Echocardiogram
A Guide to Prepare You

What is an echocardiogram (echo)?
This is a test that uses sound waves to look at the heart. It is a safe and painless way to view the heart for problems.

How does it work?
A small device, called a transducer, is held against the chest. This sends sound waves that bounce off the heart. A computer uses the information from the transducer to create a picture of the heart. The picture is shown on a TV screen. It can be saved on CD.

The echo consists of:
- **Two-dimensional echo** - This shows the true shape and motion of the different heart structures. These pictures represent “slices” of the heart in motion.
- **Doppler echo** - This allows doctors to see how the blood flows through the heart. The signals that represent blood flow are shown as a series of black-and-white tracings. They can be seen as color pictures on the TV screen. During a Doppler echo, you may hear a whooshing sound. This is not the sound of your heart. It is a signal that the machine sends.

Why is the echo done?
The echo test gives doctors useful information about your heart.
- **Size of the heart**: The echo is used to measure the size of the heart chambers and thickness of the heart muscle.
- **Pumping strength**: The test shows whether the heart is pumping at full strength or if it is weakened. It can also tell whether all the parts of the heart pump the same.
- **Valve problems**: The echo shows the shape and motion of the heart valves. It can help tell if a valve is narrowed or leaking.
- **Other uses**: The test may be used to see if there is fluid around the heart, blood clots, or a mass inside the heart, or holes between heart chambers. In some of these cases, an IV may need to be placed in the hand or arm. This allows staff to give an injection of agitated saline or an imaging enhancement agent through your IV to read any abnormalities in your heart. The echo may be done with an exercise test, to see how well the heart pumps when made to work harder. This is called a stress echo.

Before your echo
You do not need to do anything special to get ready for this test. You may eat and go about your normal routines, unless you are told otherwise. Make sure you wear a two-piece outfit. The echo may be done at the hospital or clinic.

What happens during the test?
You will be asked to undress from the waist up and put on a short hospital gown. Electrodes (small sticky patches) are placed on your chest and shoulders to record your heartbeat.

You then lie on a special exam table. To help take better pictures, a clear gel is applied to the area where the transducer will be placed. The gel will feel cool and moist.
The gel will be wiped off at the end of the test.

A sonographer moves the transducer over the chest to obtain many views of the heart. They may ask you to change your position. Air in your lungs can affect the echo pictures. You may be asked to exhale or hold your breath for a few seconds.

The pictures are recorded digitally so the doctor can review them later.

**What are the benefits?**

The echo test gives information about the heart’s structure and blood flow.

Sometimes it is hard to get a good picture in patients that have a broad chest, are overweight, or have a chronic lung disease (such as emphysema). In such cases, an IV will need to be placed in the hand or arm. This IV allows staff to inject an image enhancement agent.

**How long does it take?**

An echo exam takes about 60 minutes depending on the number of views required. Be sure to allow extra time to check in. When the test is over, you may eat and return to your normal routine.

**Your test results**

All the images are reviewed by a cardiologist (heart doctor) the next business days and a report is sent to your primary doctor. Your primary doctor will contact you with results within 1-2 weeks. The results of the echo test will help your doctor know how your heart is working and develop a treatment plan that is best for you. A copy of the echo report is not sent to your UW My Chart account.

**Is the echo safe?**

The echo test is very safe. There are no known risks from the sound waves. The test is painless. You may feel slight pressure when the transducer is held against your chest.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person’s health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 9/2017 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#5490