

An elderly couple is shown in a kayak on a body of water during sunset. The man is on the left, and the woman is on the right, both smiling and looking towards the camera. They are wearing black wetsuits. The water is calm, and the sky is a mix of light blue and orange from the setting sun. A red rectangular graphic is overlaid on the left side of the image, containing white text.

My heart.  
My voice.  
My future.

Aortic regurgitation

This guide provides an overview of aortic regurgitation and its management. It will equip you with the knowledge needed to make an informed decision regarding your treatment.

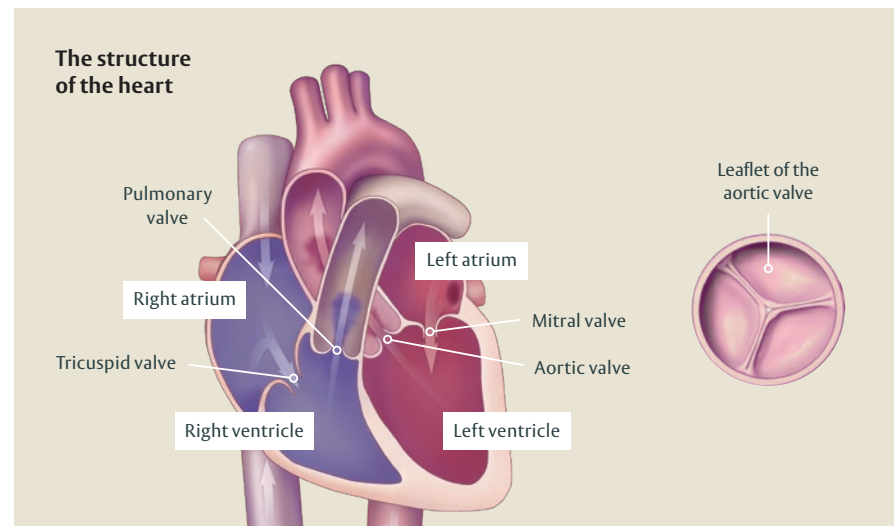


Edwards

# Your heart.



Your heart is a muscle that keeps you alive by pumping blood with essential oxygen and nutrients around your body. It is made up of two upper (atria) and two lower (ventricles) chambers.<sup>1</sup> The four heart valves, with their leaflets (flaps of tissue), act like doors between the chambers, opening and closing with every heartbeat.<sup>1,2</sup> This makes sure the blood flows in the right direction.<sup>2</sup>



## What is aortic regurgitation?

Aortic regurgitation can develop either suddenly or over many years.<sup>3</sup> It is a condition in which the aortic valve does not close properly, meaning that blood can flow in the wrong direction from the aorta, the body's main artery, into the left ventricle.<sup>3</sup> To make up for this leak, the heart needs to work harder so that enough blood is pumped throughout the body.<sup>4</sup> Aortic regurgitation can get progressively worse over time as your heart muscle can become enlarged and this can lead to heart failure.<sup>4-6</sup>

A US study estimated that of 2,865 patients, 4.8% experience aortic regurgitation, with most cases being mild.<sup>7</sup> Patients diagnosed with mild aortic regurgitation typically do not experience any symptoms, and might not even realise they have the condition.<sup>3,8</sup>

There are many reasons why the aortic valve may be unable to close properly. For example, some people may be born with valve defects or get certain infections, such as endocarditis, which can damage the aortic valve.<sup>3</sup> As we age, calcium can also build up on the valve, causing a degree of aortic regurgitation.<sup>3</sup> It could also be due to a problem with the aorta. If the aorta is stretched, the valve is unable to close properly resulting in a valve leak.<sup>6</sup>

## What symptoms should I look out for?

Initially you may not have any symptoms, but as the condition progresses, you may experience:<sup>3</sup>

- An irregular heartbeat
- Chest pain
- Lightheadedness or fainting
- Sensations of rapid, fluttering heartbeat (palpitations)
- Shortness of breath with activity, or when lying down
- Swelling of the feet and ankles

Recognising the symptoms of aortic regurgitation is important, as severe symptomatic cases of chronic aortic regurgitation are associated with a death rate of more than 10% each year.<sup>9</sup> So, if you do notice or suspect any of the symptoms mentioned above, it is recommended to reach out to your doctor to get yourself checked out.

## How will my aortic regurgitation be monitored?



You will have likely been diagnosed through a discussion of your medical history, a physical examination – which may have involved listening to your heart beat with a stethoscope to check for abnormal sounds like a heart murmur – and tests. These tests may have included an electrocardiogram (ECG) – which measures the heart's rhythm and electrical activity – exercise tests, or a heart magnetic resonance imaging (MRI) scan to acquire detailed pictures of your heart.<sup>8,10</sup>

Once you have been diagnosed with aortic regurgitation, your doctor will keep an eye on your condition through check-ups.<sup>8,10</sup> The frequency of these check-ups will vary depending on the severity. For example, asymptomatic patients with severe aortic regurgitation but normal heart function will typically need check-ups yearly.<sup>11</sup> However, for those nearing the threshold when surgery may be necessary, monitoring should occur every three to six months.<sup>11</sup>

Your doctor may monitor you with:

- Health check-ups<sup>8,10</sup>
- An echocardiogram, which is performed with a device that uses sound waves to produce an image of the heart and shows how the blood flows through the valves<sup>10</sup>
  - The device is either placed on your chest or, if a better image is needed, it's inserted down your oesophagus<sup>10,12</sup>

## What happens after my diagnosis?



The management of your condition will depend on how severe your condition and symptoms are.<sup>10</sup> Aortic regurgitation can be graded into three categories: mild, moderate and severe.<sup>10,13</sup>

If you have:

- **Mild to moderate aortic regurgitation**

It is unlikely you will be eligible for surgery, and it is likely that you may only need regular check-ups to monitor the health of your aortic valve.<sup>10,11,13</sup> If needed, you may be given medication to help with any symptoms or to lower your blood pressure.<sup>10,11</sup> While lifestyle changes can't prevent or treat your condition, your doctor may also recommend healthy habits such as following a balanced diet, quitting smoking, doing gentle regular exercise or having good dental hygiene.<sup>10,13</sup>

- **Severe aortic regurgitation**

If you are symptomatic, or if you are asymptomatic and have signs of an enlarged heart, you may be eligible for either an aortic valve replacement or repair.<sup>11</sup>

### Surgical aortic valve replacement

For the majority of patients, this is the standard approach to treating aortic regurgitation and involves replacing the damaged aortic valve with one made from metal or animal tissue through open heart surgery<sup>10,11</sup>

### Repair

This involves fixing the damaged parts of your valve whilst keeping as much of the natural tissue as possible<sup>14</sup>

Given surgical aortic valve replacement is the standard approach for the majority of patients,<sup>11</sup> the remainder of this brochure will primarily concentrate on this procedure.

# Mechanical or tissue valve?



When choosing a heart valve for your aortic valve replacement, your healthcare team will discuss your options and help you decide what the best valve replacement choice is for you.

You will be fitted with either a tissue or mechanical valve. Below are some important considerations that may help you with your choice.

	Tissue valve	Mechanical valve
What is the valve made out of?	Animal tissue, such as from pigs or cows <sup>15</sup>	Materials such as titanium and carbon <sup>15</sup>
How long will the valve last?	Approximately 10–20 years <sup>16</sup>	Usually lasts a lifetime <sup>16</sup>
Will I need to be on long-term anticoagulation medication?	No <sup>11</sup>	Yes, mechanical valves need lifelong use of an anticoagulant, which prevents blood clotting <sup>11</sup>
Do I need to make any lifestyle changes?	No	Yes, taking an anticoagulant means regular monitoring and changing your lifestyle to avoid injuries <sup>17</sup>
Do I need to consider my diet?	You might need to reduce your calcium intake <sup>18</sup>	Keep the amounts of foods high in vitamin K (leafy greens like kale, brussels sprouts, or broccoli) consistent in your diet <sup>17,19</sup>
Will I be able to hear my replacement valve?	No	Yes, you'll be able to hear some clicking sounds as your valve closes <sup>20</sup>
What are the risks if I am planning on becoming pregnant in the future?	No known pregnancy complication risk <sup>11</sup>	High pregnancy complication risk <sup>11</sup>

# Your voice.



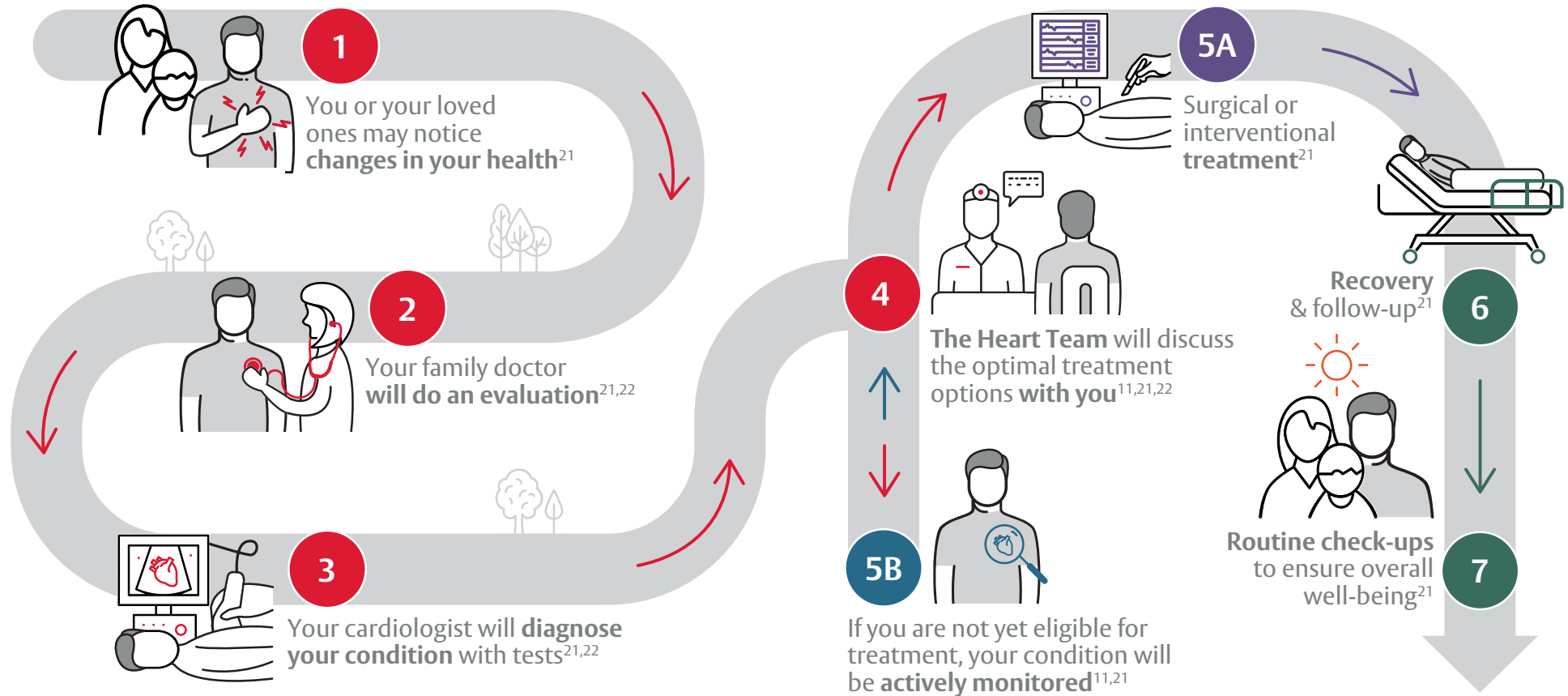
It's a good idea to think ahead when choosing your first aortic valve, as it may impact your future treatment options. Your medical team will be on hand to talk you through the options and help you make the best decision for you.

**Remember, this is a collaborative process, and your thoughts and preferences are important.**

The below chart provides a helpful framework that can help to guide your decision in choosing your heart valve. It's important to note that these recommendations have some level of flexibility; your doctor will assess your case individually and your preferences will be taken into consideration.

A mechanical valve may be a better choice if you...	Are younger than 60 years <sup>11</sup>	Are already on a long-term anticoagulant for another reason <sup>11</sup>	Are at high risk of complications if you need another valve operation <sup>11,16</sup>	Prefer to decrease the risk of needing another procedure <sup>16</sup>
	Are between the ages of 60–65 years; either valve may be appropriate <sup>11</sup>	Do not want to take an anticoagulant <sup>11</sup>	Are at risk of the valve deteriorating more quickly <sup>11,16</sup>	Are unable to take an anticoagulant as prescribed or are at high risk of complications from taking an anticoagulant <sup>11</sup>
A tissue valve may be a better choice if you...	Are older than 65 years <sup>11</sup>	Wish to become pregnant in the future <sup>11</sup>	Have an active lifestyle with a high risk of injury <sup>11</sup>	Have limited access to routine medical care to help manage anticoagulants <sup>17</sup>
			Think the clicking sound of mechanical valves would bother you <sup>20</sup>	

# Your treatment journey.



Your healthcare team is here to help, but when it comes to your heart and your future, your voice is crucial.



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