

Mitral Valve Stenosis

What is mitral valve stenosis?

Mitral valve stenosis is a narrowing in the opening of the mitral valve in the heart.

The mitral valve is 1 of 4 valves in your heart. It is located between the upper left heart chamber (left atrium) and lower left heart chamber (left ventricle). The mitral valve has 2 flaps, or leaflets, which open and close like a door with each heartbeat and normally let blood flow in just 1 direction.

Stenosis of the mitral valve prevents the valve from opening normally. A narrowed (stenotic) mitral valve reduces the amount of blood that can flow through your heart. Over time, the stenosis can cause high blood pressure in the left atrium and the lungs. The left atrium gets bigger, your lungs become congested with fluid, and you have trouble breathing easily.

How does it occur?

Rheumatic fever is the most common cause of mitral valve stenosis. This infection caused by strep bacteria may damage all the heart valves, but it affects the mitral valve most often. Over several years scarring joins the leaflets together and prevents complete opening of the valve. Calcium may be deposited in the valve, making it hard and stiff rather than flexible. Mitral valve stenosis caused by childhood rheumatic fever usually doesn't cause symptoms until early or mid-adulthood.

Mitral valve stenosis is sometimes a birth defect. Other causes include some medicines.

What are the symptoms?

Symptoms may include:

- tiredness
- shortness of breath and decreased ability to exert yourself, for example, during activities such as climbing stairs or even making a bed
- sudden awakening from sleep with severe shortness of breath
- palpitations (irregular or forceful heartbeats)
- swelling of the ankles
- long-lasting cough or coughing up blood.

How is it diagnosed?

Your healthcare provider will ask about your symptoms and examine you. He or she will listen to your heart with a stethoscope. Mitral valve stenosis causes a specific type of heart murmur. Your provider will also listen to your lungs and may hear sounds of fluid congestion.

Your provider may order the following tests:

- chest X-ray
- electrocardiogram (ECG), a recording of your heart's electrical signals
- echocardiogram (an ultrasound scan of the heart, which can show a picture of the valve).

Sometimes heart catheterization is done. For this procedure, a thin tube (catheter) is passed into one of your blood vessels and into your heart to learn more about your heart.

How is it treated?

If the narrowed valve is not causing any symptoms, you may not need any treatment.

For mild symptoms, your healthcare provider may prescribe a low-salt diet or medicine (diuretic) to help get rid of extra water in your body. If your symptoms get worse, you will need other medicines to help your heart pump better.

Mitral valve stenosis can cause abnormal heart rhythms. If this happens, your healthcare provider may prescribe medicines for it. If the heart rhythm does not go back to normal, you will need to take a blood thinner (anticoagulant) to prevent small blood clots that could cause a stroke. In some cases you may need to be sedated and an electric shock used to change your heart rhythm to normal.

Your symptoms may gradually worsen. You may find that it is harder for you to do your normal activities. If this happens, you may need to have the valve opening widened. In some cases, a procedure called balloon valvuloplasty can be done. During the procedure, a catheter with a deflated balloon at the end is inserted into a vein. The catheter is then positioned across the valve in your heart, and the balloon is inflated. As the balloon expands, the mitral valve is stretched and forced open.

Another option may be open-heart surgery. This kind of surgery is usually needed if the valve is very deformed or has calcium deposits on it. The surgeon decides either to separate the fused leaflets of the valve or to replace

the valve with an artificial heart valve, depending on the condition of your valve. Your surgeon will discuss the options with you before surgery.

How long will the effects last?

You may have mitral valve stenosis with few or no symptoms for a long time. If your symptoms worsen, permanent heart damage can occur if you don't get treatment. See your healthcare provider as often as recommended so you can get treatment when you need it.

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 mitral valve stenosis.

How can I help prevent mitral stenosis?

Mitral stenosis is often a result of rheumatic fever, which is caused by the same bacteria that cause strep throat. Go to your healthcare provider for a throat culture if you have a sore throat without other symptoms or if you have been exposed to strep throat. If you have strep throat,

take antibiotics as prescribed by your provider. If you have had rheumatic fever in the past, your provider may recommend that you take penicillin on a regular basis.

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