

MITRAL VALVE REGURGITATION

■ WHAT IS MITRAL VALVE REGURGITATION?

The mitral valve is on the left side of the heart between the left upper chamber (atrium) and lower chamber (ventricle). The valve has two flaps called leaflets that normally close every time the ventricle squeezes to pump blood out of the heart. When the mitral valve doesn't close properly, some of the blood from the ventricle is forced back up (regurgitated) into the left atrium instead of flowing out to the rest of the body. The added workload on the heart and the increased blood pressure in the lungs eventually cause problems.

■ HOW DOES IT OCCUR?

Rheumatic fever can damage the mitral valve leaflets and cause scarring. The scars deform the leaflets so that they don't close properly, and regurgitation occurs. A condition called mitral valve prolapse can also cause mitral regurgitation. With mitral valve prolapse, one or both of the leaflets bulge (prolapse) into the left atrium. A small amount of mitral regurgitation (MR) is common with mitral valve prolapse.

If one or more of the structures attaching the leaflets to the heart muscle breaks, the valve may leak. Heart attacks, diseases of the heart muscle, or other heart valve abnormalities may cause the whole heart to enlarge. The enlargement stretches the mitral valve ring and muscular attachments, pulling the valve leaflets apart. When the leaflets no longer meet, leaking of the mitral valve (MR) results.

Over time, the added workload on the heart may cause congestive heart failure. Congestive heart failure occurs when the heart can't pump enough blood to keep the lungs or other body tissues from filling with fluid.

Mitral regurgitation may cause both the left ventricle and left atrium to get larger. If the left atrium becomes big enough, an irregular heart rhythm called atrial fibrillation may result.

■ WHAT ARE THE SYMPTOMS?

People with mild to moderate MR may have no symptoms. Over time, the added workload on the heart may cause shortness of breath with exercise or an abnormal heart rhythm. This abnormal rhythm feels like your heart is pounding, racing, or skipping in your chest.

If a valve leaflet or cord breaks, the sudden MR may quickly cause congestive heart failure. The main symptoms of congestive heart failure are:

- Tiredness
- Shortness of breath or trouble breathing, at first during exercise and later with any activity or even when resting
- Waking up at night with trouble breathing or having a hard time lying flat in bed because of shortness of breath

- Swollen ankles and feet and weight gain due to too much fluid in the body
- Loss of appetite

■ HOW IS IT DIAGNOSED?

Most MR causes a heart murmur that can be heard through a stethoscope and is quite easily recognized. Enlargement of the heart may be discovered during a physical examination.

An echocardiogram uses ultrasound waves to make pictures of the heart. The pictures show the size of the heart chambers, the thickness of the heart muscle, and the movement of the heart valve. A Doppler echocardiogram is a special kind of ultrasound that shows the backflow of blood through a valve. The echocardiogram can measure the amount of MR. If a standard echocardiogram cannot adequately visualize the amount of MR or the structure of the mitral valve, your doctor may recommend a transesophageal echocardiogram (TEE). For this test a small, flexible tube (or probe) with an ultrasound transducer at its tip is carefully placed in the esophagus. (The esophagus is the tube that carries food from the throat to the stomach). Because the probe is much closer to the back of the heart when it is in the esophagus, the TEE allows the doctor to get a closer view of the mitral valve to evaluate the amount of MR.

■ HOW IS IT TREATED?

If you have MR with a normal-sized heart and no symptoms, you need no treatment. The American Heart Association has issued new guidelines regarding antibiotic treatment prior to dental work or certain surgical procedures. These guidelines can be found in this section under "Prophylaxis Guidelines for Infective Endocarditis".

Moderate to severe MR eventually results in heart enlargement and symptoms. Most people with symptoms will need valve repair or replacement. If you delay treatment for too long, your heart muscle may already be seriously damaged.

The best treatments are surgical. If the valve is not too badly deformed, it may be possible for the surgeon to repair it instead of replacing it. Surgeons repair the existing valve by narrowing the valve ring and tailoring the valve leaflets. A plastic support ring is stitched around the valve to bring the leaflets closer together. An advantage of this kind of surgery is that long-term use of blood-thinning drugs is not needed.

Sometimes the mitral valve leaflets are damaged so badly that they must be replaced. There are two kinds of prosthetic valves: mechanical and bioprosthetic. The bioprosthetic valves are made from pig, human, or cow tissue. They do not last as long as mechanical valves, but have the advantage of not requiring life-long blood thinners. Mechanical valves last longer without wearing out, but blood thinners must be taken for life.

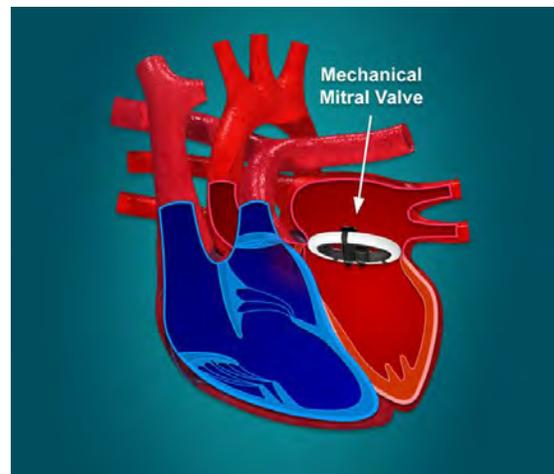


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Other than surgery, drugs that expand (dilate) blood vessels and slightly lower blood pressure are the only medicines known to be helpful in treating MR. They work best for those who are very ill, making them feel better. However, the medications do not prevent or limit the progression of mitral regurgitation.

■ HOW CAN I TAKE CARE OF MYSELF?

- Check with your doctor if your symptoms worsen
- Tell your dentist and health care providers that you have mitral valve regurgitation so you can be sure that you take antibiotics when you need them to prevent infection of the valve
- Talk to your doctor before you use any other medicines, including nonprescription medicines
- If you smoke, stop
- Get regular checkups
- Lose weight if you are overweight
- Learn ways to reduce or manage stress
- If you have high blood pressure, make sure you follow your doctor's treatment plan for it
- If you have significant mitral regurgitation, you should probably avoid heavy exercise.