

## MITRAL VALVE REPLACEMENT

A mitral valve replacement is a surgery to replace a mitral valve that doesn't work well. It's replaced with a new valve. Open-heart surgery is a procedure for mitral valve replacement or repair. It's done with an incision in the middle of the chest that goes through your breastbone. When possible, this surgery can be done using a minimally invasive technique where a keyhole incision is made; there is no need for a full sternotomy. Minimally invasive mitral valve surgery leads to rapid recovery and quicker return to your routine activities.

### Why mitral valve replacement is done

The mitral valve is one of the heart's 4 valves. These valves help the blood flow through the heart's 4 chambers and out to the body. The mitral valve lies between the left atrium and the left ventricle.

The surgery is done if the mitral valve is not working well. It may be done if you have mitral valve regurgitation, also known as mitral valve insufficiency. This is when a leaky mitral valve allows blood to flow backward into the heart chamber. This can occur because of a heart defect you were born with, damage from a heart attack, advanced age, or a bacterial infection in your valve.

In some cases, a mitral valve needs to be repaired because it is too narrow. You might have been born with this narrowed valve. But it can also occur because of damage from rheumatic fever.

These conditions can put stress on the heart and lead to symptoms such as shortness of breath, fatigue, and swelling in your body. A new valve can let blood flow through your heart and out to your body normally again.

### Risks of open mitral valve replacement

All surgery has some risks. The risks of open mitral valve replacement include:

- Infection
- Bleeding
- Irregular heart rhythms
- Blood clots that can lead to stroke or heart attack
- Complications from anesthesia

Your own risks may vary according to your age, your general health, and the reason for your procedure. They may also vary depending on the structure of your heart. Talk with your health care provider about which risks apply most to you.

### Choosing a new valve

Before the surgery, you and your doctor will talk about what kind of valve will work best for you. You may be given a biological valve. This is a valve made from cow or pig tissue. Or you may be given a mechanical valve. This is an artificial valve made from metal and other materials.

Each type of valve has different risks and benefits. Biological valves need to be replaced in 10 to 15 years. Mechanical valves don't need to be replaced, but you need to take blood thinner medicine for life. This is to help prevent clots that can form on the valve and may cause stroke. Make sure to talk with your doctor about the kinds of follow-up care needed for each type.

### Getting ready for your surgery

Discuss preparation for your surgery with your health care provider. Tell him or her about all the medicines you take. This includes over-the-counter medicines such as ibuprofen. It also includes vitamins, herbs, and other supplements. You may need to stop taking some medicines before the surgery, such as blood thinners and aspirin. If you smoke, you may need to stop before your surgery. Smoking can delay healing. Talk with your health care provider if you need help to stop smoking.

Before your surgery, you may need tests such as:

- Chest X-ray
- Electrocardiogram (EKG), to check the heart's rhythm
- Blood tests, to assess your general health
- Echocardiogram, to view heart anatomy and blood flow through the heart
- Coronary angiogram, to look at blood flow in your heart's arteries

Tell your health care provider if you:

- Have had any recent changes in your health, such as an infection or fever
- Are sensitive or allergic to any medicines, latex, tape, or anesthetic drugs (local and general)
- Are pregnant or think you may be pregnant

Also, make sure to:

- Ask a family member or friend to take you home from the hospital. You cannot drive yourself.
- Not eat or drink after midnight the night before your surgery, unless your doctor says it's OK.
- Follow all other instructions from your health care provider.

You will be asked to sign a consent form that gives your permission to do the surgery. Read the form carefully. Ask questions if something is not clear.

### On the day of surgery

Your procedure will be done by a cardiac surgeon. This is a doctor who treats diseases of the heart. He or she will work with a team of specialized nurses. The surgery will take several hours. In general, you can expect the following:

- You will have general anesthesia, medicine that allows you to sleep through the surgery. You won't feel any pain during the surgery.
- A health care provider will watch your vital signs, like your heart rate and blood pressure, during the surgery.
- You will be hooked up to a heart-lung machine. This machine will act as your heart and lungs during the surgery.
- The surgeon will make a cut (incision) down the middle of your chest. To reach your heart, the doctor will separate the breastbone.
- Your mitral valve will be taken out. It will be replaced with a new valve.
- The surgery team will take you off the heart-lung machine.
- The team will wire your breastbone back together. The incision in your chest will be closed with stitches or staples. Dressings will be put on the incisions.

### After your surgery

After surgery, you will be taken to a recovery room. Nurses will check your breathing, heart rate, and blood pressure. You may have a tube draining fluid from your chest. You may have a tube in your throat to help you breathe. This may be uncomfortable, and you won't be able to talk. The tube is usually removed within 24 hours. You may stay in the hospital for about 5 days.

You may have some pain at the incision site after surgery. You can take pain medicines to help relieve it. Only take pain medicine approved by your health care provider.

In a day or two, you should be able to sit in a chair and walk with help. You may need to do breathing therapy to help prevent or remove fluid building up in your lungs. You can go back to your normal food as soon as you feel able.

Make sure you have someone to help at home for a while. When you go home, it may take a little while for you to resume normal activities. Avoid vigorous exercise until your doctor says you are ready. Don't lift anything heavy until your doctor says it's OK. Ask your doctor when it is safe for you to drive.

Take your temperature and weigh yourself every day. This is to check for infection, and to make sure your heart is pumping normally. If it doesn't pump normally, fluid can build up in your body and quickly cause you to gain excess weight.



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### Follow-up care

Within 10-14 days of your hospital discharge, you will be scheduled for a post-operative office visit to check the surgical area. Make sure you keep all of your follow-up appointments. Follow all the instructions your health care provider gives you for medicines, exercise, diet, and wound care.

Make sure all your dentists and doctors know about your new heart valve. You may need to take antibiotics before certain medical and dental procedures. This is to prevent getting an infection in your new valve.

If you have a mechanical valve, you will need to take blood thinner medicine. This is medicine that helps prevent clots.