

walking aids with you, if you need them. Please allow at least 2 hours for this appointment. It may be helpful to bring a list of questions to this appointment. You may also need to meet the anaesthetist at another clinic visit. Sometimes, additional tests will be required, such as:

- **Echocardiogram**

Another echocardiogram may be performed to assess your MR in greater detail.

- **A transoesophageal echocardiogram (TOE)**

A procedure where a probe is passed into the food pipe (gullet) to take detailed ultrasound pictures of the heart from inside the body. See the TOE leaflet for further details.

- **An angiogram**

An x-ray in which thin plastic tubes are inserted via a tube placed in a blood vessel at the wrist or groin under a local anaesthetic. Dye is injected through the tubes to show up the blood vessels around the heart. See the Coronary Angiography Leaflet for further details.

- **Lung function tests** (breathing tests by blowing into a small tube).

After completing your tests, your care team will review the results and discuss the next steps with you. They may discuss your case with the Multidisciplinary Team (MDT) - a group of diverse specialists - to ensure they recommend the best treatment for your specific needs.

The decision will be based on:

- The severity of your valve problem
- The cause of the valve problem (primary or secondary)
- Whether you have other heart problems (such as other valve problems or heart artery problems) or other medical conditions
- Your age
- Your life situation and personal preferences

The healthcare team might decide that open heart valve surgery or a M-TEER are not right for you because the risks of the procedure would be greater than the benefits for your health.

After the healthcare team has made a recommendation, your own doctor or nurse specialist will let you know what they advise. If open chest valve surgery or M-TEER is recommended, an outpatient appointment will be arranged to explain this to you in more detail.

If you have heart valve disease, it's important to make your lifestyle as healthy as possible. This can improve your general health and gives you the best chance of a good outcome if you are having a valve procedure. If you smoke, we strongly advise you to try and stop. Your GP can suggest support for this. If you have diabetes or high blood pressure, please see your GP to ensure these conditions are well controlled. If you are overweight, please do your best to reduce your weight. Your GP may be able to refer you to weight loss services.

IMPORTANT: Patients with heart valve disease are at risk of heart valve infections. These infections can occur due to poor dental hygiene. All patients with MR should take special care that their teeth are in good condition. You should aim to visit your dentist every 6 months and make sure any dental infections are treated quickly. If you think your teeth need urgent professional attention, you should make an appointment with a dentist as soon as possible.

Any questions or comments?

If you have any comments about this leaflet (good or bad), then please contact office@nwhearts.org. NW Hearts Charity always welcomes feedback about how we are doing and how we might improve. Unfortunately, NW Hearts Charity can't answer questions about your own health situation.

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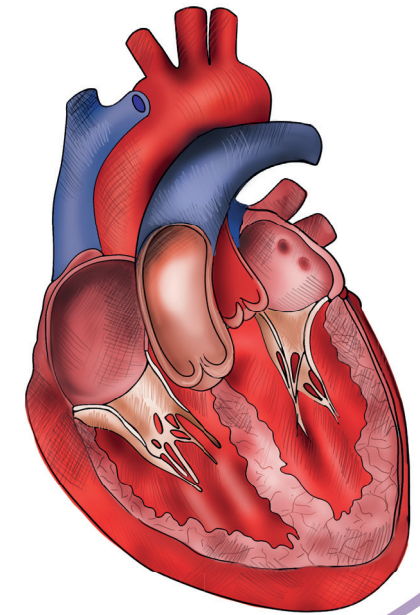
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Severe MR and Treatment Options

Patient information leaflet



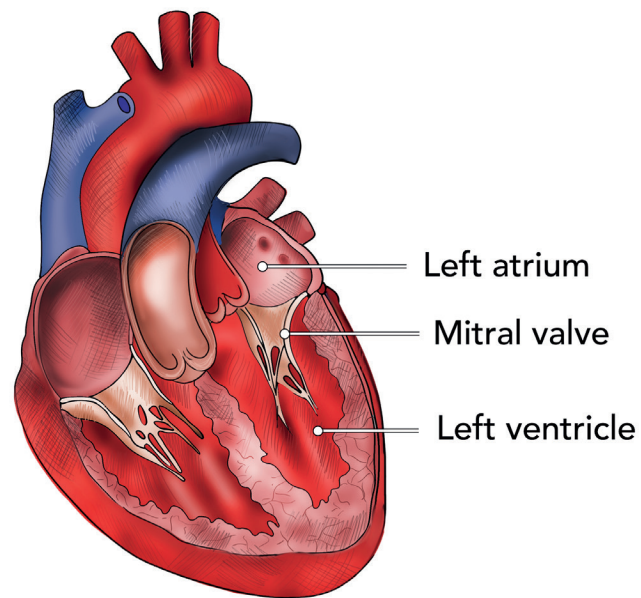
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You have been diagnosed with mitral valve disease by your doctor. We hope that this information will help you to understand your condition and treatment options available. We also hope that this information is useful for your family and/or carers to understand your condition so that they can support you before and after any treatment that may take place.

What is the Mitral Valve?

The mitral valve is found on the left-hand side of the heart and works like a one-way swing door. When a mitral valve works normally, its flaps (called leaflets) guide blood flow through the heart's chambers from the left atrium (at the top of the heart) to the left ventricle (at the bottom), without allowing the blood to flow backwards, in the wrong direction.

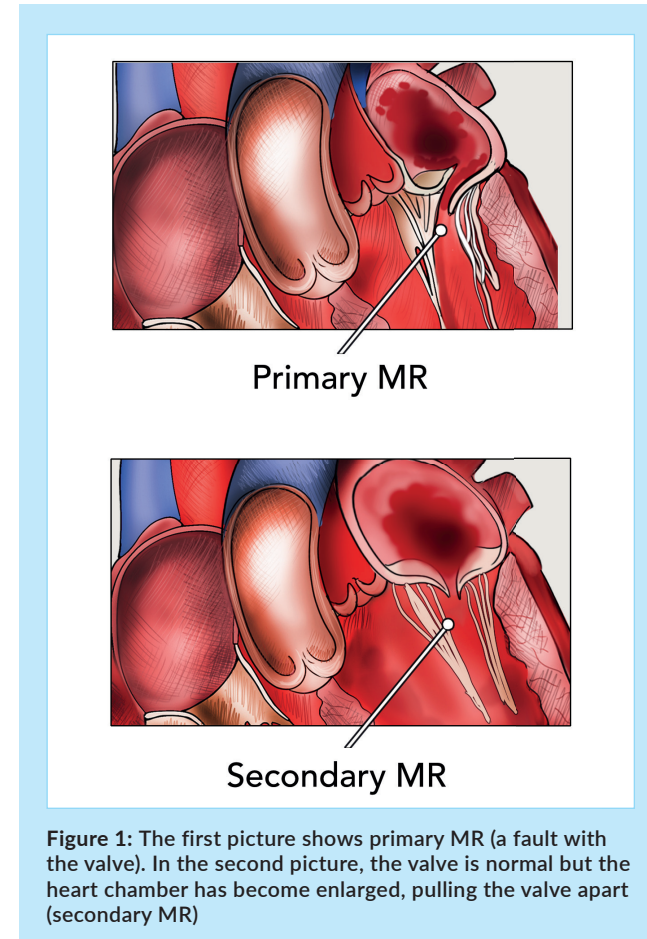


What is Mitral regurgitation (MR)?

Mitral regurgitation (MR) occurs when the mitral valve doesn't close properly, so that some blood leaks back from the left ventricle into the left atrium (moving in the wrong direction).

There are two main causes of MR (Figure 1):

- **Primary MR:** This occurs when the mitral valve itself develops a fault. The flaps may droop or bulge and do not close tightly.
- **Secondary MR:** This happens when the valve itself is working normally but another problem (such as disease of the left ventricle) causes the leakage.



Symptoms of MR can include:

- Breathlessness
- Fatigue
- Swollen ankles and feet
- Palpitations

How is MR diagnosed?

The standard test carried out to diagnose MR is a transthoracic echocardiogram (ECHO). This is a painless scan of the heart through an ultrasound probe placed on the outside of the chest. This test also shows whether the MR is mild, moderate or severe. Sometimes additional tests may be required to help work out the severity of MR. Severe MR is more likely to cause symptoms than mild or moderate MR. Severe MR that isn't treated can lead to a higher chance of hospital admissions due to fluid buildup and a shorter life expectancy in some cases.

What treatments are available for MR?

Most people who have mild or moderate MR get no symptoms and require no treatment. Some people will require regular clinic appointments to check that their valve condition or symptoms are not getting worse and might need to be treated.

When MR is severe and causes symptoms, you might be considered for mitral valve treatment.

The usual options are:

- Treatment with medication
- Open chest heart valve surgery
- A keyhole procedure called *Mitral Transcatheter Edge-to-Edge Repair (M-TEER)*

These are explained below.

• Medication

For primary MR (related to a problem with the valve itself), medication cannot stop the leak from progressing, but it can manage your symptoms and improve your quality of life.

For secondary MR (related to structures supporting the valve), specific medications can sometimes stabilize the condition and may remove the need for further intervention.

If your healthcare team thinks open-chest valve surgery or M-TEER are not the right approach, they will usually suggest a type of medication called a diuretic (sometimes called water tablets). Diuretics make you pass more urine and help to relieve breathlessness and ankle swelling.

Sometimes other medications are also suggested. Once you start medication, you'll need to have regular reviews in hospital or by your GP. These are to make sure you are on the best treatment for you and that you feel as well as possible.

You may still require medication even if you are also having surgery or M-TEER and it is important to continue your tablets if your doctor advises this.

• Open heart valve surgery

Open heart surgery with mitral valve replacement or repair may be the best long-term treatment for severe MR. However, it also has risks and a long recovery time so is not the right type of treatment for everyone.

• Mitral Transcatheter Edge-to-Edge Repair (M-TEER)

If appropriate for you, you may be offered a keyhole technique known as M-TEER to treat severe MR. See the M-TEER leaflet, where the procedure is described in more detail.

What tests are needed before deciding the best treatment for severe MR?

If either M-TEER or open heart valve surgery are being considered for you, the heart valve team will first need to arrange clinic visits and tests including:

• An outpatient appointment

You will meet the specialist doctor or surgeon and/or a specialist nurse. You may have an ECG (electrical trace of the heart), walking test and blood tests. Please make sure you wear appropriate footwear for walking and bring any