

FREQUENTLY ASKED QUESTIONS ABOUT FETAL ECHOCARDIOGRAPHY

Q: Why am I having a fetal echocardiogram?

A: A fetal echocardiogram uses ultrasound, or high-frequency sound waves, to look at the heart and major blood vessels of the fetus.

Q: Why is this procedure necessary?

A: Most women undergo a fetal echocardiogram to look for congenital heart defects, which are abnormalities of the heart that occur during development. Some women are referred because of a heart rate abnormality detected during routine monitoring of the pregnancy.

Your obstetrician will refer you to a specialist with expertise in fetal heart disease. A fetal echocardiogram may be performed routinely beginning at 18-22 weeks gestation, but an earlier study may occasionally be indicated. It is an extension of the screening ultrasound examination that many pregnant women have performed during the fourth or fifth month of pregnancy.

A fetal echocardiogram is able to diagnose only serious structural abnormalities of the heart. Minor heart defects, abnormalities involving very small structures, and abnormalities in the change from a fetal circulation to a newborn circulation can only be detected after birth.

Q: Is the procedure painful? What must I do to prepare for it?

A: The examination is painless and does not harm the fetus in any way. No special preparations are required. Like the screening ultrasound examination, the fetal echocardiogram is performed with the transducer (the probe that is used to take the pictures) on the women's abdomen.

Ultrasound sound images are slices of information obtained by aiming the ultrasound from one end of the heart to the other. The fetal heart is quite small, and the images are magnified on the screen of the ultrasound machine. Color Doppler is used to confirm normal flow patterns seen in the circulation of the baby.

An initial fetal echocardiogram takes approximately 30 to 45 minutes to perform. Because of technical limitations, some patients may require a second examination.

Q: What can I expect upon arrival for the examination?

A: The examination room will contain a bed to lie on, an ultrasound machine, and transducers. In most cases, you may have a relative or friend present during the fetal echocardiogram just like any other prenatal ultrasound. In order to avoid distractions you should not bring young children into the examination room.

The Sonographer or doctor will apply ultrasound gel to a transducer. The transducer is a wand-like device that sends and receives the harmless ultrasound waves. The gel makes it possible to conduct the procedure and obtain the images. Ultrasound images are then taken of the baby's heart from several angles, requiring movement of the transducer over the abdomen and, often, repositioning the patient on the bed.

The important parts of the echocardiogram are recorded on videotape or stored on a computer disk for later review and for record keeping.

Q: What will we see and hear on the echocardiography machine during the exam?

A: Ultrasound waves used in performing the echocardiogram are not audible to the human ear, so you will not hear the sound waves.

Structures will be displayed in “real-time” and appear as white moving objects on the screen. For example, the valves of the heart will look like white flap-like moving structures. Areas of the heart where there is fluid or blood look black on the screen.

During the exam, you will notice the sonographer placing marks on the screen with small computer calipers. The sonographer uses the calipers to perform various measurements of the size, function and blood flow of the heart.

An echocardiogram exam usually includes a Doppler recording of the blood movement or flow within the heart. When color flow Doppler is used in the exam it will appear as different colors moving within the white and black images on the monitor. The different colors represent the different speeds and directions of blood flow in the heart.

Doppler examinations often also include an audio signal of the blood flow. These audio signals can be heard and seen. During the audio Doppler recording, you will hear the sound of the blood moving through the heart and the sound of the heart valves opening and closing. The audio signals are also displayed as a graph on the monitor. These graphic recordings help the physician to determine valve function and heart pressures.

Q: What happens after the fetal echocardiogram?

A: After the procedure, the ultrasound gel will be wiped off your abdomen. The sonographer will, in general, not provide you with any results, so that the doctor can properly review the videotape the images.

You will often be counseled by a doctor to explain the preliminary findings. Occasionally, it may be necessary to perform additional measurements and assessments during the review of the study. We will prepare a final report usually within a day. We appreciate your patience as we complete our procedures.

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