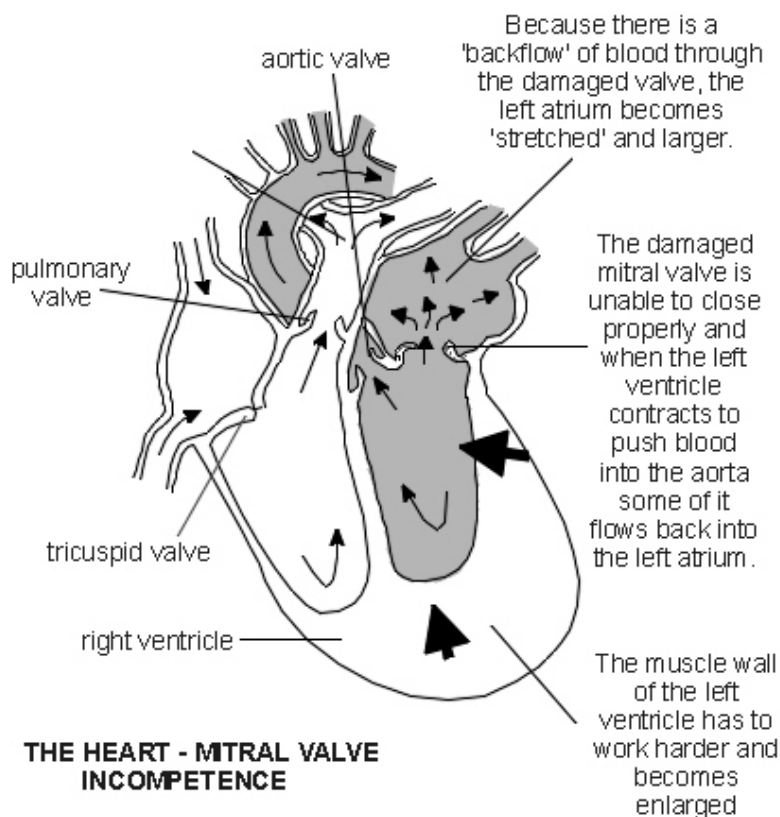


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Mitral regurgitation

The mitral valve is a [heart valve](#) that lies between the left atrium and left ventricle.



What is mitral regurgitation?

Mitral regurgitation is sometimes called mitral insufficiency or mitral incompetence. In mitral regurgitation the valve does not close properly. This causes blood to leak back (regurgitate) into the left atrium when the left ventricle squeezes (contracts). Basically, the more open the valve remains, the more blood regurgitates and the more severe the problem.

Mitral valve prolapse

This is also called floppy mitral valve. In this condition the valve is slightly deformed and bulges back into the left atrium when the ventricle contracts. This can let a small amount of blood leak back into the left atrium.

As many as 1 in 10 people have some degree of mitral valve prolapse. It becomes common with increasing age. It usually causes no symptoms, as the amount of blood that leaks back is often slight.

What causes mitral regurgitation?

Sometimes regurgitation is rarely caused by congenital structural deformity of or damage to the leaflets, chordae, and/or papillary heart muscles. It sometimes occurs with connective tissue disorders such as Marfan's syndrome, [systemic lupus erythematosus](#) or [Ehler's–Danlos syndrome](#).

[Rheumatic heart disease](#) is very common in the developing world and is a common cause of mitral regurgitation worldwide.

Mitral regurgitation symptoms

Mild mitral regurgitation may not cause any symptoms. However the symptoms associated with more severe mitral regurgitation include:

- [Shortness of breath](#), especially with activity or when you lie down.
- [Tiredness](#).
- [Heart palpitations](#).
- [Swollen ankles \(oedema\)](#).

Mitral regurgitation treatment

Mild cases may not require any regular medication. Although medicines cannot correct mitral regurgitation, some medicines may be prescribed to help ease symptoms, or to help prevent complications by managing your blood pressure – for example, [angiotensin-converting enzyme \(ACE\) inhibitors](#), 'water tablets' (diuretics) and [anticoagulation medication](#).

If you develop [atrial fibrillation](#), several medicines can be used to slow the heart rate down.

Surgical treatment

Surgical treatment is sometimes needed. Recent guidelines favour surgery at an earlier stage than used to be the case. The best option for you will depend on your particular circumstances.

- Valve repair may be an option in some cases.
- Valve replacement is needed in some cases. This may be with a mechanical or a tissue valve. Mechanical valves are made of materials which are not likely to react with your body, such as titanium. Tissue valves are made from treated animal tissue, such as valves from a pig.
- Some surgical options may be possible through a catheter into the femoral vein. This avoids open heart surgery.

Recent guidelines favour replacement rather than repair in many cases. If you need surgery, a surgeon will advise on which is the best option for your situation.

What is the outlook for people with mitral regurgitation?

In some cases, the disorder is mild and causes no symptoms. If you develop symptoms they tend to become gradually worse over the years. Typical complications include [heart failure](#), pulmonary artery hypertension, [atrial fibrillation](#) and [stroke](#). However, the speed of decline can vary. In many cases, it can take years for symptoms to become serious. Doctors use indications of how serious these complications are to decide when the best time is to refer for possible surgery. For example, when the pressure in the pulmonary artery rises above 60mmHg during exercise testing. Medication can ease symptoms but cannot repair a damaged valve.

Surgical treatment has greatly improved the outlook in most people with more severe regurgitation. Surgery has a very good success rate.

Further reading

- [Prophylaxis against infective endocarditis: Antimicrobial prophylaxis against infective endocarditis in adults and children undergoing interventional procedures](#); NICE Clinical Guideline (March 2008 – last updated July 2016)
- [Nishimura RA, Otto CM, Bonow RO, et al; 2017 AHA/ACC Focused Update of the 2014 AHA/ACC Guideline for the Management of Patients With Valvular Heart Disease. Circulation. 2017; CIR.0000000000000503. Originally published March 15, 2017.](#)
- [Heart valve disease presenting in adults: investigation and management](#); NICE guideline (November 2021)
- [Girdauskas E, Pausch J, Harmel E, et al; Minimally invasive mitral valve repair for functional mitral regurgitation. Eur J Cardiothorac Surg. 2019 Jun 1;55\(Suppl 1\):i17–i25. doi: 10.1093/ejcts/ezy344.](#)
- [Aluru JS, Barsouk A, Saginala K, et al; Valvular Heart Disease Epidemiology. Med Sci \(Basel\). 2022 Jun 15;10\(2\):32. doi: 10.3390/medsci10020032.](#)

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