

PERIPHERAL ANGIOGRAM

What is a Peripheral Angiogram?

A Peripheral Angiogram is a broad term used to describe a study of the peripheral circulation. This test is usually performed when your doctor suspects that you may have a significant blockage in one or more of the arteries of your peripheral circulation. Specifically, the arteries of the aorta (Aortogram), renal arteries (Renal angiogram), legs (Lower Extremity Angiogram), or arms (Upper Extremity or Subclavian Angiograms) may be studied. It is a common, relatively painless, nonsurgical procedure performed by an interventional cardiologist.

The information provided by this procedure provides details about the function and patency of the specific arteries being studied. It is used to diagnose and treat Peripheral Artery Disease (PAD), and may also diagnose thoracic (TAA) and abdominal aortic aneurysms (AAA).

How Is a Peripheral Angiogram Performed?

A thin flexible tube (catheter) is inserted through an artery in your groin (femoral artery), wrist (radial artery) or arm (brachial artery). To make the arteries visible on x-ray, dye is injected through the tube into the target arteries. An x-ray camera films the arteries as they pump blood. These x-ray images can be viewed right away so treatment decisions can be made quickly.

NOTE: Be sure to tell your doctor or nurse if you are allergic to x-ray dye (contrast) or shellfish, or if you are allergic to Aspirin, Plavix, Effient or Brilinta

Before Your Peripheral Angiogram

Pre-Admission Testing

Prior to your procedure, you will be required to have routine pre-admission testing performed. The hospital will call you to schedule your pre-admission testing, if required.

- During this appointment, you will be interviewed by a nurse, who will review your medical history and medications.
- Bring all medication bottles in a zip lock bag or a detailed list of what your medications including dosage and frequency.
- Fasting blood work may be performed at this appointment.
- **Patients who are on anti-thrombotic medications (warfarin, Pradaxa, Xarelto, Eliquis, Savaysa):** You should have been given a stop date. If not please call the office.
- **Diabetic patients:** Do not take your diabetes medications or insulin the morning of pretesting. You will be permitted to take your medicine/insulin after the blood work has been drawn.
- HCA will contact your insurance for pre-authorization. If a referral is required, we will fax a referral request to your primary care physician with all the necessary information.

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The Night Before

- **Patients who are on anti-thrombotic medications (warfarin, Pradaxa, Xarelto, Eliquis, Savaysa):** You should have been given a stop date. If not please call the office.
- Drink plenty of water during the day before your test as you need to be well hydrated. If you are on a fluid restriction (ordered by a physician) due to a medical condition please inform us immediately.
- No solid food or drink after midnight including gum or candy. You may take your usual medications with a sip of water the morning of the procedure. (Except diabetes medications or insulin, see below).
- **Diabetic patients:** Do not take your diabetes medications/insulin the morning of your procedure.
- You **CAN NOT** drive yourself the day of your procedure.
- If you develop symptoms of a cold, flu or fever or if you have been exposed to any communicable diseases (chicken pox, shingles, mumps, measles or tuberculosis) since your preadmission visit, immediately notify us.
- If your procedure is scheduled at St. Francis Medical Center, you will receive a call from the 4B unit between 2:30-5:00 the day prior to your scheduled procedure (Mon-Fri) to verify your arrival time: 609-599-6560.
- Be prepared to stay overnight as there is always a possibility you will be admitted following your procedure. If you are discharged the same day, you **MUST** have someone to stay with you that night.

ALLERGIES- FOR PATIENTS WITH IVP DYE, IODINE, OR SHELLFISH ALLERGY (i.e., lobster, crab, mussels, oysters, clams, and shrimp)

- Take Prednisone 50mg at 8am the day before your test.
- Prednisone 50mg at 8pm the day before your test.
- Prednisone 50mg at 8am the morning of your test.
- In addition, take two Benadryl 25 mg tabs (available over the counter at your pharmacy) the evening before your procedure

The Day of the Peripheral Angiogram

Before Leaving for the Lab

1. A doctor or nurse will explain the procedure, its purpose, benefits and risks.
2. You will be asked to sign a consent form.
3. An IV (intravenous) line will be started in your hand or arm.
4. You will be asked to empty your bladder.

Family members and friends are not allowed in the lab. They will be told where they can wait.

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It will be cool in the lab. You will be helped onto the table. You will lie flat so that the x-ray machine can rotate around the upper part of your body. If you have back problems, tell the staff so that they can help you find a more comfortable position. ECG patches (electrodes) will be placed on your shoulders, chest arms, and legs. These patches are hooked to equipment that monitors your heart.

Points of Insertion

The area that will be used for the procedure will be shaved and cleaned to remove any bacteria that is on the skin.

Since the peripheral angiogram is done using sterile technique, the doctors and nurses in the lab will be wearing sterile hospital gowns, hats, masks, and gloves. You will be covered from your chest to feet with a sterile sheet. Once the sheet is placed over you, please keep your arms at your side. If you need to move your arms, ask the nurse in the room to guide you.

Getting Ready

Your doctor will inject a small amount of medicine into the area being accessed for the Procedure(groin, arm or wrist). Although it will sting and burn a little, it will quickly numb the area. This will prevent you from feeling pain at this site during the angiogram. Your leg or hand may feel numb as well.

You will feel pressure, pulling and tugging at the site where the tube is inserted. You will be given IV pain medication and light sedation. You will be sleepy but able to communicate with your doctor and nurse.

Placing the Catheters

The doctor will make a tiny incision in your skin. A small hollow tube (a sheath) will be placed through the incision and into the artery . The catheter is then passed through the sheath, deeper into the artery being studied. The blood vessels don't have nerves on their inner linings; therefore the procedure causes minimal discomfort.

During the procedure, a dye that shows up on x-ray is rapidly injected into your arteries. As the dye is injected, you may experience a sensation of warmth or flushing, but this is a normal reaction, and will last only 20-30 seconds. The movie of the dye flowing through the arteries is called a peripheral arteriogram.

After The Procedure

Your recommended treatment depends on the type and severity of the peripheral artery disease (PAD). Once diagnosed, treatment may include:

1. Medicine to help reduce symptoms of leg pain, or claudication

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2. Peripheral artery bypass surgery to detour around the blockages
 3. Peripheral angioplasty, atherectomy, and stenting
 4. Renal artery stenting
 5. Subclavian artery stenting
 6. Abdominal aortic aneurysm (AAA) stenting
- In angioplasty, a special catheter with a small balloon at the tip is passed into a narrow portion of the artery and inflated. This compresses the plaque against the walls of the artery.
 - The angioplasty is often followed by the placement of a “wire coil” or stent. The stent, an implant, will remain in the artery. Within weeks, new tissue will grow and cover the stent.
 - A stent can be implanted at the location of a AAA, preventing rupture

After your procedure, you will return to a room to recover. You be on bed rest for two to several hours. This depends on what you had done, and the size, type, and location of catheters used. The staff will keep you comfortable with the use of medicines and position changes. Some patients are discharged the same day, but if you received a stent, angioplasty, or atherectomy, you will stay overnight.

If a stent is placed, you will be started on antiplatelet medication (*Plavix, Effient, or Brilinta*) and remain on it for a minimum of 1 month, depending on the type of stent used. You should also remain on aspirin. These medicines help to prevent a clot from forming on the stents. Do not stop your medication without first talking with your cardiologist.

Blockage can reoccur with the stent. This may happen within the first 3-6 months. This blockage occurs slowly, and you may have a return of symptoms (claudication). If this should happen, please contact your doctor soon after you notice the symptoms.

What are some possible complications?

If there is swelling or bleeding from the angiogram site, or if the extremity becomes cold, pale, or numb following discharge, you must immediately contact your physician.

The risks of peripheral angiogram include the possibility of a blood clot forming that causes a stroke or heart attack, bleeding, damage or obstruction of a blood vessel, or even death. However, in medically stable patients undergoing elective peripheral angiogram for the evaluation of peripheral artery disease, the risk of a potentially fatal result is less than 1 in 500 cases

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Follow- Up Care : Post Peripheral Angiogram

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| Dressing | If the band aid was not removed in the hospital, you may remove it once you get home, unless otherwise instructed. It is less painful if you remove it while in the shower. |
| Bathing | You may shower the day after the procedure. Gently cleanse the site with soap and water 24 hrs after the procedure. You may not take a bath, swim, or soak in a hot tub or Jacuzzi until after your office follow-up appointment. |
| Exercise | You may resume walking at home. After 24 hours, you may walk the distance at which you are accustomed. If you have not been walking, you may start at a low level. If your procedure was performed via your radial artery (wrist) : Do not hyperextend your wrist (radial artery approach) for 7 days |
| Sexual Activity | You may resume after 48 hours, unless advised otherwise. |
| Household Chores | You may resume household chores (dishes/laundry). Wait 5 days before vacuuming. You may not shovel for 5 days. |
| Lifting | Femoral artery approach (leg/groin) : Do not lift over 10 pounds for the first 3 days at home. Radial or Brachial Artery approach (wrist/arm) : do not lift over 7 lbs with the affected arm for 7 days |
| Driving | You may resume 24 hours after discharge, unless advised otherwise |
| Stairs | As tolerated |
| Work | Depends on your type of work. Check with your Doctor |
| Medications | Take as directed. Do not stop any medications unless you are instructed by your Cardiologist. Contact the office for specific instructions |
| Diet | Follow a low fat, low cholesterol diet. If you have any other dietary restrictions (i.e. diabetes), follow your doctor's recommendations |

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| Smoking | Smoking is a major risk factor for most diseases. If you smoke, you are strongly encouraged to quit. Talk to your Doctor for assistance. |
| Notify your Doctor if: | Temperature greater than 101.5. Bleeding at the puncture site. Femoral artery approach (leg/groin): leg is white, numb, cold, very painful, or if a lump appear at the incision site. Radial or Brachial Artery approach (wrist/arm): arm is white, numb, cold, very painful, or if a lump appear at the incision site. |
| Follow-Up Appointments | Schedule and keep your appointment for 7-10 days post procedure. Your Cardiologist will check your puncture site at this appointment. |

Follow- Up Care : Post Angioplasty, Atherectomy or Stent

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| Dressing | If the band aid was not removed in the hospital, you may remove it once you get home, unless otherwise instructed. It is less painful if you remove it while in the shower. |
| Bathing | You may shower the day after the procedure. Gently cleanse the site with soap and water 24 hrs after the procedure. You may not take a bath, swim, or soak in a hot tub or Jacuzzi until after your office follow-up appointment. |
| Exercise | You may resume walking at home. After 24 hours, you may walk the distance at which you are accustomed. If you have not been walking, you may start at a low level. If your procedure was performed via your radial artery (wrist): Do not hyperextend your wrist (radial artery approach) for 7 days |
| Sexual Activity | You may resume after 5 days, unless advised otherwise. |
| Household Chores | You may resume household chores (dishes/laundry). Wait 5 days before vacuuming. You may not shovel for 5 days. |
| Lifting | Femoral artery approach (leg/groin): Do not lift over 10 pounds for the first 3 days at home. Do not lift more than 20 lbs for first 2 weeks at home. Radial or Brachial Artery approach (wrist/arm): do not lift over 7 lbs with the affected arm for 7 days |
| Driving | Femoral artery approach (leg/groin): You may resume 4 days after discharge, unless advised otherwise. Radial or Brachial Artery approach (wrist/arm): You may resume after 24-48 hrs, unless advised otherwise. |
| Stairs | Femoral artery approach (leg/groin): You may resume after 24 hours, as tolerated. Radial or Brachial Artery approach (wrist/arm): As tolerated |
| Work | Depends on your type of work. Check with your Doctor |

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| Medications | Take as directed. Do not stop any medications unless you are instructed by your Cardiologist. Do not stop your anti-platelet medication (aspirin, Plavix, Effient, Brilinta), unless directed to do so by your cardiologist. Contact the office for specific instructions |
| Diet | Follow a low fat, low cholesterol diet. If you have any other dietary restrictions (i.e. diabetes), follow your doctor's recommendations |
| Smoking | Smoking is a major risk factor for most diseases. If you smoke, you are strongly encouraged to quit. Talk to your Doctor for assistance. |
| Notify your Doctor if: | Temperature greater than 101.5. Bleeding at the puncture site. Femoral artery approach (leg/groin): leg is white, numb, cold, very painful, or if a lump appear at the incision site. Radial or Brachial Artery approach (wrist/arm): arm is white, numb, cold, very painful, or if a lump appear at the incision site. |
| Follow-Up Appointments | Schedule and keep your appointment for 7-10 days post procedure. Your Cardiologist will check your puncture site at this appointment. |