

## LEFT HEART CATHETERIZATION

Left heart catheterization is a type of medical test used to help detect coronary artery disease (CAD) and other heart conditions. Cardiac catheterization checks for blood flow in the coronary arteries, blood flow and blood pressure in the chambers of the heart and the heart valves, and wall motion abnormalities. This is done with a catheter that is inserted into the heart from the groin area.



The left heart catheterization may be performed on an inpatient or outpatient basis. When performed on an outpatient basis, it is typically performed in a special **cath lab**.

Because this test is considered invasive surgery, it has more risks than other types of tests. After this test, you or your loved one will have to limit activities for one to two weeks.

### How it Works

1. You may be awake or asleep during the test. Sedatives or pain medication will be given.
2. During the test, a thin flexible tube called a **cardiac catheter** is inserted in the groin or femoral artery. Sometimes, other parts of the body (such as the crease of the elbow or the wrist) are used.
3. A blood vessel is punctured so that the catheter can be passed into it.
4. The catheter is slowly moved through the blood vessel into the body. The doctor uses viewing monitors to watch the movement.
5. The catheter tip is moved into different positions in the heart's vessels and chambers while the doctor watches on the imaging screen.
6. A small amount of contrast material is injected through the catheter into the heart chamber or a coronary artery. Pictures show the arteries as the material moves through them. Pressures within the heart chambers can also be measured.
7. Blood and heart tissue samples can be removed through the catheter.
8. At the end of the test, the catheter is removed and the puncture site is closed.

### Benefits

Because this test involves entering the heart through an artery, the doctor can perform an **angioplasty**, **stent** implantation, or other therapeutic procedure at the same time. Because a doctor can diagnose and treat a condition at the same time, this test is a good choice when the doctor has reason to believe there is a heart problem.

### Terminology

- **Angioplasty**—A medical procedure in which a balloon is used to open a blockage in a coronary artery. This helps improve blood flow to the heart.
- **Stent**—A man-made 'tube' inserted into a natural passage or conduit in the body. This helps to prevent a localized flow constriction from the disease.
- **Cath Lab**—A specially equipped room where a left heart catheterization is performed.