Catheterization Lab
Transcatheter Aortic Valve Replacement (TAVR)

What is TAVR?

Transcatheter Aortic Valve Replacement (TAVR) is a procedure to fix the aortic valve without taking out the old valve. A TAVR does not need open heart surgery and the heart does not need to be stopped.

The surgeon puts a catheter (thin tube) into an artery in your upper leg or through a small cut in your chest. The catheter will carry a new valve to your heart.

A TAVR valve is safe for use in Magnetic Resonance Imaging (MRI) exams and will not set off an airport scanner alarm.

Pictured above is one kind of valve. There are many kind of valves and your new valve might look different.

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Cardiac Catheterization:
Important things to know that will help you get ready

Your doctor will tell if you need to stop eating or drinking before your procedure. Your doctor also will tell you if you must stop taking any medications before the procedure.

In the Pre-Operative (Pre-Op) Room before your Cardiac Catheterization

- You will wear a hospital gown. We will ask you to take off all your clothing (even underwear), jewelry, dentures, glasses, hearing aids, etc.
- An intravenous line (IV) may be put into a vein in your arm
- We will prepare and clean the catheter site (where the catheter goes into your body). We will clean your skin with a special wash that kills germs. We may need to trim body hair.
- We will ask you to empty your bladder (pee) before your procedure

After Your Cardiac Catheterization

- You may be on bed rest (lying flat) for 2 to 6 hours. To lower the risk of bleeding, we do not want you to bend your body at the catheter site (where the catheter went into your body)
- Your nurse will often check your vital signs (blood pressure, heart rate, temperature) and catheter site
- You must use a urinal or bed pan until you can safely stand and walk to the bathroom
- While you are healing, do not do strenuous exercise (such as running or lifting weights). Your doctor will tell you when it is safe to exercise.
- **Call your doctor** or go to the Emergency Department if:
  - You have any pain
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Heart Blood Flow

The heart is a muscled organ in your chest that is about the size of a fist. The heart’s main purpose is to pump blood to the rest of your body.

Blood carries oxygen throughout the body. The body may not work right if there is a problem with blood flow.

Blood flows through the heart through four chambers and four valves. Blood also is pumped through the lungs and the rest of the body.

Heart Anatomy

The four heart chambers are:
- **Right atrium** – gets blood from the body.
- **Right ventricle** – gets blood from the right atrium and sends blood to the lungs.
- **Left atrium** – gets blood from the lungs.
- **Left ventricle** – gets blood from the left atrium and sends blood to the body.

The four valves are:
- **Tricuspid valve** – gate between the right atrium and right ventricle
- **Pulmonary valve** – opening from the heart to the lungs
- **Mitral valve**, also called the bicuspid valve – gate between the left atrium and left ventricle
- **Aortic valve** – opening from the heart to the rest of the body

Heart Valve Diseases

There are two common problems with heart valves: some valves do not close the right way and some do not open the right way. Regurgitation and stenosis are two heart problems that doctors most often see and treat.

**STENOSIS**
A heart valve that does not open all the way.

**REGURGITATION**
A health problem of the heart valve when blood leaks backward.

What Is Aortic Stenosis?

Aortic stenosis is the narrowing of the aortic valve opening. Aortic stenosis can happen as you get older. Calcium and scarring can harm the valve and cause less blood to flow through the valve. The pictures below show the difference in normal valves and aortic valve stenosis.

What Is Aortic Regurgitation?

Regurgitation happens when blood leaks and flows in two directions when the heart beats. Leaks can create pressure around the valve. This picture shows blood flowing backwards through the aortic valve.
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During the procedure, the catheter will carry a new valve to your heart.

The catheter is removed and the wound is closed. You will be taken to the recovery area when you wake up from your procedure.

What to expect after your TAVR procedure:

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