



QUESTIONS QUESTIONS & ANSWERS ANSWERS

What is Cardiac Catheterization and Coronary Angiography?

Cardiac catheterization and coronary angiography are heart tests that show the doctor how well the heart is working. These tests also show clots or blockages in the blood vessels carrying blood to the heart.

It helps to understand some medical words before learning about the tests.

- **Cardiac** means having to do with the heart.
- A **catheter** is a flexible tube.
- **Catheterization** is putting a long, narrow, flexible tube (catheter) into the heart. This is done by passing the tube through a large blood vessel.
- **Coronary arteries** are the blood vessels that supply blood to the heart.
- In **angiography**, dye is put through a catheter. The dye makes the coronary arteries and any blockages in them easier to see on an X-ray.

Why are these tests needed?

The **coronary angiography** test helps the doctor find heart problems. By studying X-rays called **angiographs**, the doctor can see the following:

- How well the blood is flowing through the coronary arteries
- If there is any blockage in the arteries and where it is
- How well the heart pumps blood

These tests help the doctor plan the best treatment.

What are the risks of having these tests?

In rare cases, the following problems could occur:

- Heart attack
- Bleeding
- Clotting
- Stroke

The risk of having these problems depends on your:

- Age
- General health
- Medical condition

About one million Americans have a cardiac catheterization every year. The risk of having a problem is less than one percent when specialists do these tests. St. Vincent Charity Hospital has specialists who do many of these tests every year.

The benefits of these tests are greater than the risks. Talk to your doctor about your risks if you need to have these tests done.

What are these tests like? How will I feel?

A **cardiac catheterization** can be done right away if a person has chest pain. If not in pain, you can make an appointment to come to the hospital for the test. You can take this test as an outpatient. Most people who have a cardiac catheterization go home in six to eight hours. If the test shows you need treatment, you may go home within 12 to 24 hours after treatment.

When you come to the hospital you may get medication to help you relax and/or a blood thinner to prevent clots.

1. Your doctor will make a small cut where the catheter will be put in. It is usually put in the groin area. Sometimes it is put in the arm. The area will be numbed, so you will feel no pain.
2. Then, your doctor will insert the catheter. It will pass slowly through the artery until it reaches the heart.

3. Your doctor will watch the catheter's position and movement on an X-ray screen. During this part of the test, you should not feel anything. You may feel your heart skipping or beating faster when the catheter reaches your heart. **This feeling is normal.**
4. Your doctor will then place the tip of the catheter at the opening of the coronary arteries. These are the blood vessels that supply blood to the heart.
5. Next, your doctor will put a dye into the catheter. The dye makes it easier to see the coronary arteries on the X-ray screen. Your doctor can then find any blockages in the arteries. The doctor can also take pictures of the inside of the heart.
6. Your doctor then moves the catheter to the heart's main pumping area. You will feel warm from head to toe as dye fills this area. **This feeling is normal.**

Ultrasound Test

Your doctor may want more information if a blocked artery shows up on the X-ray screen. Your doctor can take a picture of the area using an **ultrasound** machine. The ultrasound machine gives a more detailed picture. This machine also shows movement. Your doctor can see blood flowing through the arteries. Ultrasound is usually a painless test and is done as follows:

- First, a gel is spread on your skin over the area your doctor wants to see.
- The doctor uses a small device that looks like a microphone.
- The doctor holds it against your skin and sweeps it back and forth over the area.
- A picture of this area will come up on a screen.
- Your doctor can see the speed and amount of blood flow.
- Your doctor will use this result to decide on the best treatment for you.

Catheter Treatments

There are several treatments your doctor can do to repair blocked arteries. It is usually safer and quicker to have a treatment during the catheterization test.

Angioplasty

Angioplasty is one of the most common treatments used to repair blocked arteries. A tiny balloon is passed through the catheter to the blocked area. Then the balloon is blown up. As the balloon gets larger it pushes aside the blockage. This re-opens the artery. Blood can then flow at a normal rate.

Angioplasty has been used for 30 years at St. Vincent Charity Hospital. It is proven to be a safe treatment for blocked coronary arteries. The risk of problems such as bleeding or clotting is less than five percent.

Stents

Stents are tiny wire mesh tubes. They are placed inside the artery to support its walls. They are usually placed at the site where an angioplasty was done. Stents reduce the risk of an artery closing up after an angioplasty.

Specialists at St. Vincent Charity Hospital have been using stents since the 1990s. The risk of problems such as bleeding or clotting is less than five percent.

What happens after my treatment?

- Your doctor will remove the catheter when the treatment is over.
- Your doctor may use a few stitches to close the opening where the catheter was inserted.
- In some cases, the doctor may simply put pressure on the site to keep it from bleeding.
- Your doctor may also put in a small device to seal the hole more quickly.
- You will likely spend several hours in a special unit. Here, cardiac nurses will watch your heart and blood pressure closely. This is an important step. It will take time for the effects of the blood thinner you were given to wear off.
- During this time you may be drowsy or feel tired. This is from the relaxation medication you were given.
- You will need to drink a lot of fluids to flush out the dye.
- You will need to lay flat for several hours. You will need to keep your arm or leg straight where the catheter went in.
- The catheter may stay in for some time.
- Patients who have a treatment usually go home within 12 to 24 hours.
- You will need someone to drive you home.

Going home instructions for angioplasty

Your doctor may tell you to avoid certain activities for some time after you go home. Be sure to follow these directions. Also, be sure to get the follow-up care your doctor says you need.

If you have questions or problems, call your doctor right away. If you think you are having a medical emergency, call 911.

How should I take care of the incision site?

- Keep the dressing or bandage on for today. Take it off the next morning.
- Do not shower until the next day.
- Gently clean groin with soap and water. Pat dry after showering. Do not use powders or lotion.
- Watch the site where the catheter was put in. **Call your doctor if you see any swelling, bleeding or drainage.**
- **Call your doctor if you see signs of infection:** redness, fever, chills or drainage other than blood.
- You may feel sore in the area for one week.
- You may have a bruise at the site for one to two weeks. This is normal.
- If you have a lot of bleeding or a large swollen area near the groin, put direct pressure on the site and call 911.
- **If you have chest pain, call your doctor right away.**

What activities should I avoid?

- Do not lift anything over five pounds for the next two days.
- Do not climb stairs for the next two days.
- Do not bend at the waist for the next two days.
- No hard activity or exercise for one week.
- Do not drive by yourself for two days.
- Check with your doctor to find out when you can go back to work.
- Talk to your doctor to find out when you may have sexual activity.

After your treatment, it is important for you to do the following:

- Eat a healthy diet.
- Exercise on a regular basis.
- Follow your doctor's orders when taking medication.
- If you take the medicine Glucophage (metformin), stop taking for 48 hours after your procedure.

How can I find a Doctor?

St. Vincent Charity Hospital has doctors who have special training in Cardiac Catheterizations and Coronary Angiography. To contact one of our doctors, please call:

Physician Referral Line at 1.800.223.8662

Visit our website at www.stvincentcharity.com

St. Vincent Charity Hospital

2351 East 22nd Street

Cleveland, Ohio 44115

216.861.6200

TTY: Ohio Relay 1.800.750.0750

Saint Luke's HealthCare Center

11201 Shaker Boulevard

Cleveland, Ohio 44104

216.721.6900

Reading Health, a program of Project: LEARN, assisted in the writing of this material under a grant from the Sisters of Charity Foundation: January 2008.



**ST. VINCENT CHARITY
MEDICAL CENTER**

A Ministry of the Sisters of Charity Health System

