

What is Severe Aortic Stenosis?

Learn more about this potentially life-threatening heart valve condition



Provided by Edwards Lifesciences

HOW DOES YOUR HEART WORK?

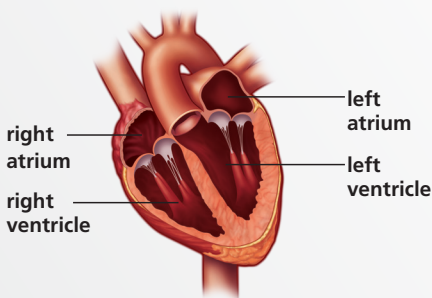
The heart is a muscular organ located in your chest between your lungs. The heart is designed to pump blood through your body. The right side of your heart pumps blood through the lungs, where the blood picks up oxygen. The left side of the heart receives this blood and pumps it to the rest of your body.

The pulmonary valve

has three leaflets. It controls blood flow from the right ventricle to the pulmonary artery, sending blood to the lungs to pick up oxygen.

The tricuspid valve

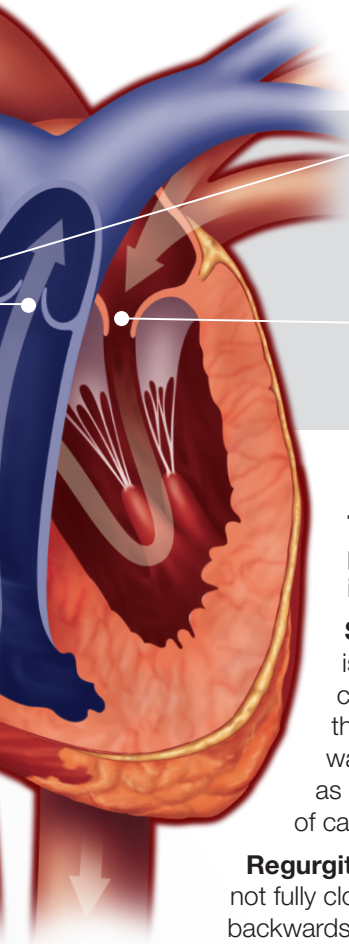
has three leaflets. It controls blood flow from the right atrium to the right ventricle.



NOTE: The left and the right side of the heart are pictured as the heart sits in your body.

Chambers and Valves

Each time your heart beats it pumps blood through these valves by contracting (squeezing) its chambers. These valves open in one direction, like one-way gates, allowing blood to flow forward. In between beats, the heart's chambers quickly relax, and its valves close, preventing blood from flowing backward.



The aortic valve

has three leaflets. It controls blood flow from the left ventricle to the aorta, sending blood to the rest of the body.

The mitral valve

has two leaflets. It controls blood flow between the left atrium and left ventricle.

There are two common problems that can develop in heart valves:

Stenosis is when your valve is narrowed and does not completely open because of things like high cholesterol (a waxy fat), age, genetics (such as a birth defect) or a build-up of calcium (mineral deposits).

Regurgitation is when your valve does not fully close and allows blood to leak backwards through the valve.

With either problem, your heart needs to work harder and may not pump enough oxygen-rich blood to your body.



WHAT IS SEVERE AORTIC STENOSIS?

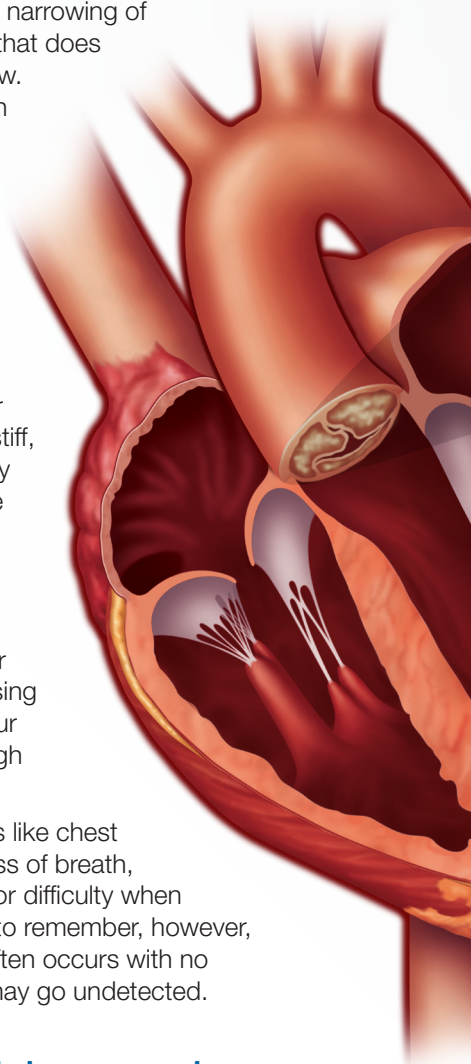
Severe aortic stenosis is a narrowing of your aortic valve opening that does not allow normal blood flow.

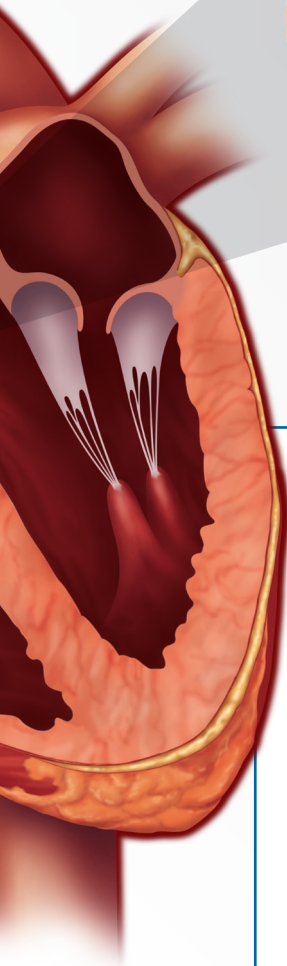
It can be caused by a birth defect, rheumatic fever, radiation therapy, or can be related to age.

In elderly patients, severe aortic stenosis is sometimes caused by the build-up of calcium (mineral deposits) on the aortic valve's leaflets. Over time the leaflets become stiff, reducing their ability to fully open and close. When the leaflets don't fully open, your heart must work harder to push blood through the aortic valve to your body. Eventually, your heart gets weaker; increasing the risk of heart failure (your heart cannot supply enough blood to your body).

You may notice symptoms like chest pain, fatigue, and shortness of breath, lightheadedness, fainting or difficulty when exercising. It is important to remember, however, that heart valve disease often occurs with no outward symptoms and may go undetected.

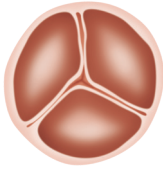
Severe aortic stenosis is a very serious problem. Without treatment, half of the people who feel sick from this problem die within an average of 2 years.



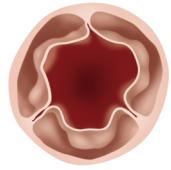


**Diseased
Aortic Valve**

Healthy Aortic Valve



Closed



Open

Diseased Aortic Valve



Closed



Open

WHAT ARE YOUR TREATMENT OPTIONS?

No drug therapy exists to treat severe aortic stenosis. However, medicine can help make you feel better for the short-term. The only effective treatment for severe aortic stenosis is AVR.

Today there are two options to treat your diseased aortic valve.

1) AVR through open-heart surgery is the most common treatment for patients with severe aortic stenosis. The surgeon will remove the diseased native valve in order to implant an artificial valve in its place. These valves come in different sizes to fit your anatomy and are made from a variety of materials:

- a. Tissue valves made primarily from animal or human tissue
- b. Mechanical valves constructed from synthetic material

2) For patients that have been diagnosed with severe symptomatic calcified native aortic valve stenosis and are too sick or at high-risk for open-heart surgery, transcatheter aortic valve replacement (TAVR) may be an alternative. TAVR is a recently approved procedure for high-risk or inoperable patients that allows a new valve to be implanted where the native calcified valve currently is. TAVR does not require your chest to be opened or your heart to be arrested during the procedure. This valve also comes in different sizes to fit your anatomy. The valve is made of animal tissue.

Different valve types have different benefits and risks. Your doctor will recommend the best treatment option for you, based on your overall health.

To learn more about your options, please consult your doctor.

Should I consider aortic valve replacement?

No drug therapy exists for treating severe aortic stenosis. But with aortic valve replacement (AVR), many people will go on to lead normal, healthy lives.

It can greatly increase survival, alleviate symptoms, and improve quality of life.

Because of the risk of sudden death without treatment, valve replacement should be performed promptly after the onset of symptoms.

To learn more about severe aortic stenosis please consult your doctor.



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