

Tests for Aortic Valve Disease

This is a complete list of the standard tests you may need after your initial visit to help us see a complete picture of your aortic valve disease.

Glossary of terms:

Invasive test: A medical procedure that invades (enters) the body, usually by cutting or puncturing the skin or by inserting instruments into the body.

Non-invasive test: A procedure that does not require inserting an instrument through the skin or into a body opening.

Computed Tomography Scan (CT)

A CT scan looks at the aorta (largest blood vessel in the body), lungs and other organs. If your surgery is a re-operation, a CT helps your surgeons see how safely they can enter your chest cavity. This test takes about one hour to complete.

Preparations for this test:

- Stop eating 2 hours before your CT exam
- You may drink clear liquids up to 30 minutes before exam
- Before the scan, an IV is started as IV contrast dye is given during the scan
- You may need IV fluids before and after the CT because of your kidney function

Heart Catheterization (Cath)

A **heart cath** is an invasive test that looks at the blood vessels of your heart for any blockages (coronary artery disease). You will need to lay flat while a catheter is placed in a blood vessel in your groin (or sometimes a blood vessel in your arm) while a camera takes images of your heart's blood vessels. The cath takes about 1 hour to complete and another 4-6 hours for you to recover

(when there are no signs of bleeding from the groin site). If blockages are seen, you may need an intervention before your surgery or coronary artery bypass at the time of your surgery. A **coronary artery bypass** is when a healthy blood vessel is taken from another part of the body to make a new path for blood around a blocked artery.

Preparation for this test:

- Stop eating and drinking 6 hours before your cath procedure.
- Before the procedure, a needle is inserted into a vein (intravenous or IV) so medication can be administered through the needle. During the procedure, a medication called contrast dye is given through this IV needle.
- You will need someone to drive you home.

Surface Echocardiogram (Echo)

Echo is a non-invasive test that looks at your heart valves, chambers and how well your heart is functioning (ejection fraction). For an echo, a warm water-based gel is put on your chest and then a transducer (ultrasound probe) is firmly pressed against your skin, moving it back and forth over the heart until the desired images are captured. There is usually no discomfort from pressure. This test takes about 1 hour. **There is no preparation for this test.**

Pulmonary Function Test (PFTs)

PFT's measure how well your lungs take in and release air and move gases such as oxygen. For the test, you will breathe into a mouthpiece that is connected to an instrument called a spirometer. The device records the amount and the rate of air that you breathe in and out over a period of time. This will give the surgeon an idea of how well your lungs work and your risk for being on the ventilator long term. A PFT usually takes one hour. **There is no preparation for this test.**

Carotid Doppler/Ultrasound Study (Carotids)

A carotid ultrasound is done to check for blockage or narrowing of their carotid arteries, to see if you have an increased risk from a stroke. A warm water-based gel will be applied on your neck and then a transducer (ultrasound probe) will be firmly pressed against your skin, moving it back and forth over the area of interest until the desired images are captured. There is usually no discomfort from pressure and the test takes about 30 minutes. **There is no preparation for this test.**

Ankle-Brachial Index (ABIs)

This non-invasive test checks for blockages in the arteries of your legs or arms (peripheral artery disease). People with peripheral artery disease are at a high risk of heart attack, stroke, poor circulation and leg pain. This test usually takes one hour. **There is no preparation for this test.**

Laboratory blood draw

We will need to draw a baseline set of labs to further evaluate the functioning of your heart, kidneys, liver, as well as the components of your blood. This test takes about 15 minutes. **There is no preparation for this test.**

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Author: FCVC TAVR Program
Reviewers: Bethany Lee-Lehner, RN, MSN
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