagnosis of fetal abnormalities
- Role of 3-D and 4-D ultrasound in contemporary obstetric practice
- Detection and surveillance of fetal growth restriction
- Diagnosis and management of complications of multiple pregnancy
- Diagnosis and management of maternal medical disorders during pregnancy

The RCSI Department of Obstetrics and Gynaecology leads the HRB-funded National Obstetric Research Consortium, dedicated to the conduct of large-scale clinical research trials in Ireland to optimise maternal and fetal wellbeing.



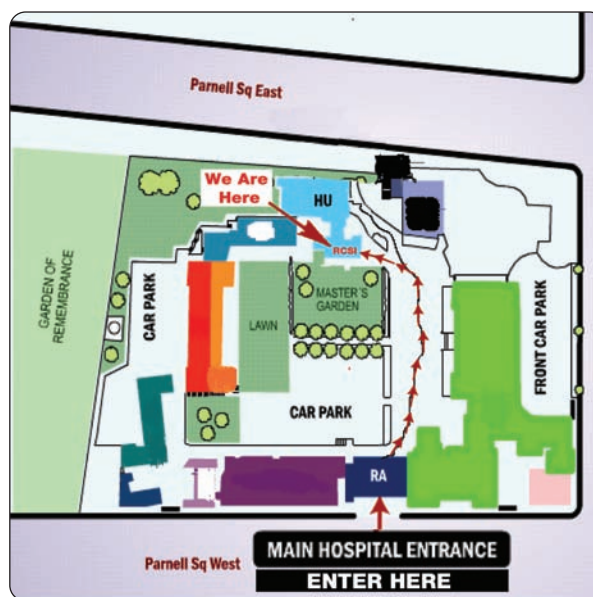
RCSI FETAL MEDICINE CENTRE

How to find us

RCSI Fetal Medicine Centre
RCSI Unit
The Rotunda Hospital
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Dublin 1

TEL: (01) 878 6070

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The RCSI Fetal Medicine Centre is located within the centre of the Rotunda Hospital garden area. Follow signs for RCSI Unit and HARI Unit.

Disc parking is available on Parnell Square and a secure parking lot is available in the ILAC Centre on Parnell Street, opposite the front entrance to the hospital.



RCSI

Royal College of Surgeons in Ireland

RCSI FETAL MEDICINE CENTRE

Preconceptional counselling

Fetal viability scan

First trimester screening

Second trimester screening

Fetal anatomy scan

Fetal echocardiography

Fetal wellbeing scan

CVS and amniocentesis

Cervical assessment

Advanced fetal therapy procedures

High-risk pregnancy consultation

Management of multiple pregnancy

The RCSI Fetal Medicine Centre provides advanced specialist care for the fetus and mother during pregnancy. As well as these services, patients may request additional ultrasound examinations to obtain 3-dimensional or 4-dimensional images of their baby or evaluation of their baby's gender. The optimal time to obtain detailed 3-D images of the baby's face is at 26 to 30 weeks.

The ethos of the RCSI Fetal Medicine Centre at the Rotunda Hospital involves specialist consultant supervision of all ultrasound examinations and all procedures are performed only by maternal-fetal medicine consultants.

Preconceptional counselling

This is a meeting with a specialist maternal-fetal medicine consultant before pregnancy, to discuss any medical conditions or prior pregnancy problems that are of concern.

Fetal Viability Scan

This is an ultrasound examination, usually carried out at 6 to 10 weeks to confirm that the pregnancy is developing normally and to provide reassurance regarding possible miscarriage. Additionally, this scan will confirm or exclude whether twins are present. Sometimes this scan needs to be performed vaginally.

First Trimester Screening (FTS)

This ultrasound examination is usually performed at 11 to 13 weeks and has the following benefits:

- Accurate dating of pregnancy
The most accurate assessment of the due date is obtained from an early ultrasound scan.
- Diagnosis of multiple pregnancy
This ultrasound test will determine the number of fetuses and whether each has its own placenta. Sharing of the placenta is important to diagnose as such pregnancies are at increased risk for serious pregnancy complications.
- Evaluate risk of Down syndrome
The FTS test provides parents with an accurate assessment of chances that their baby may be affected by Down syndrome or other chromosomal abnormalities. It involves a measurement of the skin thickness at the back of the baby's neck (nuchal translucency) together with a special blood test from the mother to measure the levels of certain proteins that are associated with Down syndrome. These tests can now all be completed within the Department so that parents can get their results the same day. This FTS test can identify about 90% of cases of Down syndrome.

Second Trimester Screening (STS)

The Second Trimester Screening test is carried out at 14 to 21 weeks of pregnancy.

This test measures the level of four proteins normally found in the blood during pregnancy. These are AFP, hCG, oestriol, and Inhibin-A. Based on the level of these four proteins, mothers age and the results of a detailed ultrasound scan (the Fetal Anomaly Scan), we can calculate the chances of the baby having Down syndrome or other chromosomal problem such as Trisomy-18, or spina bifida.

As the STS blood tests are analysed in a special laboratory in the United Kingdom, the results of this test will take up to 10 days before they will be available. This STS test can identify about 80% of cases of Down syndrome, about 95% of cases of Trisomy-18, and about 95% of babies with spina bifida.

Fetal Anomaly Scan

This is a detailed head-to-toe ultrasound examination of the fetal anatomy, performed at 18 to 22 weeks. The baby's brain, face, spine, heart, stomach, kidneys, bladder and limbs are carefully examined to provide reassurance regarding fetal health.

Fetal Echocardiography

The fetal heart is examined in additional detail at 20 to 24 weeks for patients who may be at increased risk for fetal heart defects. Patients who may benefit from this special scan include mothers who have previously had a baby with a heart abnormality, mothers with diabetes, or who have had an earlier test which has suggested an increased risk of congenital heart disease.

Fetal Wellbeing Scan

Ultrasound examination of the fetus between 24 and 42 weeks is done to confirm that the baby is growing well. During this scan the baby is measured to estimate fetal weight, amniotic fluid and fetal movement is assessed, and colour Doppler examination of blood flow to the placenta and fetus may be measured.

Chorionic Villus Sampling (CVS)

This is a special test, performed at 10 to 13 weeks, in which a small sample of the placenta is obtained by passing a fine needle through the mother's abdomen into the uterus, or by passing a thin plastic straw through the cervix. The most common reason to undergo this test is concern regarding the chance of chromosomal problems, like Down syndrome, either because of the mother's age or a high risk First Trimester Screening test.

Amniocentesis

Amniocentesis is performed after 15 weeks, and uses ultrasound to direct a fine needle through the mother's abdomen into the uterus to obtain a small amount of amniotic fluid from around the baby. The most common reason for this test is anxiety regarding chromosomal problems, like Down syndrome.

Cervical Assessment

A transvaginal ultrasound examination of the cervix is commonly suggested between 20 and 30 weeks for patients at increased risk of preterm delivery. This may include mothers who previously delivered a baby prematurely or mothers pregnant with twins or triplets. If shortening of the cervix is noted on ultrasound, routine antenatal care may need to be changed.

Advanced Fetal Therapy

In special circumstances, if a significant problem is diagnosed, it may be possible to perform additional procedures for treatment:

- Fetal blood sampling and transfusion
For mothers with certain blood types who have developed abnormal antibodies, or if ultrasound suggests that the baby is developing heart failure, a fine needle can be placed into the baby's umbilical cord within the uterus to obtain a sample of blood from the baby. It is also possible to transfuse the fetus to restore its blood count.
- Fetal bladder and chest shunt
Some fetuses develop a blockage in the bladder which prevents urine from escaping from the kidneys. A plastic tube can be placed into the fetal bladder, to bypass the blockage. Similarly, if fluid accumulates in the baby's chest and interferes with heart function a plastic tube can be placed in the fetal chest to reduce the pressure.
- Laser therapy for twin-to-twin transfusion syndrome (TTTS)
TTTS is a very serious complication seen in identical twin pregnancies in which one twin gets too much blood while the second twin gets too little. It is caused by abnormal blood vessels in the placenta. The best therapy involves laser treatment of the placenta. A thin metal tube is placed through the mother's abdomen into the uterus, and a camera with a laser fibre is inserted to find and burn any abnormal vessels on the surface of the placenta. This procedure reverses the imbalance of twin blood flow.

High Risk Pregnancy Consultation

Consultations can also be provided with maternal-fetal medicine specialists regarding medical or obstetric complications in pregnancy or for care of more complex cases such as multiple gestations.