

Cardiac Catheterization - Coronary Angiography

Introduction

Sometimes people have serious problems with their heart and the arteries that go into it. An angiogram helps doctors look at blood vessels of the heart.

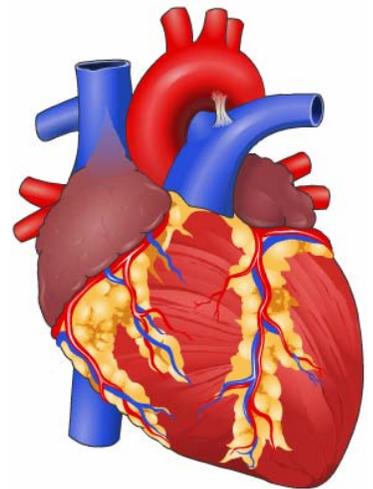
If your doctor recommends a coronary angiogram, the decision whether or not to have the procedure is also yours.

This reference summary will help you understand better the benefits and risks of this procedure.

Anatomy

The heart is the most essential muscle in the body. Its main function is to pump the blood to the lungs and to the rest of the body.

Since the heart is living tissue, it needs blood like the rest of the body. The heart also pumps blood to itself through many blood vessels that go directly to the heart muscles. These are known as coronary arteries.



Symptoms and Their Causes

Cholesterol deposits accumulate in the coronary arteries forming a “plaque” that narrows the artery. Narrowed arteries do not let enough blood go through. This causes blood flow to decrease, which can lead to heart attacks.

An angiogram is a test that helps show the plaque in the coronary arteries and helps detect any narrowing or blockage. Other tests such as EKGs or heart tracings can cause the doctor to suspect blockage in the coronary arteries. However, these tests do not show the blood vessels. A coronary angiogram is the only reliable test that shows the blood vessels of the heart.

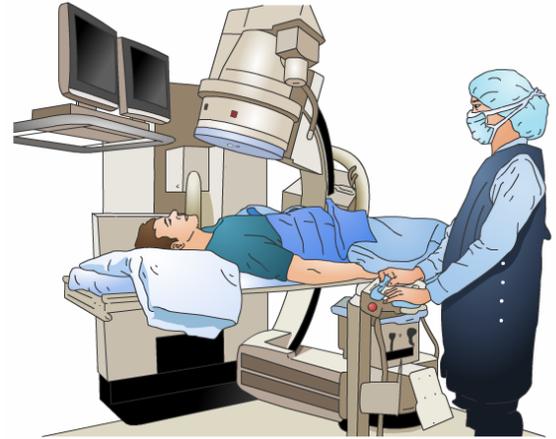
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Procedure

Your healthcare provider may ask you not to eat or drink for several hours before the procedure. If your surgery is in the morning, this usually means no food or drink after midnight the night before.

During an angiogram, the doctor inspects the coronary arteries for blockage. The angiogram may be done on an outpatient basis, meaning you will be able to go home after the test is completed.

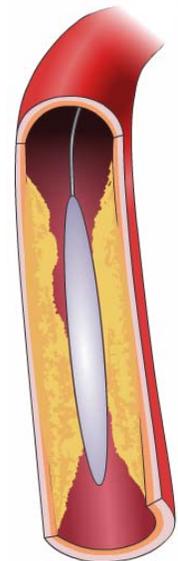
This procedure is done while you are awake. There is virtually no pain involved. You will be asked to lie down on an x-ray table. During the procedure, the heart rate, blood pressure, and vital signs are continuously monitored.



The groin area is then disinfected and made numb with a local anesthetic. A catheter is then inserted into the artery through the skin in the leg and threaded all the way up to the coronary arteries. Sometimes, depending on the doctor's preference and the state of your arteries, the catheter may be inserted in a big artery in the underarm instead of the groin. Dye is then injected in the arteries and x-rays are taken. You should stay very still during the x-rays to allow good sharp pictures to be taken.

If a blockage is found, the doctor will recommend whether it can be opened using either a balloon or another device. The procedure that uses the balloon is called angioplasty.

After the angiogram and the angioplasty, if it is needed, the catheter is taken out. In order to prevent bleeding from the puncture site, you will be instructed to lie flat and not bend your leg. If your cardiologist uses a closure device, you will lie flat for about 1 hour; if not, you will lie flat for up to 8 hours. You should not bend the leg on the side of the groin that was catheterized. You will probably not be able to drive and will therefore probably need somebody to drive you back home.



Balloon Angioplasty

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Risks and Complications

This procedure is safe. There are, however, several possible risks and complications. These are unlikely but possible. You need to know about them just in case they happen. By being informed you may be able to help your doctor detect complications early.



X-rays are used during this procedure. The amount of radiation during this test is deemed safe. However, this same amount could be dangerous for unborn children. It is therefore very important to make sure you are not pregnant prior to an elective radiological test.

The coronary angiogram can, rarely, lead to a heart attack, requiring an unforeseen angioplasty or even an open-heart surgery. The catheter placed in the artery can, rarely, injure that artery or other arteries of the body. This may cause decreased blood flow to the leg or arm involved, which may require an operation to reestablish blood flow.

The insertion can also cause injury to a nerve in the arm or leg depending on where the initial puncture was done.

Some people have allergies to the iodine dye used in this test. Make sure to tell your doctor about your allergies and about any possible reactions to any sort of dye used on you in the past. In some people, dye can cause kidney failure. Let your doctor know if you have a kidney problem. You might be at a somewhat higher risk.

Your doctor may instruct you to stop taking your Glucophage® (metformin) before the exam and not to begin using it again until 48 hours after your test. This is done to decrease the chances of kidney problems. It is important that you inform your doctors about all the medications you are taking.

After the Angiogram

If your cardiologist uses a closure device, you will lie flat for about 1 hour; if not, you will lie flat for up to 8 hours. You should not bend the leg on the side of the groin that was catheterized.

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The nurse will give you discharge instructions, which include a number to call in case of an emergency. Make sure to call this number in case of any new symptoms such as redness, fever or numbness, weakness, swelling or bleeding at the puncture site.

You should go to the nearest emergency room if you have chest pain, difficulty breathing, arm pain, or irregular heart beat.

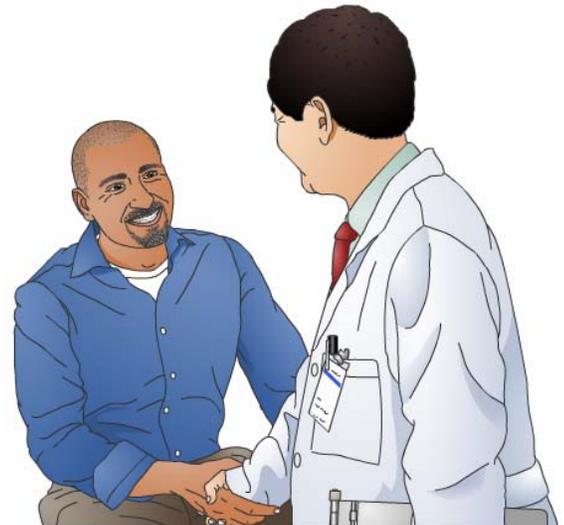
Summary

A coronary angiogram test helps your doctors look at the blood vessels of the heart. In this procedure, the doctor injects dye into the coronary arteries so that they can be x-rayed. An angiogram is the best way to find out if arteries are blocked or restricted by plaque.

If a coronary artery is blocked, your doctor may recommend a coronary angioplasty.

A coronary angioplasty is a procedure that allows your doctor to open narrowed arteries of the heart. Your doctor will discuss with you the results of the angiogram and the treatment options.

Coronary angiograms are very safe. Risks and complications are very rare. Knowing about them will help you detect them early if they happen.



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