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What Is A Heart Catheterization?

Zulekha Hospital
Your Health Matters

3. WHAT IS THIS TEST FOR?
Heart catheterization is used to check blood flow to the heart and to see how well the heart is pumping. It can measure blood pressure in the heart and how much oxygen is in the blood. This test will help your doctor to see how well your heart valves work. And it will let them check for any defects in the wall of your heart.

4. WHY DO I NEED THIS TEST?
This test can reveal whether you have coronary artery disease, also known as *CAD* or *atherosclerosis*. In CAD, the arteries of the heart become blocked by a fatty substance known as *plaque*. Over time, the plaque builds up and blocks blood flow to the heart muscle. CAD can cause chest pain (*angina*) and puts you at risk for a heart attack.

5. HOW IS THE TEST DONE?
The test is done by a cardiologist and trained assistants. A small plastic tube called a *catheter* is inserted into an artery or vein in your arm or groin. The catheter is used to inject a dye into your coronary arteries. If a blockage is found in your coronary arteries, then another catheter with a balloon tip may be used to insert a stent in order to widen the artery.
You will receive a mild sedative to help you relax before the test. You will be awake and able to follow directions during the test. The test may last 30 to 60 minutes. During this time, the doctor will take several pictures of your heart using special x-rays. After the test, the tube will be removed and pressure applied at the insertion site to prevent bleeding. If the tube was placed in your groin, you may be asked to lie flat for several hours after the test to avoid bleeding.

6. HOW WILL THE TEST FEEL?
You will receive numbing medicine at the site where the tube will be placed. You may continue to feel some discomfort or pressure once the tube is in place. You may feel a warm sensation once the doctor injects the dye through the tube. Some people feel nauseated or have chest pain or pressure. If you feel this, say so. The doctor or nurse can give you medicine to relieve it.

1. IS IT HARMFUL?

Heart catheterization has a slightly higher risk than other heart tests,but it is very safe when performed by a well-trained staff. Some risks include heart attack, infection, irregular heart rhythms, low blood pressure, stroke, bleeding, blood clots, kidney damage, and allergic reaction to dye.

2. HOW DO I PREPARE FOR THE TEST?

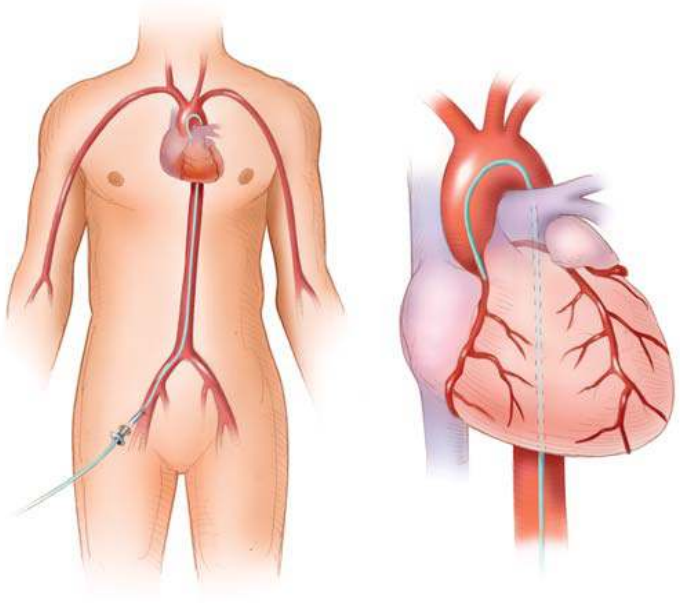
You will be asked not to eat or drink 6 to 8 hours before the test. You have to stop Anti Diabetic medication on the day of the procedure. Please confirm with your Doctor about continuing or stopping any other medications you are taking. The test will be performed in the hospital, and you will most likely go home 4 to 6 hours after the test is done. Or, you may be admitted to the hospital overnight for observation and then sent home the next morning. Tell your doctor before the test if you are allergic to iodine or seafood, have had a reaction to contrast dye, have kidney problems, or may be pregnant.

7. WHAT PROCEDURE I SHOULD TAKE AFTER I GO HOME?

If the procedure is done through wrist avoid using hand for lifting or heavy work for one week.
Watch for any bleeding/swelling in the puncture site. If you notice any bleeding or swelling immediately report to the doctor/hospital. If you have any sign of infection such as redness, drainage (pus) or fever then you should visit the doctor.

BOTTOM LINE

Heart disease is the number one cause of death in the world. A heart Catheterization will help your doctor predict your risk of a heart attack or other heart problems. The results will help your doctor to choose the best modality of treatment like proper medicines, balloon dilatation and stenting or open heart surgery. The results will also help your doctor choose the best plan to lower your risk of heart attack. This plan may include eating healthy, exercising, and stopping smoking



The catheter is inserted into the femoral artery in the groin. It is threaded up the aorta to the heart and into the coronary artery.

TABLE 1. **Indications and contraindications for heart catheterization**

	LEFT-HEART CATHETERIZATION	RIGHT-HEART CATHETERIZATION
INDICATIONS:	▪ Abnormal stress test ▪ Chronic stable angina ▪ Left ventricular dysfunction ▪ Unstable angina ▪ Acute myocardial infarction ▪ Coronary artery disease ▪ Preoperative assessment ▪ Valvular heart disease ▪ Ventricular arrhythmia	▪ Assessment of intracardiac shunt ▪ Cardiac tamponade ▪ Differentiation between constrictive and restrictive cardiac physiology ▪ Differentiation between shock states ▪ High-risk cardiac status during pre-intra and postoperative periods ▪ Severe pulmonary hypertension ▪ Acute myocardial infarction ▪ Assessment of volume status ▪ Severe Pulmonary hypertension ▪ Severe left ventricular failure ▪ Risk stratification for heart transplant evaluation
CONTARINDICATIONS (ABSOLUTE):	None	▪ Bioprosthetic tricuspid or pulmonic valve prosthesis ▪ Left bundle-branch block ▪ Mechanical tricuspid or mitral valve prosthesis ▪ Newly implanted pacemaker or defibrillator ▪ Profound coagulopathy
CONTRAINDICATIONS (RELATIVE):	▪ Active GI bleed ▪ Coagulopathy ▪ Dye allergy ▪ Laboratory abnormalities ▪ Severe peripheral vascular disease ▪ Abdominal aortic aneurysm ▪ Acute stroke ▪ Decompensated heart failure ▪ Infection ▪ Renal failure ▪ Uncontrolled hypertension	▪ Terminal illness for which aggressive management is futile ▪ Right-sided endocarditis ▪ Thrombus or tumor in a right heart chamber