Centennial Heart CARDIOVASCULAR CONSULTANTS

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2-D Echocardiogram With Doppler

What is an echocardiogram?

An echocardiogram, also called an echo, is a test that uses sound waves, or ultrasound, to examine the heart. It is a safe and painless procedure that helps doctors diagnose a wide variety of heart problems. It is the same type of test that doctors use on pregnant women to evaluate their baby. The only difference is that we are evaluating your heart.

What does it show?

The echocardiogram provides important information for your doctor about your heart, such as:

- ***The size of your heart:*** It is used to measure the size of the heart chambers and the thickness of the heart muscle.
- ***Your heart's pumping strength:*** It can show if your heart is pumping at full strength, or if it is weakened in any areas.
- ***Valve problems:*** The echo shows the shape, motion, and blood flow across the four heart valves. It can help determine whether any of your valves are narrowed or leaking, and how severe the problem is.
- ***Other uses:*** The echo test can also detect the presence of fluid around your heart, blood clots, or other masses inside the heart, and abnormal holes between the heart chambers.

How does it work?

The technician doing your test will ask you to lay on your back or left side and will try to make you as comfortable as possible. It is important that you be as still as you can, and breathe normally. Please let the technician know if you need anything special to make you comfortable, such as a blanket or extra pillows. A colorless gel is applied to a transducer, and it is placed on your chest. The transducer is a small microphone-like device that sends ultrasound waves into the body. The sound waves reflect (echo) off the different parts of the heart. They then return to the transducer where a computer uses the returned sound waves to construct a two-dimensional image of the heart. It is displayed on a television screen and recorded on videotape. The image shows the size and motion of the heart structures.

Doppler Echocardiogram

The blood flowing through your heart is also evaluated during your test. The method is called Doppler. The signals are displayed as color images, like the weather radar, or as a series of black and white tracings on the TV screen. During the Doppler portions of your test, you will hear a whooshing or pulsating sound. This is not the actual sound of your heart, but an amplified and computerized sound signal. These noises and displays tell the doctor a lot of information about the function of the valves in your heart.

Echocardiogram with “Bubbles”

A 2-D echo with bubbles, also called a bubble study, can give additional information about possible holes between the heart chambers. A nurse will put a small IV in your vein. A small amount of saline (IV fluid) is rapidly injected into your vein. Although the IV may be somewhat uncomfortable, the fluid does not cause pain or discomfort. The ultrasound beam detects the small particles of air that are present in all fluids and displays them on the TV screen image as bright sparkles. The IV is removed after the technician has the information that the doctor needs.