

# Aortic Valve Stenosis

## What is aortic valve stenosis?

Aortic valve stenosis is a narrowing in the opening of the aortic valve in the heart. When the valve opening narrows, the valve does not open all the way, so the heart has to work harder to pump blood to the body.

The aortic valve is 1 of 4 valves in the heart. It is located at the opening from the left side of the heart (left ventricle) into the aorta. The aorta is the big blood vessel that carries blood to all the tissues of the body. The job of the aortic valve is to keep blood moving from the heart into the aorta and to rest of the body. When the heart beats and pushes blood out to the aorta, the valve opens. In between beats, the valve closes so no blood goes back into the heart.

## How does it occur?

The most common cause of aortic stenosis is a buildup of calcium as you get older. Why this happens in some people but not others is not known, but high cholesterol may have something to do with it. The valve does not open or shut normally, and some backflow or leakage through the valve may occur. As the blockage of blood flow from the heart increases, the heart has to work harder. This makes the heart muscle larger and thicker. It may become stiff and stop working properly.

Some people are born with an abnormal aortic valve. The valve is partly fused, or stuck together. This stops the valve from opening normally. In some people, this birth defect is very severe and needs treatment at a very young age. In other people, the defect is not as severe, but abnormal blood flow through the opening leads to a buildup of calcium in the valve. Over time, this causes the stenosis to get worse. These people may need valve replacement surgery in their 20s, 30s, or 40s.

Rarely, aortic valve stenosis can be caused by rheumatic fever or some rheumatoid diseases.

## What are the symptoms?

With mild stenosis there are usually no symptoms but aortic valve stenosis usually worsens with time. After the age of 60 you may start having symptoms. The first symptom is usually shortness of breath when you are physically active. With more severe valve blockage, you may have fainting spells. You may also have chest pain.

## **How is it diagnosed?**

Your healthcare provider will ask about your symptoms and examine you. Your provider will use a stethoscope to listen for the sound of a heart murmur caused by the blocked valve.

Tests you may have are:

- an electrocardiogram (ECG or EKG) to check for enlargement and thickening of the heart muscle
- an echocardiogram, which uses ultrasound waves to take pictures of the heart
- a special part of the ultrasound test called a Doppler exam to measure how severe the stenosis is
- a chest X-ray
- a treadmill exercise test
- cardiac catheterization.

## **How is it treated?**

In the early stages of the disease, you may not need treatment. You will, however, need to take antibiotics to prevent infection before dental work or some other procedures to prevent infection of the diseased valve.

If you start having symptoms, you may need surgery. In adults, valve replacement surgery is preferred. Children may have surgery to open the fused valve cusps.

Two types of artificial heart valves are available: mechanical and biological.

- Mechanical, man-made valves work well, but you will need to take blood-thinner medicine for the rest of your life to prevent blood clots. Blood thinners cause a small increase in the risk of bleeding. You will need to see your provider regularly for checkups.
- Biological valves are made from body tissue. You do not have to take blood thinners if you have a biological valve, but the valve will not last as long as a mechanical valve.

Surgery to replace the aortic valve at the right time can improve both the quality and length of your life.

## **How long will the effects last?**

Once you start having symptoms, they do not go away unless the valve is replaced.

## How can I take care of myself?

Follow the treatment your healthcare provider prescribes.

In addition:

- If you smoke, stop.
- Get regular checkups.
- With your healthcare provider's supervision, take antibiotics to prevent infections that could spread to the heart valve if you are having any kind of dental work or surgery. This includes having your teeth cleaned or procedures involving the bladder, vagina, or rectum. Damaged valves are more likely to become infected by bacteria. Infection of the valve can damage it more and may destroy it. Antibiotics can prevent this. If there is any doubt, be sure to ask if you should take antibiotics.
- Lose weight if you are overweight.
- Learn ways to reduce or manage stress.
- Avoid taking aspirin if you are taking an anticoagulant (blood thinner).
- Exercise regularly according to your provider's advice.
- Talk to your provider before you use any other medicines, including nonprescription medicines.
- Cut back on the salt in your diet if recommended by your provider.
- Ask your provider about a potassium supplement if you are taking diuretics that could cause potassium loss.
- Tell all other healthcare providers you see that you have aortic valve stenosis.

[Related Topics]

Cardiac Catheterization

Artificial Heart Valves

Written by Donald L. Warkentin, MD.

Published by RelayHealth.

© 2008 RelayHealth and/or one of its affiliates. All Rights Reserved.

This content is reviewed periodically and is subject to change as new health information becomes available. The information is intended to inform and educate and is not a replacement for medical evaluation, advice, diagnosis or treatment by a healthcare professional.