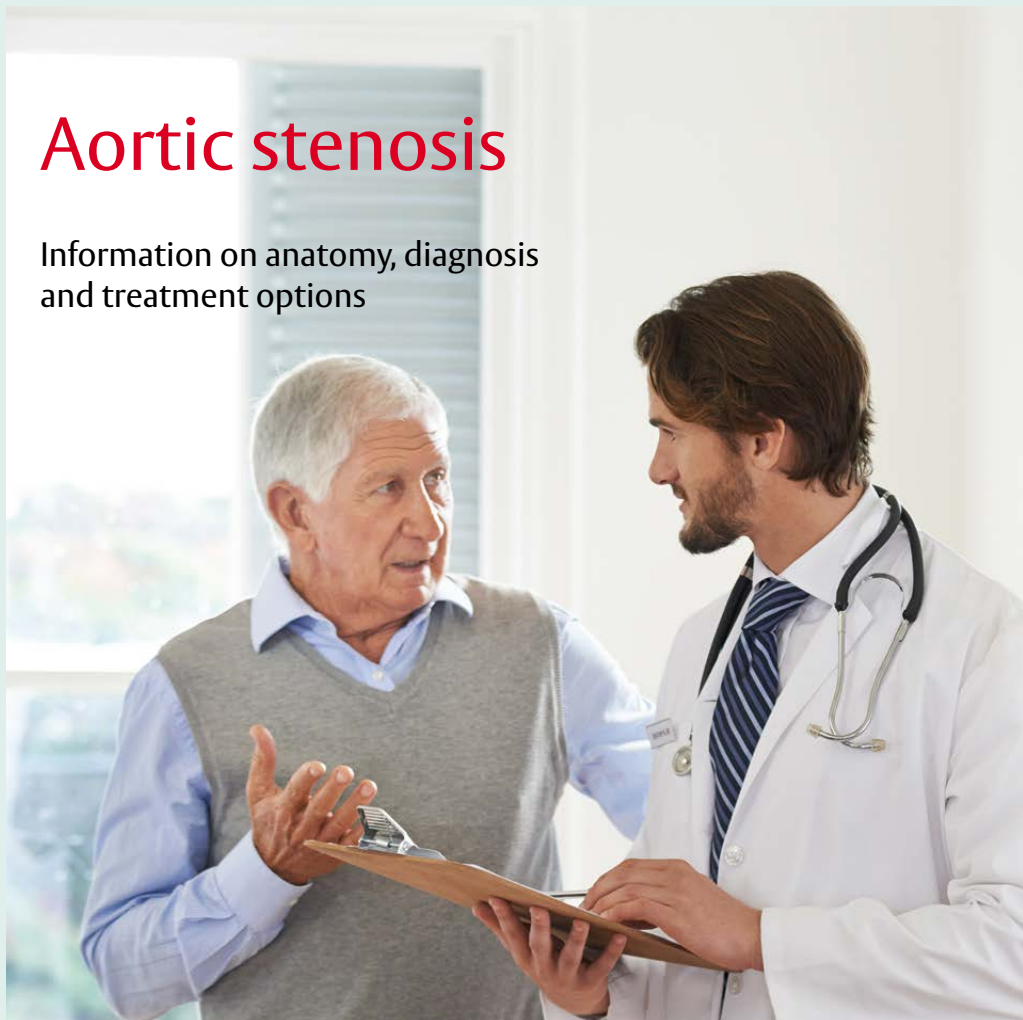


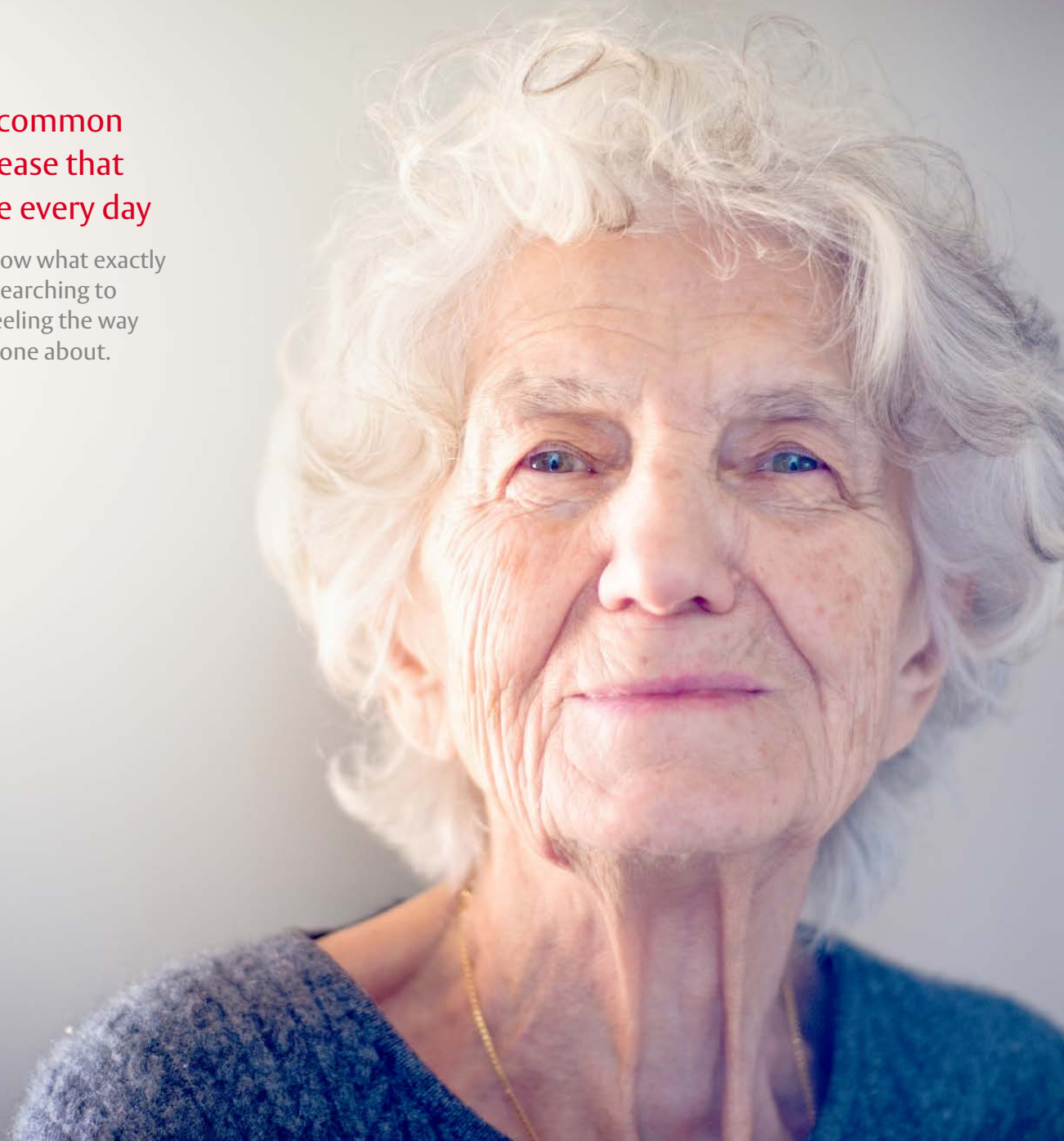
# Aortic stenosis

Information on anatomy, diagnosis  
and treatment options



**Aortic stenosis is a common structural heart disease that affects many people every day**

Like many, you may not know what exactly 'aortic stenosis' is and be searching to understand why you are feeling the way you do, and what can be done about.



## How does the heart work normally?

### Structure

The heart is made up of four chambers, called atria and ventricles – two on the right, which pump blood to the lungs, and two on the left, which pump blood around the rest of the body.

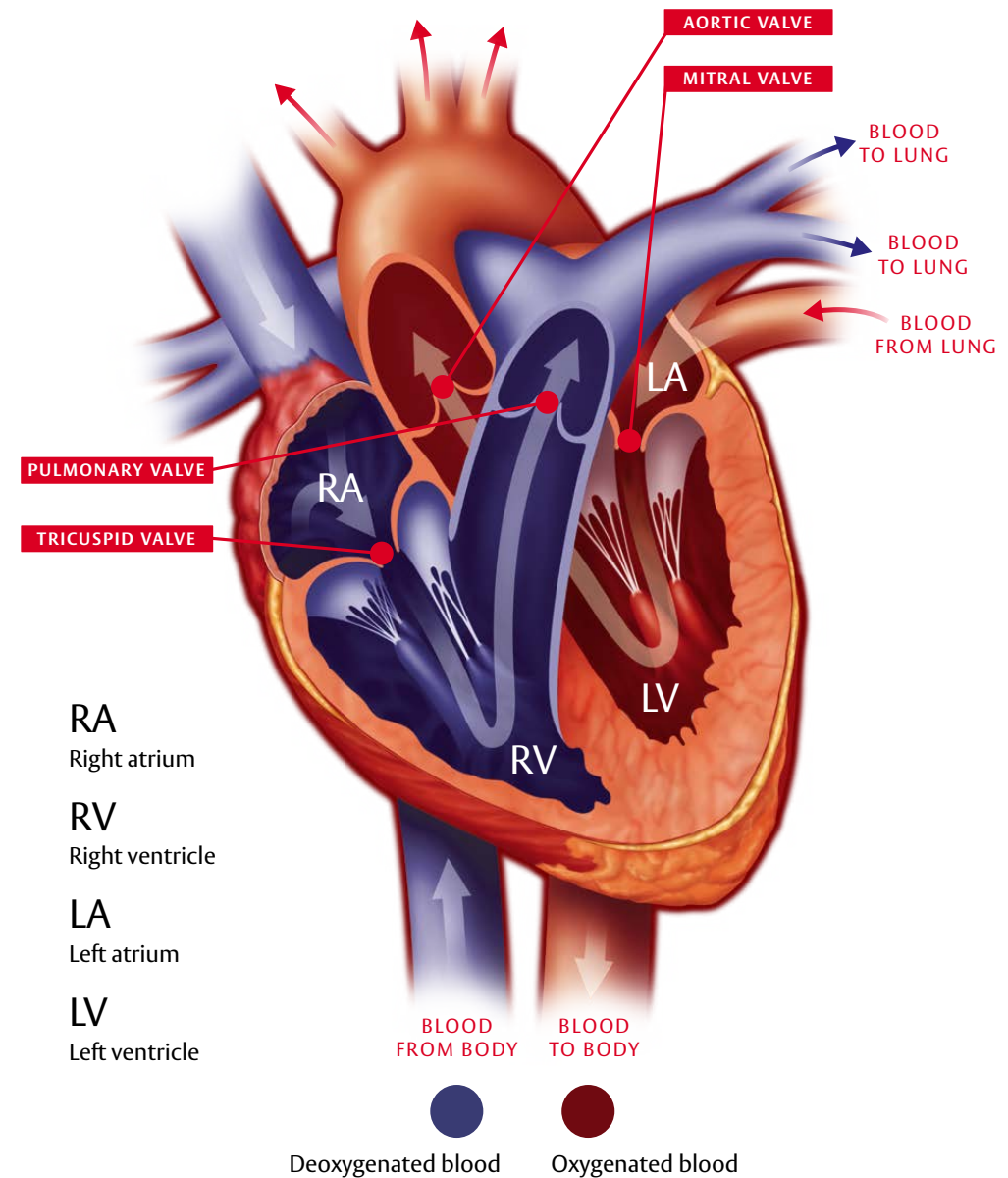
### Blood circulation

On each side of the heart, the atrium and ventricle are connected by a valve. Blood is pumped through the right atrium and ventricle and out of the heart through the pulmonary valve, then on to the lungs to be oxygenated. This blood then returns to the left side of the heart. It is then pumped through the aortic valve into the main artery (the aorta) and around the body.

### The aortic valve

The essential function of a heart valve is to maintain the flow of blood in the right direction. When the left ventricle has contracted fully and pumped all the oxygenated blood into the aorta, the aortic valve closes. It only opens again when the ventricle has refilled blood from the left atrium, ready for the next contraction.

## Heart valves



## Diagnosis and treatment

### General Cardiologist

The cardiologist will perform some more tests on your heart to decide which of your heart valves is not working well. This can often help to determine what is causing your heart murmur. It may be possible to discuss the different treatment options available with the cardiologist.

### Heart Team

If it's necessary, your cardiologist could refer you to the heart team. This multidisciplinary team of specialists may discuss the most suitable options of intervention with you.



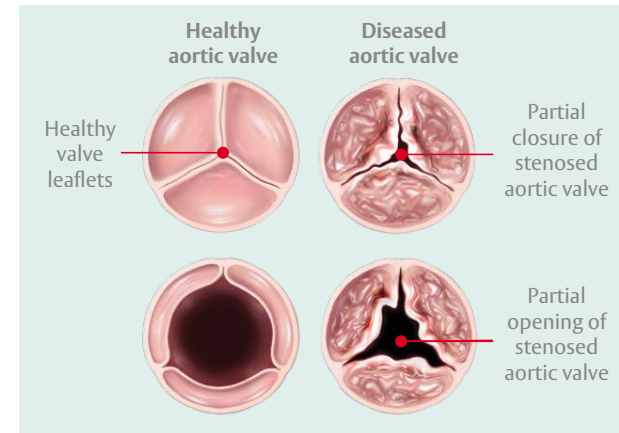
## What is aortic stenosis?

In a patient with aortic stenosis, the aortic valve no longer opens fully. Its opening is restricted as the leaflets of the valve become stenosed (narrowed) over time. This makes it harder for your heart to pump blood through the valve and around your body. The narrower the valve, the harder the heart has to work and the worse the symptoms are likely to be.

Therefore, if your heart is having to work a lot harder, you may notice the common symptoms of aortic stenosis such as shortness of breath and dizziness. A doctor may explain that if these persist over a long time, symptoms will worsen and those affected will potentially develop heart failure.<sup>1</sup> People with severe aortic stenosis may also suffer from fainting, and in some cases, it can lead to the heart stopping completely.<sup>2,3</sup>

Now that you understand what aortic stenosis is and why you may be experiencing these symptoms, a doctor will explain what treatment options are available to you.

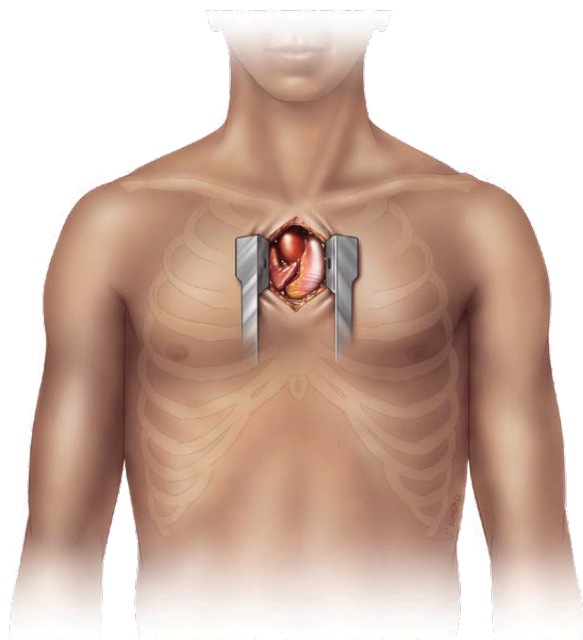
***The narrower the valve, the harder the heart has to work***



## What are the treatment options for aortic stenosis?

A cardiologist will explain your treatment options. The treatment options may include either a surgical aortic valve replacement, transcatheter aortic valve implantation, or simple medical management. A doctor will help to decide which is the most appropriate type of treatment for the individual patient.

**Surgical aortic valve replacement** is a form of open-heart surgery. With this treatment option, patients may have a general anaesthetic so that they are asleep. A surgeon will open the chest cavity and replace the narrowed valve with a new valve, potentially reducing the symptoms of aortic stenosis. Surgical aortic valve replacement is a very well-established treatment that has been performed successfully for many years.<sup>3-6</sup>

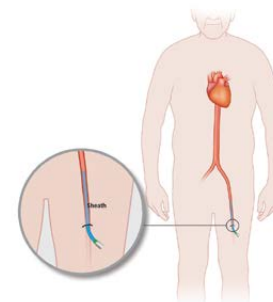


**Transcatheter aortic valve implantation**, or TAVI for short, does not require open-heart surgery. Instead of opening up the chest, a small incision is made, often in the groin, or sometimes in the chest. Following this, a long tube (catheter) is guided from the incision site to the heart. The replacement valve is passed through a catheter into the heart, then implanted within the faulty valve. As with surgical aortic valve replacement, the new valve allows for the aortic valve to return to normal function.

Both surgical and transcatheter treatment options should improve the symptoms of aortic stenosis. The structural heart team may perform an evaluation on the patient and decide which of these options are best for each individual case. Treatment option suitability is dependent on each person and the structural heart team will discuss the best intervention for each patient.

### Transfemoral approach

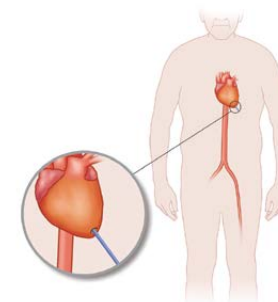
Through an incision in the leg



Diseased (calcified) native aortic valve

### Transapical approach

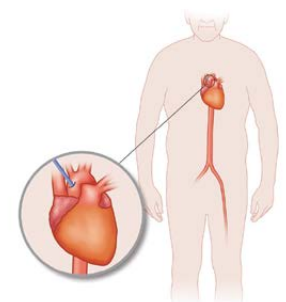
Through an incision between the ribs



Diseased (calcified) native aortic valve

### Transaortic approach

Through an incision in the chest



Diseased (calcified) native aortic valve

## Get the help you need

A discussion with your doctor regarding symptoms of aortic stenosis may lead to identifying which treatment option may be appropriate.



## Key things to remember

- Aortic stenosis is a common form of heart valve disease<sup>7</sup>
- Several different treatments are available for aortic stenosis
- Treatment can improve your symptoms giving you better quality of life

To find out more about  
Aortic Stenosis visit  
[www.newheartvalve.co.nz](http://www.newheartvalve.co.nz) and  
order your free information kit



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