Cardiac Catheterization

A cardiac catheterization (cath) is an X-ray exam of the heart and its arteries. It looks at how well the heart works. The test helps detect the area and extent of any artery blockage or narrowing.

During the exam, a thin catheter (tube) is inserted into an artery and slowly passed to the heart. Dye (contrast) is injected and X-rays are taken. The contrast allows the blood vessels to be seen. The exam involves little or no discomfort and lasts 1 to 2 hours.

This guide will explain what to expect before, during and after a cardiac cath.

Before the exam
The Cardiac Cath Lab nurse will contact you about 1 week before the exam. The nurse will answer your questions, review pre-cath guidelines and review your current medications with you. Please tell the nurse about:

- Allergies
- Unusual reactions to iodine or X-ray contrast in the past
- Blood thinner medication
- Diabetes medication
- NSAIDS (nonsteroidal anti-inflammatory pain medicine such as ibuprofen)

Night before the exam
The night before the exam, do not eat or drink anything after midnight.

Day of test
On the day of the test, take only the medicine the nurse has instructed you to take. Medicine should be taken with small sips of water. Do not take any oral diabetes medication on the morning of your test.

Arrival
Please check in on the 8th Floor of the Galter Pavilion, 675 North Saint Clair Street. Parking is available for patients and visitors in the garage at 222 East Huron Street, across from the Feinberg and Galter pavilions. Check in at the reception desk on the 8th floor. For discounted rates, please bring your parking ticket with you. Tickets can be validated at the Customer Services Desks on the 1st, 2nd and 8th floors of the Feinberg and Galter pavilions.
For their own safety, children under the age of 16 may not visit in the testing area. They may stay in the waiting room with a responsible adult.

What to expect

You will be assigned a room for both your pre and post cath care. After you change into a hospital gown, the nurse will review your health history and take your blood pressure, pulse and temperature. Blood tests will be done. An IV (into the vein) line will be inserted into your arm or hand. The IV will be used for fluids and medicines needed during the exam. Your groin and wrist area will be cleaned and shaved.

The physician will discuss the exam with you. After the physician has answered your questions, you will be asked to give your written consent for the test.

You may wear your glasses, dentures (or bridgework) and hairpieces. You will be asked to empty your bladder just before going into the procedure room.

During the exam

Once you come into the Cath Lab, you will be assisted onto a firm, X-ray table. The room will have a camera and several TV monitors. Medicine to relax you is given into the IV line. You may feel drowsy, but usually you will be awake and comfortable during the test.

The radial artery in the wrist is used most often for the exam. Other sites, such as the femoral artery in the groin area or a vein on the side of your neck, may be used. The area around the puncture site will be cleaned with a special soap that may feel cold. An anesthetic (numbing medicine) will be injected into the area. A needle will be inserted into the artery and the catheter will be guided into position. This is not usually painful. You may feel pressure and mild discomfort at the puncture site. If needed, more numbing medicine may be given. Contrast dye will be injected into the catheter and carried through the blood vessels. Then, a series of X-rays will be taken.

If a blockage is found, your physician will be contacted. In most cases, treatment is done during the exam itself. This may include angioplasty and often stent placement. In angioplasty, a small tube (catheter) with a balloon tip is inserted into the narrow artery. The balloon is slowly inflated to open up the artery. At this time, a small metal coil (stent) may also be inserted to keep the narrow artery open. Patients having an angioplasty or stent placement may be required to remain in the hospital overnight.

After the exam

After returning to your room, you will need to lie flat in bed for a minimum of 2 hours. Longer bed rest is needed after an angioplasty. This allows the artery to seal. If the radial artery was used, a pressure bandage will be placed on your wrist. Once bed rest is over, the nurse will assist you to sit up and walk. After the physician discusses the test results and checks the wound site, you may be discharged.

If you have an angioplasty or had a stent placed there may be added follow-up care.
At home

After your cardiac cath, the following provides helpful information to assist your recovery.

**Fluids**
You should drink at least 6 glasses of water (8 ounces each) over the next 24 hours (unless otherwise instructed). Water helps to clear the “dye” used during the procedure from your body.

**Activity**
While the wound is healing, bleeding or swelling can occur as a result of stress or strain to the groin and abdominal muscles. Carefully follow these guidelines:

- On the day of discharge, limit your activities.
- No driving for 24 hours.
- Showering is permitted the following day.
- No tub baths for 1 week.
- For the first 2 days, climb stairs (as needed) with a slow, steady pace.

You may resume your usual activities the day after discharge, including normal social activities, but:

- No heavy lifting (greater than 10 pounds) for 1 week if your puncture site was in your groin.
- In addition, if your puncture site was in your wrist:
  - Do not bend your wrist for 24 hours.
  - Do not soak the wrist for 3 days (in a bath tub, sink or for other cleaning).
  - Do not lift more than 3 to 5 pounds with your affected wrist for 1 week.
- No strenuous physical exercise (such as tennis, running, swimming, golfing, weightlifting or bicycling) for 1 week.
- No sexual activity for 1 week.

**Medications**
Please review the medications listed on your After Visit Summary provided by the discharging nurse. Depending on the results of your procedure, your doctor may prescribe new medications. Please make sure you understand what medications you should be taking after the procedure and how often to take them.

If you usually take blood-thinning medication, you may resume ____________________________

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**Wound care and healing**
After the cath, a small dressing is applied to the wound site. You may remove the dressing the day after the exam. Do not reapply a dressing. Keep site clean and dry. Avoid lotions, ointments or powders at the wound site for 1 week.

The healing wound should be soft and dry. A bruise (black and blue) or a marble-size lump may be present.
Warning signs and symptoms

Wound changes
Please contact your physician or the Cardiac Cath Lab physician if any of the following signs appear:

- Skin redness around the wound
- Drainage from the wound
- A lump at the puncture site that enlarges or is larger than marble size
- Pain at the puncture site that makes walking difficult
- Numbness or tingling in the thigh or leg
- Calf tenderness or pain
- Increased area of the bruising extending into the thigh, over the buttock or into the groin
- Discoloration or coolness of the leg or foot

If your radial (wrist) artery was used for the cath, notify the Cardiac Cath Lab physician if there is arm or hand numbness, coldness, tingling, swelling or pain.

Chest pain and other symptoms
Please notify your physician right away if you have:

- Chest discomfort or pain (angina) that radiates to the neck, jaw or arm
- New symptoms or a change in your pattern of angina
- Nausea or profuse sweating
- Shortness of breath with exertion
- An irregular heartbeat
- Lightheadedness or dizziness that makes you lie down
- A fainting spell

Call 911 or go to the nearest emergency room if you have:

- Chest discomfort or pain lasting longer than 10 minutes and not relieved by taking 1 nitroglycerin tablet under the tongue
- Frequent, recurring episodes of chest discomfort or pain

If you have any questions about this information, talk to your physician, nurse or the Cardiac Cath Department at 312.926.CATH (2284), extension 3.

Arterial bleeding
This occurs when the blood vessel (artery) used during the procedure has reopened. Although rare, it is an emergency requiring immediate medical attention.

- If the puncture is in your groin, immediately lie flat and apply firm pressure to stop the bleeding.
- If the puncture is in your wrist, press firmly on the site with your thumb while supporting your wrist with your other fingers.
**Call 911 or go to the nearest emergency room if you have:**
- Swelling around the wound which quickly increases or is pulsating
- A lot of blood or a jet of blood pumping out of the puncture site

Either one of these may occur suddenly.

**Follow-up appointments**

(Cath Lab contact)

Please call if you have a problem or question.

**Weekdays:** 312.926.CATH (2284), extension 3.
**Weekends, evenings and holidays:** Ask for the Cath Lab physician on-call.

**Northwestern Medicine – Health Information Resources**

For more information, contact Northwestern Memorial Hospital’s Alberto Culver Health Learning Center (HLC) at hlc@nm.org, or by calling 312.926.5465. You may also visit the HLC on the 3rd floor, Galter Pavilion at 251 E. Huron St., Chicago, IL. Health information professionals can help you find the information you need and provide you with personal support at no charge.

For more information about Northwestern Medicine, please visit our website at nm.org.