

AORTIC VALVE STENOSIS

Aortic valve stenosis is a narrowing of the aortic valve. The aortic valve allows blood to flow from the heart's lower left chamber (ventricle) into the aorta and to the body. Stenosis prevents the valve from opening properly, forcing the heart to work harder to pump blood through the valve. This causes pressure to build up in the left ventricle and thickens the heart muscle.

Your heart can make up for aortic valve stenosis and the extra pressure for a long time. But at some point, it won't be able to keep up the extra effort of pumping blood through the narrowed valve. This can lead to heart failure.

What causes aortic valve stenosis?

Problems that can cause aortic valve stenosis include:

- Calcium buildup on the aortic valve. As you age, calcium can build up on the valve, making it hard and thick. This buildup happens over time, so symptoms usually don't appear until after age 65.
- A heart defect you were born with (congenital).
- Rheumatic fever or endocarditis. These infections can damage the valve.

What are the symptoms?

Aortic valve stenosis is a slow process. For many years, even decades, you will not feel any symptoms. But at some point, the valve will likely become so narrow (often one-fourth of its normal size) that you start having problems. Symptoms are often brought on by exercise, when the heart has to work harder.

As aortic valve stenosis gets worse, you may have symptoms such as:

- Chest pain or pressure (angina). You may have a heavy, tight feeling in your chest.
- Feeling dizzy or faint.
- Feeling tired and being short of breath.
- A feeling that your heart is pounding, racing, or beating unevenly (palpitations).

If you start to notice any of these symptoms, let your doctor know right away. If you have symptoms, you need treatment. By the time you have symptoms, your condition probably is serious. If you have symptoms, you also have a high risk of sudden death.

How is aortic valve stenosis diagnosed?

Most people find out they have it when their doctor hears a heart murmur during a regular physical exam. To be sure of the diagnosis, your doctor may want you to have an echocardiogram, which can show moving pictures of your heart. You may have other tests to help your doctor judge how well your heart is working.

How is it treated?

If you don't have symptoms, your doctor will see you regularly to check your heart. You probably will not have surgery. Unless you have symptoms, or tests show that the heart's pumping action is getting weak, surgery is likely to be riskier than the disease.

If you have symptoms, you probably need surgery right away. Surgery to replace the aortic valve is the best treatment for most people. Some young people or pregnant women may have another procedure called balloon valvuloplasty to enlarge the valve opening. Some people who cannot have open-heart surgery may have a minimally invasive procedure to replace the valve.

If you don't have your valve replaced after you start having symptoms, you may die suddenly or develop heart failure. Replacing your valve can help you have a more normal life span and improve your quality of life.

Surgical options

Your doctor will likely recommend valve replacement surgery if you have symptoms of aortic valve stenosis, unless you have other health problems that make surgery too risky.

Minimally invasive aortic valve replacement surgery

Aortic valve replacement surgery is typically an open-heart surgery. In an aortic valve replacement surgery, the damaged valve is removed and replaced with an artificial valve (mechanical or prosthetic). A keyhole incision is made; there is no need for a full sternotomy. Minimally invasive aortic valve surgery leads to rapid recovery and quicker return to your routine activities.

If you decide to have surgery, you and your doctor will decide which type of valve is right for you.

Bypass surgery with valve replacement surgery

If you are going to have valve replacement surgery, your doctor may suggest that you have a coronary angiogram/catheterization test. This test can show if you have blockages in your coronary arteries (as part of coronary artery disease). If you have serious blockages, your doctor may want to do a coronary artery bypass surgery at the same time as the valve replacement surgery.

Transcatheter aortic valve replacement

Transcatheter aortic valve replacement is a new way to replace an aortic valve. It does not require open-heart surgery. It is a minimally invasive procedure that uses catheters in blood vessels to replace the aortic valve with a specially designed artificial valve. This procedure is available in a small number of hospitals and it is not right for everyone. It might be done for a person who cannot have surgery or for a person who has a high risk of serious problems from surgery.

Balloon valvuloplasty

Balloon valvuloplasty is a less invasive procedure than surgery. It may be an option for some people who have aortic valve stenosis. Although the heart valve is not replaced, the narrowed opening is made larger.

Medications

Medicines aren't used to treat aortic valve stenosis, but you may need medicines to prevent and treat complications from the condition. Or you may need to take medicines if you have your valve replaced.

If you have an artificial valve, you may need:

- Blood thinners. You may take a blood thinner to prevent blood clots. Blood thinners include antiplatelet medicine, such as aspirin, or anticoagulant medicine, such as Coumadin.
- Antibiotics. If you have an artificial valve, you may need these medicines before you have certain dental or surgical procedures. The antibiotics help prevent an infection in your heart called endocarditis.

You may need other medicines if you develop other problems, such as arrhythmias or heart failure.