

Cardiac catheterization

Definition

Cardiac catheterization involves passing a thin flexible tube (catheter) into the right or left side of the heart, usually from the groin or the arm.

Alternative Names

Catheterization - cardiac; Heart catheterization

Why the Test is Performed

In general, this procedure is done to get information about the heart or its blood vessels or to provide treatment in certain types of heart conditions. It may also be used to determine the need for heart surgery.

Your doctor may perform cardiac catheterization to diagnose or evaluate:

- Coronary artery disease
- Heart defects that are present at birth (congenital)
- Problems with the heart valves
- Causes of heart failure or cardiomyopathy

The following procedures may also be done using cardiac catheterization:

- Repair of certain types of heart defects
- Repair of a stuck (stenotic) heart valve
- Opening of blocked arteries or grafts in the heart

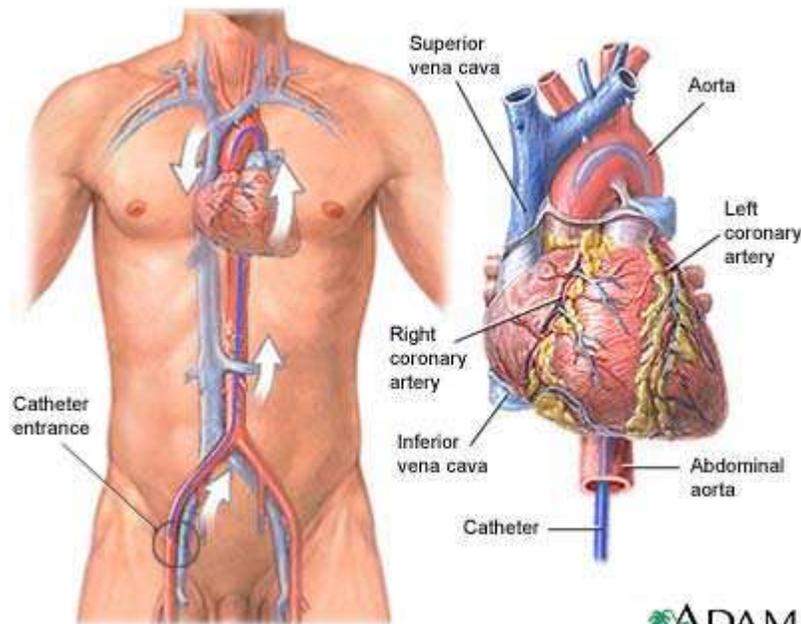
How the Test is Performed

You will be given medicine before the test to help you relax. The health care provider cleans a site on your arm, neck, or groin and inserts a line into one of your blood vessels. This is called an intravenous (IV) line.

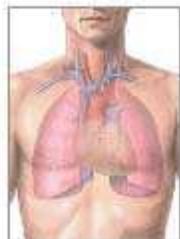
A thin tube called a catheter is placed through the IV and into your blood vessel in the leg or neck. The health care provider is carefully moved up into the heart using live x-rays as a guide. Then the doctor can:

- Collect blood samples from the heart
- Measure pressure and blood flow in the heart's chambers and in the large arteries around the heart
- Measure the oxygen in different parts of your heart
- Examine the arteries of the heart
- Perform a biopsy on the heart muscle

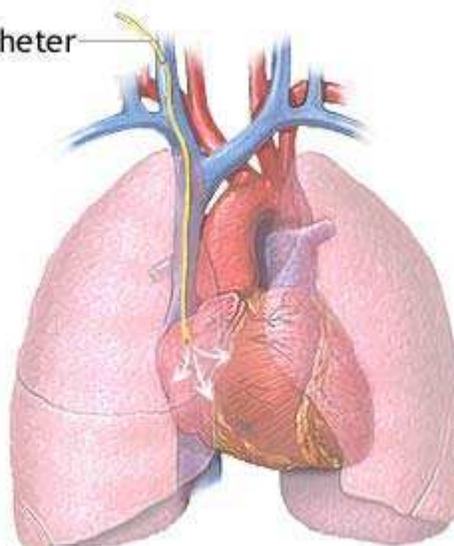
The test may last 30 - 60 minutes. After the test, the catheter is removed. If the catheter is placed in your groin, you will usually be asked to lie flat on your back for a few hours after the test to avoid bleeding.



ADAM.



Catheter



After catheter is threaded to heart dye is injected

ADAM.

How to Prepare for the Test

If possible, you will be asked not to eat or drink for 6 - 8 hours before the test. The test takes place in a hospital and you will be asked to wear a hospital gown. Sometimes, you will need to spend the night before the test in the hospital. Otherwise, you will be admitted as an outpatient or an inpatient the morning of the procedure.

Your health care provider should explain the procedure and its risks. A witnessed, signed consent for the procedure is required.

Tell your doctor if you:

- Are allergic to seafood
- Have had a bad reaction to contrast dye or iodine in the past
- Take any medicines, including Viagra
- Might be pregnant

How the Test Will Feel

The study is done by trained cardiologists with the assistance of trained technicians and nurses.

You will be awake and able to follow instructions during the test.

You may feel some discomfort or pressure where the catheter is placed. Some people have some discomfort from lying still during the test or from lying flat on your back after the procedure.

Risks

Cardiac catheterization carries a slightly higher risk than other heart tests, but is very safe when performed by an experienced team.

Generally, the risks include the following:

- Cardiac tamponade
- Heart attack
- Irregular heart beat
- Low blood pressure
- Reaction to the contrast dye
- Stroke

Possible complications of any type of catheterization include the following:

- Bleeding, infection, and pain at the IV site
- Damage to the blood vessels
- Blood clots
- Kidney damage due to the contrast dye (particularly in patients with diabetes)

What Abnormal Results Mean

The procedure can identify heart defects or disease, such as:

- Coronary artery disease
- Valve problems
- Ventricular aneurysms
- Heart enlargement

The procedure also may be performed for the following:

- Primary pulmonary hypertension (high blood pressure in the lungs)
- Heart valve defects, such as pulmonary valve stenosis, mitral valve regurgitation, and aortic stenosis
- Pulmonary embolism (blood clots in the lungs)
- Birth defects, including tetralogy of Fallot, transposition of the great vessels, ventricular septal defect, and coarctation of the aorta
- Cardiac amyloidosis
- Cardiomyopathy



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