

Preparing for your angiogram

You have been scheduled for a test called an angiogram. An angiogram is a diagnostic procedure that takes X-ray images of the blood vessels. Both arteries and veins can be imaged in this fashion.

Angiography involves injection of X-ray dye or contrast media into the blood vessels. Images are then taken using state of the art fluoroscopy x-ray machines. The images generated provide a road map picture of your blood vessels. These can reveal blockages, plaque, narrowing (stenosis), aneurysmal dilation (ballooning) and other pathology within the arterial tree. These pictures can help plan treatment of your medical condition. An angiogram is both diagnostic and therapeutic. Images can be obtained to diagnose pathology and concomitantly interventional procedures can be done to eliminate the blockages. This can be done with stent placement, balloon angioplasty, and in some cases by plaque excision. All parts of the circulatory system can be studied. This includes the arteries to the legs, kidneys, arms and brain. Usually, only one particular area of the body is evaluated during the procedure to limit radiation exposure.

The procedure is not particularly painful. All work is done under local (lidocaine) anesthetic with intravenous medication used as needed to calm and relax the patient. A needle is used to access the patient's artery in the groin after local numbing solution has been given. After the initial arterial access is established the rest of the procedure is painless.

Do not eat or drink anything after midnight on the night before your angiogram. Continue to take all your regular medications (with small sips of water) prior to your angiogram. If you are on the blood thinner **Coumadin** you will need to hold this for 5 days prior to the procedure. The medications **Plavix** and **Pradaxa** should also be held for 5 days prior. Aspirin is usually OK to take prior to angiogram. Diabetic medications such as **Glucophage** and **Metformin** should be held 24 hours prior to and 48 hours after the angiogram study. If you are a diabetic on insulin, take only ½ the dose of your morning insulin on the day of the procedure. Please tell the doctor if you are **allergic to IV dye, or shellfish**. An allergy does not always preclude the ability to do an angiogram, but you may need to take special steroid medication prior to the procedure. If you are on any blood thinners or diabetic pills, please remember to discuss your medications with the physician.

On the day of the procedure, please report to the Outpatient Registration Department approximately 2 hours before your scheduled procedure. Upon your arrival a brief medical history will be taken. Blood work will be drawn if needed. An intravenous line will be started in your arm by the nursing staff. The IV line allows for the administration of fluids and medications during the procedure.

When you arrive at the Special Procedures room (Angio Lab), you will be moved onto a special X-ray table. Monitoring devices will be used to measure your vital signs during the procedure. An area of your groin or upper arm will be shaved, cleaned with sterile liquid, and covered with sterile drapes to help prevent infection. After local anesthesia is applied to the entry site, a very

small tube called a catheter is inserted into the artery. While viewing the X-ray picture on a monitor, the physician guides the catheter to the area to be studied. The IV dye is then injected through the catheter to give a clear image of the inside of the blood vessels. You may be asked to take in a deep breath and blow it half way out when the pictures are being obtained. You should then hold your breath and avoid any movement as the pictures are being taken. This will avoid any artifact and allow the physician to obtain clear images of your arteries. The catheter may then be moved to other areas of interest and more pictures taken. Each time the contrast is injected you may experience a sensation of heat. This is normal and only temporary.

Most routine angiography procedures take about one to two hours. More complex procedures with additional work may take up to three hours. When the procedure is completed the catheter will be removed and pressure will be held on the groin for several minutes to stop any bleeding. Sometimes an arterial closure device may be used to help close the tiny hole made in the artery.

Once the angiogram is completed, you will be transferred to the outpatient recovery room for 2-3 hours of strict bed rest. It is very important during this time to stay flat on the bed and avoid any strenuous movement. After 30 minutes you will be allowed to elevate your head and have a small drink of water. These maneuvers prevent any bleeding or blood collection (hematoma formation) at the catheter entry site.

You will be able to take your usual medications and resume your regular diet upon discharge to home. Please make sure you have someone to pick you up after the procedure. In addition you should avoid any strenuous bending or activity for 2-3 days after the procedure. Light activity and minimal walking should be done for the first 24 hours. You may take a shower the morning after the operation. We recommend avoiding swimming or soaking in the bathtub for one week after the procedure. You should not drive for at least 24 hours after the angiogram.

Patient discharge instructions

- Drink plenty of fluids once you have returned home.
- Avoid strenuous activity for 2-3 days. Keep walking to a minimum for the first day.
- Do not drive a car for 24 hours after the procedure. You should not be home alone the first day of the operation.
- Keep a clean dressing or Band-Aid on the catheter insertion site for one day. After 24 hours you may remove the dressing and clean the area with soapy water.
- You may take a shower 24 hours after operation.
- Call your physician immediately if you develop excessive bleeding at the puncture site (some minimal bleeding is normal), unusual pain in the leg or at the site of catheter insertion, or temperature greater than 100 degrees F.
- You should see the physician within a week for your follow up appointment.