

## Angiogram/Arteriogram

An angiogram, or arteriogram, is an X-ray test that uses an injection of dye (or contrast) to examine blood vessels of the organs, head, neck, arms or legs. These tests identify the area and extent of any artery blockage or narrowing. The contrast solution allows the blood vessels to be seen more clearly. The procedure usually involves only mild discomfort and takes between 1 and 2 hours to complete.

*If you have any questions, please talk with your physician or nurse.*

### Before the test

#### **At home**

**If your test is scheduled to begin at or before 12 noon**, follow these diet instructions:

Do not eat any solid foods after midnight the night before your test. You may drink water or black coffee with nothing added (no cream, milk or sugar) until 3 am.

Do not drink liquids after 3 am.

You can take medication that you need with sips of water.

**If your test is scheduled to begin after 12 noon**, follow these diet instructions:

Do not eat any solid foods after 6 am. You may drink water or black coffee with nothing added (no cream, milk or sugar) until 9 am.

Do not drink liquids after 9 am.

Needed medications may be taken with sips of water.

#### **At the hospital**

Your physician will give you specific instructions about where and when to check in for your test.

The nurse will start an IV (into the vein) in your hand or arm before the test. This will allow the care team to give you fluids and medications as needed.

The physician from the Interventional Radiology (IR) Department will explain the test and talk with you about the risk. After the physician has answered your questions, they will ask you to sign a written consent for the procedure.

Before the test begins, the physician will do a brief exam and ask you questions about your medical history. Tell the physician about any allergies or if you have ever had an unusual reaction to iodine or contrast solution.

The staff will give you a hospital gown to wear. Remove your clothing, including underwear. Remove your watch, glasses, all jewelry and hairpins. If you are going to have general anesthesia, the staff will ask you to remove your dentures or bridgework. Give all valuable items to your family or leave them at home. The staff will ask you to use the bathroom to empty your bladder. The nurse will check your temperature, pulse, breathing and blood pressure. They will answer any questions you may have.

***If you are having this test while you are a patient in the hospital***

The test may not be scheduled for an exact time. The staff will tell you as soon as the IR Department calls for you. When the patient escort arrives, they will help you get onto a cart. They will give you a blanket to keep you warm and then take you to the IR Department.

## **During the test**

In the IR procedure room, the staff will help you onto an X-ray table. The nurse may give you some medication through your IV to help you relax. This medication will make you feel drowsy, but comfortable during the test.

In some cases, you may have general anesthesia. This begins with IV medication and includes breathing anesthetic gases mixed with oxygen. You will not be aware of the test or your surroundings. The clinician will put a breathing tube into your windpipe to help you breathe during the test.

The physician will choose the site to puncture the skin. They most often use the femoral artery in the groin. Sometimes they use other sites, such as the brachial artery or the radial artery in the arm. They will shave and clean around the puncture site with a special antiseptic that may feel cold. They will use a local anesthetic (similar to novocaine) to numb the area. When the area is numb, the physician will make a puncture and put a catheter into your artery. This catheter is a long, thin, flexible tube that can be guided to a certain position. The catheter placement is not usually painful. You may feel pressure and mild discomfort at the puncture site. If needed, they can give you more local anesthetic.

When the catheter is in the proper position, the physician will inject the contrast dye into the catheter. The dye will go through the blood vessels. You may feel a sudden warm or hot sensation when they inject the dye. This will only last a few seconds. After the dye is in your system, they will take a series of X-rays. They will ask you to hold your breath for a few seconds as they take the X-rays. When they are finished taking the X-rays, the physician will remove the catheter. They may use a closure device to seal the puncture site. In some cases, they will put firm pressure over the puncture site for at least 10 to 20 minutes to seal the puncture site. This will complete the test.

## After the test

The care team will ask you to stay still for 1 to 6 hours. During this time, if you want to use the restroom, you must use a urinal or bedpan. The nurse will help you if needed. It is very important to keep your leg or arm straight. If they used the femoral artery in the groin, you will need to lie flat in bed. The nurse will frequently check your blood pressure, temperature and pulse, along with the puncture site and pulse in the leg or arm used in the test.

The care team can put an ice pack over the site to prevent swelling and relieve discomfort.

Do not eat solid foods until the care team tells you to do so. Drink plenty of fluids. You might have the IV until the next morning so that you can receive added fluids. This will help flush out the contrast used during the test. Tell the nurse right away if you have any of the following symptoms.

- Pain or swelling at the puncture site
- Bleeding or bruising at the puncture site
- Numbness, tingling, pain or any change in normal sensation in your arm or leg
- Difficulty moving your fingers, hands, feet or legs
- Coolness or discoloration of your hand or foot
- Changes in vision
- Difficulty speaking or slurred speech

Your physician will talk with you about the results of the test. If you have any questions or concerns, please ask your physician or nurse.

## Other instructions

### ***Diet***

Unless you are told otherwise, you may go back to your regular diet when you leave the hospital. You should drink at least 6 glasses of water (8 ounces each) over the next 24 hours. Water helps to clear the dye used during the procedure from your body. Do not drink alcohol for 24 hours.

### ***Activity***

Do not drive for 24 hours after the procedure. For the next 3 days, do not do physical exercise or lift anything heavier than 10 pounds. Talk with your physician before doing strenuous physical activity. You may shower 24 hours after the test, but do not let water directly hit the puncture site. Do not scrub the area. Do not take a tub bath for 7 days. You may go back to all other daily activities 24 hours after the test. This includes normal social activities.

### ***Wound site/bleeding***

You may see a small bruise around the puncture site. If you notice any bleeding from the puncture site, do the following:

1. **Lie flat right away.**
2. **Put firm pressure over the site for 15 minutes. You may use a clean cloth or tissue to apply pressure. If possible, have another person apply pressure.**
3. **After 15 minutes, slowly remove pressure. The wound should be dry and flat without bleeding. Cover the wound with an adhesive bandage.**
4. **Call your physician right away.**

The following signs may mean that the puncture of the artery has reopened and that there is active bleeding from the artery:

- Sudden increase in swelling of the area around the puncture site
- Blood streaming from the site that will not stop

**If the bleeding and/or swelling continues as you keep applying pressure, it is a medical emergency!**

- **Continue to put firm pressure over the puncture site**
- **Call 911**

Contact your physician for following:

- Drainage or oozing from the puncture site
- Swelling at the puncture site
- Increasing size of the bruise with discoloration extending past the initial puncture site
- Numbness or tingling in your arm or leg
- Difficulty moving your fingers, toes, feet or legs
- Discoloration and/or coolness of your hand or foot