

PERIPHERAL ARTERIAL ANGIOPLASTY AND STENTING

What is Peripheral Arterial Disease?

Your arteries are normally smooth and unobstructed on the inside, but as you age, plaque can build up in the walls of your arteries. Cholesterol, calcium, and fibrous tissue make up this plaque. As more plaque builds up, your arteries can narrow and stiffen. This process is called atherosclerosis, or hardening of the arteries. Eventually, enough plaque builds up to reduce blood flow through your arteries.

Am I a candidate for angioplasty and stenting?

You are a candidate for angioplasty and stenting if you have moderate to severe narrowing or blockage in one or more of your blood vessels. Usually, you will also have symptoms of artery disease, such as pain or ulceration, in one of your limbs.

If you have extremely hard plaque deposits, blockages that contain blood clots or a large amount of calcium, extensive or particularly long blockages, or blood vessel spasms that don't go away, you probably are not a good candidate for angioplasty.

Depending upon the particular circumstances, your physician may recommend angioplasty as an alternative to bypass surgery, which also treats narrowed arteries.

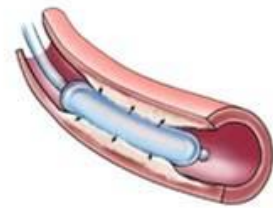
For certain types of blockages, angioplasty has some advantages when compared to bypass surgery.

- Angioplasty does not require a large incision. Because of this, angioplasty patients usually spend less time in the hospital and recover at home faster than bypass surgery patients.
- Your physician can usually perform angioplasty while you are awake, whereas bypass surgery requires general or regional anesthesia.

Nevertheless, in some circumstances, bypass surgery may be a better option. Your vascular surgeon will help you decide what alternative is best for your particular situation.

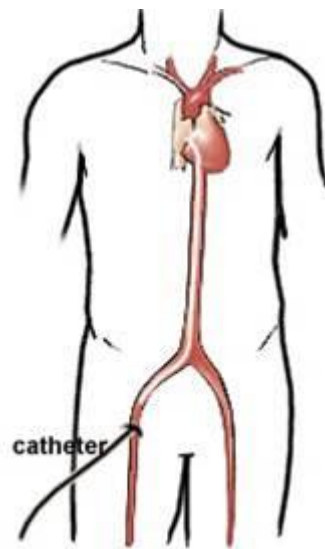
What is angioplasty and stenting?

In an angioplasty, your vascular surgeon inflates a small balloon inside a narrowed blood vessel. The balloon helps to widen your blood vessel and restore normal blood flow. After widening the vessel with angioplasty, your vascular surgeon sometimes inserts a stent depending upon the circumstances. Stents are tiny mesh tubes that support your artery walls to keep your vessels wide open.



Angioplasty and stenting are usually done through a small incision or puncture in your skin, called the access site. Your physician inserts a long, thin tube called a catheter through this access site. Your physician guides the catheter through your blood vessels to the blocked area. The tip of the catheter carries the angioplasty balloon or stent.

Angioplasty most often is used to treat peripheral arterial disease (PAD), which is another name



Artery narrowed by plaque

for hardening of the arteries not involving your heart. It can also be used, in some circumstances, to treat narrowed areas in your veins.

Your physician will order tests to show how much plaque has built up in your arteries. These tests can help your physician determine whether you need an angioplasty. The choice of test depends on the blood vessel in question and not all of the tests need to be used for every situation.

These tests include:

- Duplex Ultrasound
- Magnetic resonance angiography (MRA)
- Computed tomography (CT) scan
- Arterial Doppler Studies

If these tests show that your arteries are moderately to severely narrowed, your vascular surgeon may also plan a test called angiography that shows your blood vessels on an x-ray.

What can I Expect?

- Prior to your procedure, tests may be scheduled such as blood work, electrocardiogram (ECG), and chest x-ray. These may be done at a separate appointment, or the day of the procedure
- Angioplasty or stenting is commonly done as an outpatient procedure, although some patients are hospitalized (inpatients)
- You can wear whatever you like to the hospital. You will wear a hospital gown during the procedure.
- If you normally wear dentures, glasses or a hearing assist device, plan to wear them during the procedure to assist with communication.
- Your doctor or nurse will give you specific instructions about what you can and cannot eat or drink before the procedure.
- Ask your doctor what medications should be taken on the day of your test. You may be told to stop certain medications, such as Coumadin (warfarin, a blood thinner).
- If you have diabetes, ask your physician how to adjust your medications the day of your test.
- Tell your doctor and/or nurses if you are allergic to anything, especially iodine, shellfish, x-ray dye, penicillin-type medications, latex or rubber products (such as rubber gloves or balloons).
- You may or may not return home the day of your procedure. When you are able to return home, arrange for a companion to bring you home.
- Please bring a list of your medications (including over-the-counter) and dosages. When you arrive for your appointment, please tell your nurse if you are taking Coumadin (warfarin), Plavix (clopidogrel), diuretics (water pill) or insulin.
- You will be given a hospital gown to wear. A nurse will start an intravenous (IV) line in your arm so that medications and fluids can be administered during the procedure.

- You will lie on a special table and you will be able to watch your procedure on the monitors.

- The nurse will clean your skin at the site where the catheter (narrow plastic tube) will be inserted (arm or groin). The catheter insertion site may be shaved.

- Sterile drapes are used to cover the site and help prevent infection. It is important that you keep your arms and hands down at your sides, under the sterile drapes.

- Electrodes (small, flat, sticky patches) will be placed on your chest. The electrodes are attached to an electrocardiograph monitor (ECG), which monitors your heart rate and rhythm.



- You will be given a mild sedative to relax you, but you will be awake and conscious during the entire procedure.

- In some cases, a catheter may be placed into your bladder during the procedure.

- The doctor will use a local anesthetic to numb the site. A plastic introducer sheath (a short, hollow tube through which the catheter is placed) is inserted in a blood vessel in your arm or groin. A catheter will be inserted through the sheath and threaded to the arteries of your heart. You may feel pressure as the introducer sheath or catheter is inserted, but you should not feel pain. Tell the nurse or doctor if you feel any pain.

Angiography is usually performed again at the beginning of the angioplasty procedure or sometimes the angioplasty procedure is performed at the time of the initial angiogram.

Please tell the doctor or nurses if you feel:

- itching, tightness in the throat (allergic reaction)
- nausea
- chest discomfort
- any other symptoms

After the procedure:

- The catheters and sheath are removed.

- **If the catheter was inserted in the arm:** The incision will be bandaged. You will need to keep your arm straight for at least an hour. You will be observed for a few hours to monitor any symptoms or side effects of the procedure.
- **If the catheter was inserted at the groin:** The incision will be closed with applied pressure, suture device or a "plug." A "plug" is a material which works with your body's natural healing processes to form a clot in the artery. You will need to lie flat and keep the leg straight for two to six hours to prevent bleeding (less time if a plug was used). Your head cannot be raised more than 30 degrees (2 pillows high). Do not try to sit or stand.

- A sterile dressing will be placed on the angio site to protect it from infection. The nurse will check your bandage regularly, but call your nurse if you think you are bleeding (have a wet, warm sensation) or if your toes begin to tingle or feel numb.

- You will need to drink plenty of liquids to clear the contrast material from your body. You may feel the need to urinate more frequently. This is normal. If you are on bed rest, you will need to use a bedpan or urinal.
- Your doctor will tell you if you are able to return home or will need to stay overnight. In either case, you will be monitored for several hours after the procedure.
- Treatment, including medications, diet and future procedures, will be discussed with you prior to going home. Care of the wound site, activity and follow-up care will also be discussed