Mitral valve regurgitation is the most common type of heart valve disorder. It occurs when the mitral valve does not fully close.

When the left atria (upper chamber) of the heart contracts, the mitral valve opens so blood can flow through it into the left ventricle (lower chamber). The mitral valve then closes as the left ventricle contracts and pumps blood to the rest of the body.

When the mitral valve doesn’t close tightly, some of the blood in the left ventricle flows back into the left atria. This backflow is called regurgitation. It results in less blood going out to the body and the heart may try to pump harder. This may lead to heart failure.

Causes
Mitral regurgitation results from the valve or tissue around the valve being weakened or damaged. This can be caused by:

- Heart attack
- Coronary heart disease and high blood pressure
- Mitral valve prolapse
- Rheumatic heart disease (a complication of an untreated strep infection)
- Other rare conditions

Symptoms can also occur suddenly when:
- A heart attack damages the muscles around the mitral valve
- An infection destroys part of the valve
- The cords that attach the muscle to the valve break

Symptoms may include:
- Feeling the heart beat (palpitations) or a fast heart rate
- Fatigue, exhaustion
- Cough
- Light-headedness
- Shortness of breath that increases with activity and when lying down
- Urinating more, especially at night
- Swelling

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Exams and Tests
Your doctor will do an exam and listen to your heart and lungs and may detect:

- A heart murmur
- A extra heart sound called an S4 gallop
- A thrill or vibration over the heart when feeling the chest area
- Crackles in the lungs (if fluid has backed up into the lungs)

These tests may be ordered:

- CT scan of the chest
- TEE – Transesophageal Echocardiogram
- MRI – magnetic resonance imaging
- Cardiac Catheterization

Treatment
Treatment depends on:

- What symptoms you have
- The cause of the mitral valve regurgitation
- How well the heart is working

Treatment may not be needed when symptoms are mild. You should visit your doctor regularly to have your symptoms and heart function checked.

People with high blood pressure or a weakened heart muscle may be given medicines to reduce the strain on the heart and ease symptoms. A low-salt (sodium) diet may also be helpful.

Medications may include:

- Beta-blockers, ACE inhibitors or calcium channel blockers
- Anticoagulants to help prevent blood clots in people with atrial fibrillation
- Drugs to control abnormal or uneven heartbeats
- Water pills (diuretics) to help remove excess fluid in the lungs

The mitral valve may need to be repaired or replaced if:

- Symptoms such as shortness of breath related to mitral regurgitation are present
- Heart function is poor
- Heart becomes enlarged or dilated

Transcatheter Mitral Valve Repair (TMVR)
During this procedure a device called MitraClip® is inserted into the center of the mitral valve. Catheters (narrow flexible tubes) are inserted into a vein in the groin and the clip is guided into place.

Mitral Valve Replacement
During this open-heart surgery, the valve is removed and replaced with a mechanical or tissue replacement valve. Your surgeon will discuss the types of valves with you.

When to Contact Your Doctor

- Call your doctor if your symptoms get worse or do not improve with treatment.
- Also call your doctor if you have any of these signs of infection:
  - Fever, chills
  - Headache, muscle aches
  - General ill feeling

Prevention
People with damaged or abnormal heart valves are at risk for an infection called endocarditis. To help prevent this:

- Have strep infections treated right away.
- Avoid reusing needles.
- Tell your doctors and dentist about an abnormal valve before being treated. Sometimes antibiotics are needed before dental procedures or surgery.