Intermountain® Healthcare

Peripheral Angioplasty and Stenting

What is it?

Angioplasty and stenting are treatments for narrowed or blocked arteries and veins.

- **Angioplasty** opens a blood vessel by inflating a small balloon inside it.
- **Stenting** places a tube-shaped device called a **stent** in the blood vessel to keep it open.

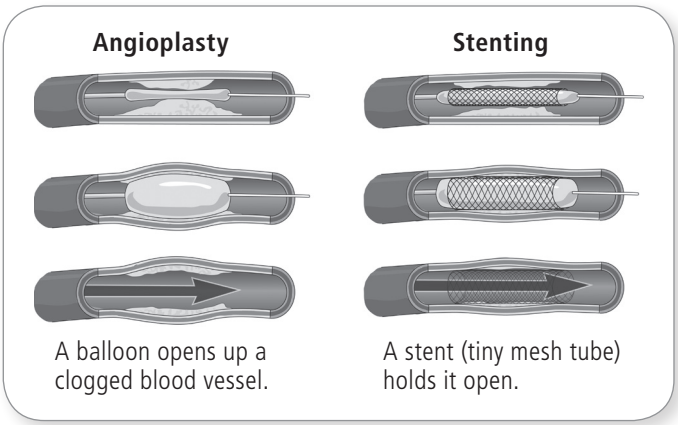
While angioplasty can be done alone, it's often combined with stenting.

Why is it done? You may know that angioplasty and stenting are often used to treat arteries that feed the heart. In **peripheral angioplasty and stenting**, a doctor uses these treatments for blood vessel problems in other areas of the body. Examples include narrowing of the arteries that supply the arms and legs (known as **PVD**, or peripheral vascular disease) and narrowing of the arteries in the head and neck (which can lead to a stroke).

What can I expect? This treatment is called "minimally invasive" because it involves only a very small incision in the groin area. Compared with surgery, it has fewer risks of complications and a shorter recovery. The procedure itself takes 1 to 2 hours, with about 4 to 8 hours spent in a special recovery area afterward.

How do I prepare?

- **Avoid food and drink the night before.** Do NOT eat solid foods or drink liquids after midnight on the night before. (If you do, your procedure might be cancelled and rescheduled.)
- **Arrange for a ride.** Ask someone to drive you to and from the hospital.
- **Tell your doctor about your allergies.** Your doctor needs to know if you have asthma, if you're allergic to any medications or dyes, or if you've ever had a bad reaction to contrast dye.



- **Talk to your doctor about your medications.** Tell your doctor about the medications you take, and follow your doctor's directions. You may be prescribed medication to take a few days before your procedure. If you take metformin (Glucophage), you'll need to stop taking it the day of the procedure and wait to restart it until at least 2 days after. You'll need blood tests before starting it again. Monitor your blood glucose during this time, and call your doctor if it's higher than 300 mg/dL.
- **Arrive one and a half hours before your scheduled procedure time.**

What happens in the procedure?

- **Before it starts:** A nurse will place an IV line to give you sedation (medication that makes you feel comfortable). You'll be connected to heart and blood pressure monitors. A healthcare provider will clean the skin and clip the hair in the area where the catheter will be placed — often the groin, but sometimes the arm or neck.
- **Local anesthetic:** The doctor will inject numbing medication in the area. This usually feels like a pinprick with some burning, and only lasts a few seconds.
- **Placing the catheter:** The doctor will insert a **sheath** (short plastic sleeve) into a blood vessel. You'll feel some pressure at first. A **catheter** (a narrow tube) will be put into the sheath.

- **Contrast dye and x-rays:** A clear liquid called **contrast dye** will be injected through the catheter. For a few seconds, you'll feel a warm sensation. The contrast dye shows up on x-rays to create real-time images (**fluoroscopy**) to guide the doctor.
- **Balloon:** The doctor will guide the catheter to the narrowed or blocked artery. The doctor inflates a small balloon at the tip of the catheter. The balloon opens the vessel, restoring blood flow.
- **Stent:** In many cases a **stent**, a small tube-shaped device, is placed and remains there to hold the vessel open.
- **Removing the catheter:** The catheter and sheath will be removed. A healthcare provider may put pressure on the insertion site to prevent bleeding.

What happens afterward?

- You'll be moved to a recovery unit. You may need to lie flat for up to 4 to 8 hours. You may want to drink plenty of fluids to flush out the contrast dye.
- In case you have temporary numbness or weakness in your leg, special steps will be taken to make sure you're safe when you first get up. If you need to urinate and your leg is numb, it may not be safe to walk to the bathroom. You will use a urinal or bedpan instead.

When you get home

- **The first 48 hours:** Watch for swelling or bleeding. The site will be bruised, but this should go away in a week or so. Avoid bending or squatting. Avoid intense activity such as climbing stairs, running, or lifting anything over 20 pounds. Take short walks (5 to 10 minutes) four or five times a day. Avoid constipation.
- **Care for the puncture site:** Avoid hot baths, hot tubs, or swimming pools for the first 5 days or until the wound is closed. Showers are okay after 24 hours, but don't let the spray hit the site. If the site is sealed with a special closure device, ask your doctor for directions.
- **Returning to work:** When you go back to work depends on your physical condition and the nature of your job. Check with your doctor.

When should I call the doctor?

Contact your doctor if:

- The arm or leg where the catheter was inserted feels cold or numb.
- There is bleeding or severe pain at the insertion site, or if bruising, redness, or swelling gets worse.
- You have a fever over 100° F.

Talking with your doctor about this procedure

The table below lists the most common potential benefits, risks, and alternatives for angioplasty and stenting. There may be other benefits or risks in your unique medical situation. Talking with your doctor is the most important part of learning about these risks and benefits. If you have questions, be sure to ask.

Potential benefits	Risks and potential complications	Alternatives
Angioplasty and stenting can: • Relieve symptoms of PVD, by opening a narrowed or blocked blood vessel that supplies an arm or leg. • Help prevent or treat a stroke, by opening a narrowed or blocked blood vessel that supplies the brain.	While **angioplasty and stenting is generally safe,** it does have the following risks and potential complications: • Numbness or weakness below the catheter insertion (rare and temporary). • Bleeding or infection where the catheter was inserted (rare). • Allergic reaction to the contrast dye (very rare). • Reduced kidney function (or kidney failure in rare cases) — tell your doctor if you have kidney disease or diabetes. • Blood vessel injury, a blood clot, stroke, or death in extremely rare cases. • Exposure to x-rays, which can slightly increase your lifetime cancer risk. See the Intermountain brochure *Your Guide to Radiation* to learn more. **Angioplasty has this additional risk:** Re-narrowing of the blood vessel at a later time (a stent may reduce this risk). **Stenting has this additional risk:** Blood clots in the stent (you'll need to take medication to prevent clots for at least 6 to 12 months afterward).	Alternatives to angioplasty and/or stenting may include: • Surgery to open a blood vessel or bypass it • Medication

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