

# Valvuloplasty

## What is valvuloplasty?

**Valvuloplasty** [VALV-yu-lo-plass-tee] is a procedure that treats a narrow or stiff heart valve. In valvuloplasty, your heart doctor uses small balloon at the end of a **catheter** (a thin, flexible tube) to stretch the valve so blood flows more easily through it.

## Why do I need it?

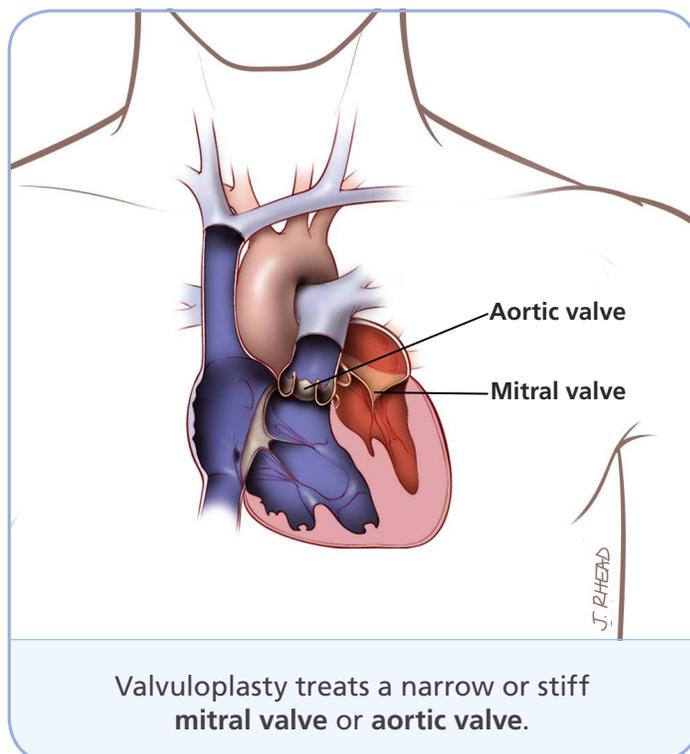
Your heart valves work like doors or gates to keep blood moving in one direction through the heart chambers. The valves also keep oxygen-rich and oxygen-poor blood from mixing together.

A healthy heart valve has leaflets that open to let blood through and then close to keep it from flowing backward. Disease, birth defects, or aging can make heart valves narrow or stiff, making it work harder to pump blood through the valve.

Valve problems can cause symptoms such as:

- Dizziness
- Chest pain
- Breathing problems
- Swollen ankles
- Abnormal heartbeat

Valvuloplasty can help your heart during the time before a valve replacement surgery is scheduled, or it can help you postpone open heart surgery or avoid surgery altogether.



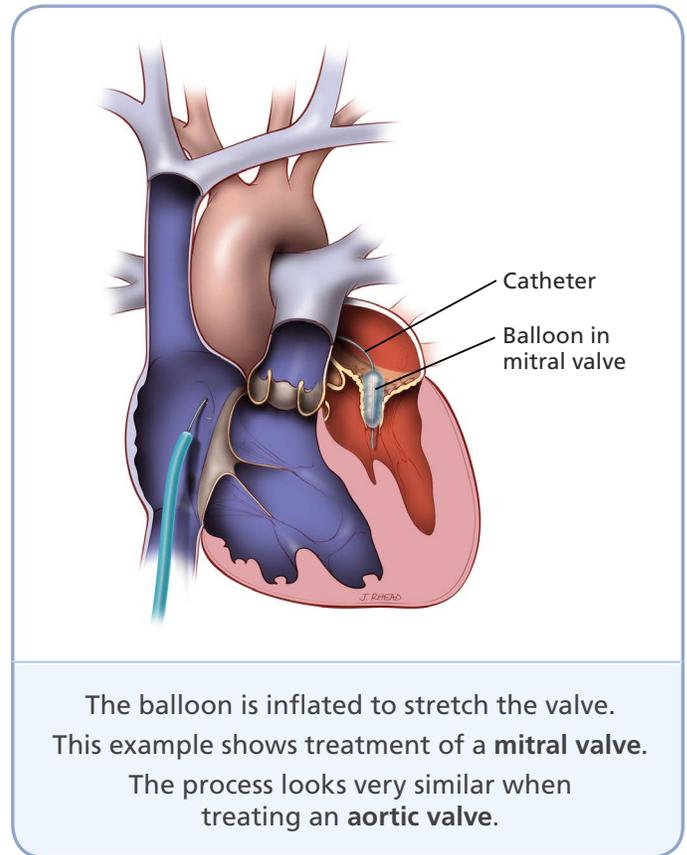
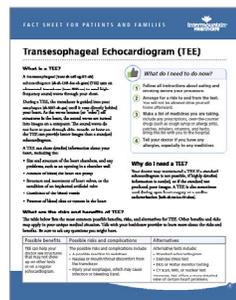
## How do I prepare?

- Tell your doctor about all the medicines you are taking.** Include all prescription medicines, over-the-counter drugs (such as allergy pills or cough syrup), patches, herbs, and vitamins.
- Follow your doctor's directions about your medicines.** You may need to stop taking some of them a few days before the procedure.
- Follow all instructions on when to stop eating and drinking before the procedure.**
- Tell your doctor or hospital staff if you:**
  - Have a cold, flu, or other illness the day of the procedure
  - May be pregnant
  - Have allergies to any medicines or dyes

## What can I expect?

Valvuloplasty can take several hours. This is what you can expect:

- **Preparation and sedation.**
  - For treatment of the **aortic valve**, you'll have medicine through an IV to make you feel relaxed and drowsy.
  - For treatment of the **mitral valve**, an anesthesia provider will give you general anesthesia through the IV so you sleep through the procedure.
- **Local anesthetic.** Your heart doctor will inject numbing medicine into the site where one or more catheters will be inserted, usually on one or both sides of your groin.
- **Inserting the catheter.**
  - For an **aortic valve**, the doctor will insert a sheath (a short plastic tube) into a blood vessel. You'll feel some pressure at first. A catheter will be put into the sheath. The doctor will slowly move the catheter through the sheath, into the aorta, and across the aortic valve. You won't feel this. The doctor will use x-ray imaging to provide guidance.
  - For a **mitral valve**, two sheaths will be inserted, one in each side of your groin. The catheters will be moved through the sheaths and then to your heart. The first catheter contains a tiny balloon. It reaches the mitral valve by moving through the wall between the heart's upper chambers. The second catheter stays in the aorta, and is used as a monitor. To help your doctor know where to move the catheters, a transesophageal echocardiogram (TEE test) will be used during the procedure. A TEE test uses ultrasound technology to create an image of your heart. To learn more about how it works, ask your doctor for a copy of the Intermountain fact sheet [Transesophageal Echocardiogram \(TEE\)](#).



- **Checking the problem.** The doctor will check the valve to see how much the problem affects the flow of blood through your heart. This is done by measuring the blood pressure in various areas of your heart.
- **Stretching the valve.** The balloon on the catheter will be inflated (filled with air) and deflated several times to stretch the valve leaflets apart. If your **aortic valve** is being treated, a pacing catheter may be used to increase your heart rate during this process. This helps to secure the balloon catheter in the valve.
- **Removing the catheter and closing the site.** When the valve is stretched enough, the balloon catheter will be taken out. The site where the sheath was inserted might be closed with a stitch or other closure device. A doctor or nurse will apply pressure to the site to prevent bleeding.

## What happens after?

After the procedure, you'll move to a **recovery unit** until you're ready to go home.

- The medical team will watch your pulse and other vital signs, check the circulation in your arm or leg, and watch for bleeding. Tests will be used to measure your heart's activity.
- You will need to lie flat for several hours to prevent bleeding. A sandbag might be used to apply pressure to the wound.
- You may be asked to drink liquids to flush the contrast dye out of your system.
- If 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 (pee) and your leg is numb, it may not be safe to walk to the bathroom. You will use a urinal or bedpan instead.
- You can go home when your doctor says it's okay. This may mean you have to stay overnight. You'll need to have someone drive you home.



### *When should I call my doctor?*

Call your doctor if you have any of these symptoms:

- A fever over 101°F (38° C).
- Redness, swelling, or drainage near the catheter site
- Bleeding or severe pain near the catheter site
- Coldness or numbness in your arm or leg
- Shortness of breath
- Cough (especially when lying down)
- Excessive urination
- Swelling in your hands or ankles

**Call 911** if you have chest discomfort that is severe or is not relieved by medicine for chest pain.

## How do I care for myself at home?

### The first 48 hours.

- Watch for swelling or bleeding.** Be sure to tell your doctor if you have:
  - Shortness of breath or swallowing problems
  - Fatigue
  - Chest discomfort that is severe or that continues beyond the first few daysThe site will be bruised, but this should go away in a week or so.
- Care for the catheter site.** Avoid 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 about the device and what you should watch for.
- Avoid bending or squatting or any intense activity** such as climbing stairs, running, or lifting anything over 20 pounds.
- Take short walks** (5 to 10 minutes) 4 or 5 times a day.
- Use a stool softener and / or a mild laxative** for relief from constipation.
- You can go back to work when your doctor says it's okay.**

## Talking with your doctor

The table below lists the most common possible benefits, risks, and alternatives for valvuloplasty. Other benefits and risks may apply in your 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 them.

Possible benefits	Possible risks and complications	Alternatives
<ul style="list-style-type: none"> <li>• A valve that works more efficiently, which may relieve symptoms that were caused by a stiff or narrow heart valve</li> <li>• Avoiding or postponing open heart surgery</li> </ul>	<p><b>Major complications are rare.</b> Possible risks and complications include:</p> <ul style="list-style-type: none"> <li>• Temporary leg numbness or weakness in the first few hours afterward (rare)</li> <li>• Continued valve stiffness or narrowness</li> <li>• Leakage in the valve treated</li> <li>• Damage to the heart muscle or heart valve that may require open heart surgery</li> <li>• Bleeding, infection, or blood vessel damage where the catheter(s) were inserted</li> <li>• Abnormal heart rhythm</li> <li>• Blood clots</li> <li>• Heart attack or stroke</li> <li>• Negative reaction to anesthetic or dye</li> <li>• Unforeseen complications</li> </ul>	<p>Alternatives to valvuloplasty include:</p> <ul style="list-style-type: none"> <li>• Heart valve repair surgery</li> <li>• Heart valve replacement surgery</li> <li>• Catheter-based valve replacement (now being investigated)</li> </ul>



### Questions for my doctor

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