

Cardiac Catheterization

Cardiac Cath, Heart Cath or Coronary Angiogram



THE OHIO STATE UNIVERSITY

WEXNER MEDICAL CENTER

- **Please review all of the instructions about your procedure as soon as you get them**, so you can prepare. You may need to change some of your medicines.
- Arrange to have an adult to drive you to your procedure and be there to take you home after the procedure. If you are taking a cab, bus or medical transportation service home after the procedure, an adult, other than the driver, needs to ride with you for your safety. Medicine given to help you relax during the procedure may affect your judgment and reflexes much of the day.
- If you have questions about your procedure or you need to cancel or change your appointment, call Ross Heart Hospital at 614-293-8372 or East Hospital at 614-685-6961.
- If you have any questions about your insurance coverage, call Pre-certification at 614-685-5958.

Why the procedure is done

A cardiac catheterization is done to check the chambers, valves and arteries of the heart. The procedure may be done on the right side, the left side or both sides of your heart. Your doctor may use the cardiac cath to:

- Diagnose heart and lung diseases, such as coronary heart disease, heart failure and pulmonary hypertension.
- Provide treatment for heart disease.
- Check how well your heart is working before or after heart surgery.
- Measure blood flow, pressures and oxygen levels in parts of the heart.
- Remove samples of blood or tissue for testing.

Based on why you had the procedure and the results of your cardiac cath, your doctor may recommend:

- No treatment changes.
- Medicines.
- Surgery.
- Other procedures.

Prep instructions

You will be called by Cath Lab Scheduling who will review these instructions with you. Please make notes of any questions you may want to ask about the procedure or your prep.

If you take prescription medicines, **you may need to change or stop certain medicines** before this procedure. See **Medicine Review** section for more information. Cath Lab Scheduling will give you more information if needed.

Be sure to tell staff if you have:

- **Any allergies**, or if you have had **any problems with contrast dye** in the past.
- **Any problems with bleeding.**
- Problems lying flat.
- Trouble having blood drawn or getting IVs started.
- Any other planned procedures or surgeries scheduled.
- Concerns about paying for your medicines or other concerns.

Start clear liquids at midnight before procedure

You may eat your regular meals until midnight before you procedure. From midnight, **drink only clear liquids until 2 hours before your test.** *

These clear liquids are allowed:

- Water.
- Fruit juices that you can see through, such as apple, white cranberry or white grape
- Popsicles or ice chips.
- Ginger ale or lemon-lime soda.
- Gatorade, other sports drinks or other drink mixes like Kool-Aid.
- Clear broth or bouillon.
- Jell-o.
- Coffee or tea (no milk or cream added).

*If your procedure is **scheduled after 10 AM, you can eat a light breakfast before 6 AM** of an egg and a piece of toast or a small bowl of cereal with milk. After that, only clear liquids until 2 hours before your procedure.

Take a shower or bath

Either the evening before or the morning of your procedure, take a shower or bath.

You will not be able to shower or bathe for the first 24 hours after your procedure.

Morning of your procedure

- Take your medicines for blood pressure, heart issues, seizures or pain with a sip of water **up to 2 hours before** your procedure as directed.
- Female patients should come prepared to give a urine sample in case a pregnancy test is needed.
- **Your driver must be present when you sign in to proceed with your test.**
- Bring these with you to your test:
 - All of your medicines in their prescription bottles that you are scheduled to take during the day.
 - A list of all medicines, including prescription and over the counter medicines and any vitamin or herbal products you are taking.
 - A list of your allergies.
 - List of medical conditions and previous surgeries.
 - A copy of advanced directive such as a living will or power of attorney.
 - Your photo identification, insurance card and co-payment, if needed.
 - CPAP machine if you use one at home for sleep apnea.
 - Overnight bag packed with personal items and toiletries, in case you need to stay at the hospital. Leave this in the car until you know if you will need to stay.
- Please **leave all valuables and jewelry, including piercings, at home** or have your driver keep them for you.
- **Plan to arrive at _____ AM the day your procedure is scheduled.**

Before the procedure

- Your doctor will talk to you about the procedure and have you sign a consent form.
- You will need to wear a hospital gown. You can wear your glasses, dentures and hearing aid in the cath lab.
- Empty your bladder before going to the cath lab.
- You will have an intravenous line (IV) put in to give your fluids and medicines during the procedure.
- Your family will be directed to a waiting area to wait until your procedure is done.

Having the procedure

The procedure is done in a special room called the **cath lab**. It looks like an operating room and will feel cool. Gowns, gloves and masks will be worn by the staff in the room. Lights will be dim so the doctor can see the screen.

- You will be awake during the cath but you may be given medicine through your IV to help you relax. You will have small patches, called leads, placed on your body to check your heart rate during the procedure.
- The technician will scrub your arm and leg sites. Hair may be cut from the leg site, if needed, using a clipper. **Often the arm site is used but both sites will be prepared.**
- Numbing medicine will be injected at the site.
- A needle is put into a vein for a right heart cath or an artery in the arm or upper leg for a left heart cath. A flexible wire is threaded through the needle and then the catheter is put over the wire in the blood vessel.
- You may feel some pressure as the catheter is put in. You may also feel some skipped heart beats as the catheter passes into the chambers of your heart.

- **Be sure to tell the staff if you feel any pressure, pain, problems with breathing or other discomfort during the procedure.**
- The doctor guides the catheter toward the heart using an x-ray screen. When the catheter is in position, a medicine, called contrast or dye, is put through the catheter. Dye lets the doctor see the coronary arteries and the chambers of the heart on the screen.
- You may feel warm, flushed, tingling and maybe some nausea for 20 to 30 seconds while the dye is injected. Some people feel a slight headache.
- Blood samples are taken and pressures are measured during the procedure.
- If stents are needed, the doctor will place them using the catheter.
- The doctor and other staff will talk to you during the procedure.
- The catheter is removed when the procedure is done. Pressure may be applied to the site to prevent bleeding.
- The procedure lasts about an hour.

After the procedure

- You will be taken to the recovery room.
- Your nurse will check your blood pressure, heart rate and breathing during the next 2 to 4 hours. Pulses will also be checked in your arms, legs and feet. The access site will be checked often for signs of bleeding.
- **Tell your nurse right away if you notice any swelling or bleeding in this area or if you feel pain, numbness or tingling in your arm or leg.**

You will be given more specific discharge instructions before you are sent home.

Results of your procedure

Your doctor will talk with you after the catheterization to explain the results of your procedure.

Coronary heart disease

Cardiac cath is most often done to check for and treat **coronary heart disease (CHD)**, also called coronary artery disease (CAD). This is blockage or narrowing from a build up of plaque in the blood vessels, called **coronary arteries**, that supply oxygen to your heart muscle.

Chest pain, called **angina**, is often a sign of coronary heart disease. A **heart attack** happens when the blood flow to heart muscle is stopped, causing permanent damage to heart muscle. A cardiac cath may be done as an emergency treatment for a heart attack to prevent more damage to heart muscle.

Treatment for a heart blockage or a heart attack during a cardiac cath is called **percutaneous coronary intervention (PCI)** or **coronary angioplasty**. A balloon is used to push the plaque against the artery walls to open up the vessel to let more blood flow.

A small wire cage or tube, called a **stent**, may also be placed to keep the artery open. The stent may also be called a cardiac stent or coronary stent. If you have multiple places with blockage or narrowing, your doctor may place more than one stent to keep your heart arteries open.

Types of heart stents

There are two main types:

- **Bare metal stent.**
- **Drug-eluting stent** that is coated with medicine to help keep the stent from blocking and reduces scar tissue from forming.

Talk to your doctor about which type of stent may be best for you.

If you have a stent or stents placed, you will need to take **aspirin and other blood thinner medicines to prevent blood clots** from forming in the stent. How long you need to take these medicines will depend on the type of stent and your risk of forming blood clots.

Medicine review

Blood thinner medicines

Continue to take these medicines to prevent blood clots **up to and even on the day of your procedure:**

- Aspirin
- Brilinta (Ticagrelor)
- Effient (Prasugrel)
- Plavix (Clopidogrel)

Other medicines to prevent blood clots may need to be stopped for a few days to reduce your chance of bleeding during the procedure:

- Arixtra (Fondaparinux)
- Coumadin (Warfarin)
- Eliquis (Apixaban)
- Fragmin (Dalteparin)
- Heparin
- Jantoven (Warfarin)
- Lovenox (Enoxaparin)
- Pradaxa (Dabigatran)
- Savaysa (Edoxaban)
- Xarelto (Rivaroxaban)

You will be given **instructions about these medicines when Cath Lab Scheduling** calls you to review your prep.

Diabetes medicines

If you take medicine for diabetes, you may need to stop or reduce the amount of insulin before your procedure.

- If you take Metformin, Glucophage, Metaglip, Glucovance, Avandamet, ActoPlus Met, or any medicines with metformin in them, **do not take them the day of the procedure and the 2 days after your procedure.**
- Do not take any of these diabetes medicines the morning of your procedure:
 - > All oral diabetes pills
 - > Humalog (Lispro), Novolog (Aspart), Apidra (Glulisine), or regular insulin.

- › Byetta (Exenatide), Victoza (Liraglutide) , Tanzeum (Albiglutide) or Trulicity (Dulaglutide)
- If you take Levemir (Detemir), or Lantus (Glargine):
 - › Type 1 diabetes - reduce your dose by 20% the evening before and the morning of your procedure.
 - › Type 2 diabetes -decrease your total daily dose of insulin by half or 50%.
- If you have Type 2 diabetes and take NPH, 70/30 or 50/50 insulin - reduce your evening dose the day before and your morning dose by half or 50%.
- If you use an **insulin pump**, talk to your doctor about your pump use the day of the procedure.

Water pills or diuretics

Do not take water pills, such as Lasix (furosemide), Bumex (bumetanide) or Demadex (torsemide), the morning of your procedure unless you are not able to lay flat because of trouble breathing if you do not take them.

Medicines for pulmonary hypertension, erectile dysfunction (ED) or benign prostatic hypertrophy (BPH)

If you take:

- Adcirca, Cialis (Tadalafil)
- Viagra, Revatio (Sildenafil)
- Levitra, Staxyn (Vardenafil)

For pulmonary hypertension, let the cath lab know. These medicines may interact with other medicines given during the procedure.

For erectile dysfunction or benign prostatic hypertrophy, stop this medicine for 48 hours before your procedure.

Other medicines

For most other medicines, such as blood pressure medicines, you should take your dose as usual the morning of your procedure.

Procedure location

Your procedure is scheduled at:

- ❑ **Ross Heart Hospital**, 452 W. 10th Avenue, Columbus, OH 43210
 - Use valet parking in front of the hospital or park in the SAFEAUTO Hospitals Garage.
 - Register in the main lobby on the first floor.
- ❑ **East Hospital**, 181 Taylor Avenue, Columbus, OH 43203
 - Free parking is available in a lot off Hawthorne Avenue, across from the hospital's main entrance.
 - Register in the main lobby on the first floor.

Talk to your doctor or health care team if you have any questions about your care.

For more health information, contact the Library for Health Information at **614-293-3707** or e-mail **health-info@osu.edu**.