

Fact Sheet

Fetal echocardiogram



What is a fetal echocardiogram?

A fetal echocardiogram is a study performed using an ultrasound machine. It uses high frequency sound waves (ultrasound) reflected from various structures in and around the heart of the fetus to provide information about both the structure and function of the heart. This means that detail about the anatomy of the heart as well as function of the heart muscle and valves can be obtained. The equipment and principles are the same as that used for routine obstetric ultrasound.

How is a fetal echocardiogram performed?

The study is completely painless. A physician or technician uses a hand held transducer (like a "camera lens") to transmit and receive sound waves (beyond the hearing range). A thick gel (jelly) is used to assist transmission of the sound waves and improve picture quality.

The information received by the transducer is then processed by a highly sophisticated computer to provide images on a video screen. These images are also supplemented by sounds or colour (Doppler) which help to assess patterns of blood flow in the circulation. Sometimes the position of the fetus makes it difficult to see all heart structures. In that case we may ask you to move around the room or even come back a little later if we feel that will improve the chances of seeing all the heart structures.

Are there risks?

There are no known harmful effects of ultrasound on the fetus associated with fetal echocardiography.

What can we establish from a fetal echocardiogram?

From about 16 - 18 weeks we can potentially see all the main heart chambers, heart valves, main blood vessels directly attaching to the heart, and establish information about the heart rate and rhythm. We can establish, with a high degree of certainty, the presence of the most important congenital abnormalities of the heart.

What can't we establish from the study?

- Sometimes it is not possible to see all the heart structures because of the position or size of the fetus. This does not mean they are not there, but may mean that for technical reasons they cannot be assessed. Sometimes this information may not be important; while in some cases it means that definite answers are not possible. The echocardiographer will discuss this with you if necessary, and repeat studies are frequently performed later in the pregnancy.
- Certain congenital heart abnormalities are also hard to detect by fetal echocardiograms, but often these are simple abnormalities. We do not mention this to concern you, but rather that you understand that there are technical limitations to such studies. It remains important that the normal careful medical examination of the baby (including the heart) takes place after birth, and if there were any suspicious cardiac findings, that these are evaluated in the usual way irrespective of the findings at fetal study.

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- Certain communications between the two sides of the circulation are normally present in all developing babies and normally close after birth. We are not able to tell in advance whether this will occur, however there is only a tiny chance that they will not. Persistence of these structures is generally not a difficult problem to deal with.
- We direct our attention only to the heart, where we have special expertise. This is not the same as your general obstetric ultrasound scan. Other ultrasound information about the fetus can be obtained from an obstetric ultrasonographer or your obstetrician.

Remember

- The study is painless.
- Some abnormalities cannot be identified prior to birth.

Results

In general we will inform you of the results of the scan when it is completed. You should also discuss the results with the doctor who referred you since the results often need to be interpreted in the light of other tests or clinical information which might only be clear to the doctor looking after the pregnancy.

Questions

Ask and we will try to answer them. Sometimes this may be difficult during the study when the operator may need to concentrate on obtaining all the information necessary, so please be patient.

This fact sheet is for education purposes only. Please consult with your doctor or other health professional to make sure this information is right for your child.

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