

Your guide to Heart Valve Health



Listen
to your
heart 

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A background image of a waterfall with colorful moss and rocks. The water is cascading down, creating a misty spray at the bottom. The rocks are covered in vibrant green and yellow moss, with some reddish-brown patches. The overall scene is bright and natural.

Heart valve disease often goes undiagnosed and untreated

Early detection of a heart murmur is your best prevention in the fight against heart valve disease.

Did you know the only way to identify valve disease is to have your doctor listen to your heart with a stethoscope? This is performed by your GP so they can listen to see if you have a heart murmur¹.

Heart valve disease is often mistaken for normal signs of aging

Heart valve disease is a condition where one or more of your heart valves stops working properly, making it more difficult for blood to flow through your body.



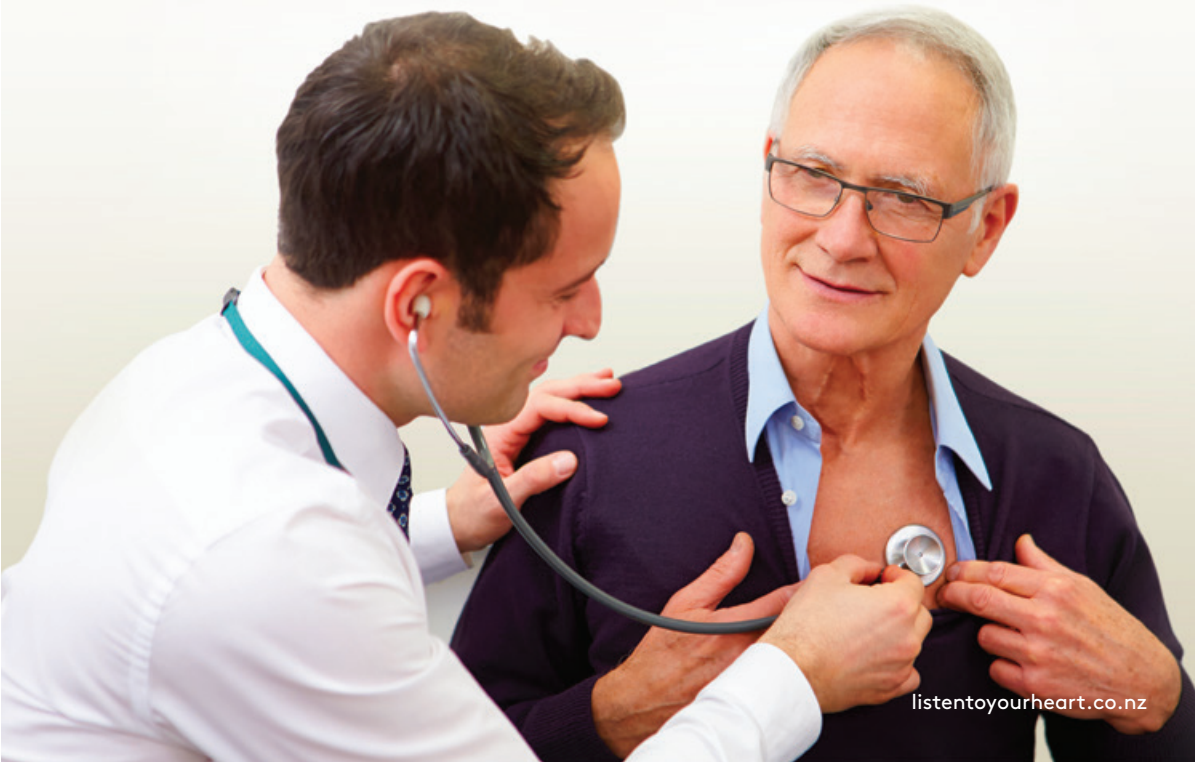
Heart valve disease impacts people every day but often goes undiagnosed as symptoms can develop slowly over a long time. It commonly occurs as people age, so it's important to get your heart regularly checked by a doctor; because if you don't treat heart valve disease, it can get worse and life expectancy can be severely reduced².

Your chance of developing heart valve disease increases by 19 times between the ages 45 and 75³.

Auscultation – listening to your heart

The only way to check for a murmur is for your doctor to listen to your heart with a stethoscope on the front of your chest¹.

A heart check, with a stethoscope, is a short and simple procedure your doctor can include in your regular check-up.





A complete heart check with your GP could involve:

- Stethoscope check
- Blood pressure check
- Cholesterol test
- Pulse check
- Family history, medical history and lifestyle

A stethoscope check is the only way to pick up a heart murmur. While other tests can provide your doctor with important information about your heart health, these don't replace your doctor listening to your heart.

In New Zealand, 60% of Kiwis don't get their heart listened to when they go to their GP⁴.

What is a heart murmur?

By listening to your chest, a doctor can hear the blood^{5,6} flowing through the valves of your heart. If this sounds unusual or isn't following a regular pattern, it is called a heart murmur.

Not all heart murmurs mean serious problems, but it's best to have them investigated further and regularly monitored as they can be a sign of a more serious heart condition and can progress over time.



If you have a murmur, your doctor will look for symptoms and changes in your symptoms⁷

You may feel like some of these symptoms are not worth mentioning to your doctor but this is very important information.

Let your GP know if you have or notice any changes in:



Shortness of breath upon exertion



Chest pain or tightness (angina)



Feeling faint or dizzy upon exertion



Reduced physical activity



Feeling fatigued



Heart palpitations

I've got a heart murmur – now what?

If your doctor thinks your heart murmur needs further investigation, they may refer you to a cardiologist⁷ for one of the following:

Electrocardiogram (ECG)



These can detect changes in heart rhythms or chamber sizes.

Echocardiogram (ECHO)



This procedure uses ultrasounds to create images of the heart and evaluate anatomy and function.

Chest X-Ray



A chest x-ray screens for an enlarged heart, signs of abnormal circulation, or heart muscle failure.

These are all excellent tests but if you really want to know what's going on with your heart valves, you'll need an echocardiogram. It will give your doctor the most accurate detail about your heart.

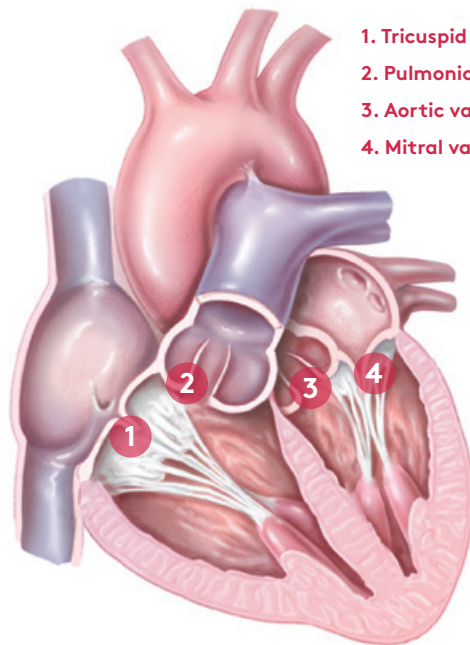
If you have a new or existing heart murmur combined with any symptoms, you'll require an echocardiogram to assess your heart⁸.

What causes a heart murmur?

Several different things can cause a heart murmur, but sometimes it can be a sign of heart valve disease.

Your heart has four valves which act like gates between the chambers of your heart. They open and close to keep blood flowing in the right direction.

Heart valve disease happens when at least one of the four valves in the heart no longer works the way it should. Most heart valve problems involve the aortic and mitral valves.



1. Tricuspid valve
2. Pulmonic valve
3. Aortic valve
4. Mitral valve

One of the most commonly diagnosed heart valve diseases is aortic stenosis, and the best way for your doctor to diagnose this is through an echocardiogram.

It's very important to tell your doctor about any symptoms you are experiencing, even if they seem insignificant.

Most Common Valve Issues¹⁰

Normal

The valve fully opens and closes.



Open



Closed

Regurgitation

The valve is leaky and doesn't fully close.



Open



Closed

Stenosis

The valve becomes stiff and doesn't open enough.



Open



Closed

1 in 8 people over the age of 75 have Aortic Stenosis¹¹

The two most common issues that can cause a heart murmur are regurgitation and stenosis.

A normal heart valve fully opens and closes. Aortic stenosis is one of the most commonly diagnosed heart valve diseases, and this affects the aortic valve.

Aortic stenosis occurs when the valve become stiff and doesn't open as much as it should, making it harder for your heart to pump blood through the valve and around the body.



Why are symptoms so important?

Symptoms can come on slowly and people tend to adjust their lifestyle to manage them. It's always important to tell your doctor if you are experiencing any of the following symptoms, or if they are getting worse, as this may mean you need increased monitoring or treatment⁸.

Symptoms are your best indicator of severe heart valve disease¹²

If you're experiencing any of the following symptoms or you're worried, get it checked by a doctor.



Chest pain



Heart palpitations



Shortness of breath



Trouble doing usual activities/exercise



Fever or night sweats



Dizziness or fainting



Ankle swelling



Extreme tiredness



Sudden weight gain

If you have aortic stenosis and are experiencing symptoms, you need to talk to your GP about treatment options as soon as possible.

What are the treatment options for aortic stenosis?

Treatment depends on the severity of your aortic stenosis. The only effective treatment method for severe aortic stenosis is to replace your aortic valve¹³ - medical management is not a cure. Today there are two options for treatment.

Transcatheter Aortic Valve Implantation (TAVI)

TAVI is a less invasive treatment option for severe aortic stenosis. It is designed to implant a new valve through a small tube, commonly by making a small access site in the leg, without you having to go through open heart surgery.





Surgical Aortic Valve Replacement (SAVR)

This is where the aortic valve is replaced through open-heart surgery.

The latest clinical guidelines support the use of TAVI in a range of ages¹⁴.

A dedicated team will conduct a thorough evaluation to determine the most appropriate treatment option for you.

Treatment Comparisons¹⁵

TAVI	VS	SAVR
General anaesthesia, conscious sedation or local anaesthesia	 Anaesthesia	General anaesthesia required
Average of 1.5 hours	 Time	Average of 4 hours
Small access site is made typically in the upper leg	 Incision	Sternotomy - vertical incision along your breastbone
Average of 1 or 2 nights	 Hospital Stay	Average of 5 nights

Both TAVI and SAVR are funded in the public and private health system in New Zealand – talk to your doctor if private is an option for you.

The earlier you catch your disease the sooner you can have treatment and the lower the risks of complications¹⁶.

Early diagnosis and early intervention with treatment is key to returning back to normal life.

Which of these people best describes you?

And what should you talk to your doctor about.



GEORGE

**I don't know
if I have a
heart murmur**

Questions for your doctor

- Can you check for a heart murmur?
- Will you order an echocardiogram or any other tests if you detect a murmur?
- Can you check for heart valve disease?

MALCOLM

I've been told I have a heart murmur

Questions for your doctor

- When do I need a new or follow-up echocardiogram?
- Can you check for heart valve disease?
- Will you refer me to a cardiologist?



MARIANNA

I have aortic stenosis

Questions for your doctor


- When do I need a new or follow-up echocardiogram?
- Have my aortic stenosis symptoms progressed?
- When will I need treatment?
- What are my treatment options?



Heart Valve Disease Symptom Tracker

Tick the symptoms that apply to you, noting the frequency.
Then bring it to your next appointment to review with your doctor.

Symptom	Never	Occasionally	Often	Always
Pain, tightness or pressure in the chest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lightheadedness or dizziness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shortness of breath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heart palpitations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fainting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difficulty sleeping or sitting up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swollen feet or ankles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difficulty walking short distances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not engaging in activities you once did	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

An elderly man with white hair and a blue zip-up sweater is sitting in a workshop. He has a serious expression. In the background, there is a workbench with various tools and equipment, including a large metal fan or motor. The lighting is soft and indoor.

//
My biggest regret is waiting six months before I went to the doctor. I could easily have left it too late. We get a warrant of fitness on our car every year, we should do the same for ourselves. //

Ross McGregor

New Zealand patient and heart disease survivor.

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Information on this material includes educational information regarding certain conditions and potential therapies or treatment options. Other therapies or treatment options may be available, and you should discuss any educational information you access online with your healthcare professional. Appropriate treatment for individuals is a matter for healthcare professionals to decide in consultation with each individual.

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¹ Cherif L. H., et al, Segmentation of Heart Sounds and Heart Murmurs. *Journal of Mechanics in medicine and Biology*.

² Ross J Jr, Braunwald E. Aortic Stenosis. *Circulation* 1968; 38: 61-7

³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6391621/>

⁴ Ipsos AS Patient Drop-off Australia New Zealand, March 2021

⁵ Mangner N, Schuler G. ESC guidelines on the management of valvular heart disease. What has changed and what is new? *Herz* 2013;38:828–37

⁶ Nishimura RA, et al. 2014 AHA/ACC guideline for the management of patients with valvular heart disease: executive summary: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *JACC* 2014;63:2438–

⁷ Carabelle BA. Introduction to aortic stenosis. *Circ Res* 2013;113:179–85. Mayo Clinic Staff. www.mayoclinic.com <http://www.mayoclinic.org/diseases-conditions/aortic-stenosis/basics/symptoms/con-20026329>. Accessed August 12, 2016

⁸ Otto CM et al. 2020 ACC/AHA Guideline for the Management of Patients With Valvular Heart Disease: Executive Summary: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. 2021 Feb 2;143(5): e35–e71

⁹ <https://www.heartfoundation.org.nz/your-heart/heart-conditions/what-is-a-heart-murmur>

¹⁰ Otto CM, Bonow RO. Valvular Heart Disease: A Companion to Braunwald's Heart Disease. 4th ed. Philadelphia, PA: Elsevier Saunders; 2014.

¹¹ Nkomo VT, et al. Burden of valvular heart diseases: a population-based study. *Lancet* 2006;368:1005–11.

¹² Nishimura RA, et al. 2014 AHA/ACC guideline for the management of patients with valvular heart disease: executive summary. *JACC* 2014;63:2438–88.

¹³ Lindman BR, et al. Calcific aortic stenosis. *Nat Rev Dis Primers* 2016;2:16006. doi:10.1038/nrdp.2016.6.

¹⁴ Public Summary Document Application No. 1635 – Transcatheter aortic valve implantation via transfemoral delivery using the balloon-expandable valve system for patients at low risk for surgery [http://www.msac.gov.au/internet/msac/publishing.nsf/Content/197EF21E1EB7A616CA25859900288CE7/\\$File/1635%20Final%20PSD%20-%20updated%20July%202021_redacted.pdf](http://www.msac.gov.au/internet/msac/publishing.nsf/Content/197EF21E1EB7A616CA25859900288CE7/$File/1635%20Final%20PSD%20-%20updated%20July%202021_redacted.pdf). Accessed on 06/04/2022

¹⁵ Leon MB, Mack MJ. PARTNER 3: transcatheter or surgical aortic valve replacement in low risk patients with aortic stenosis. Presented at ACC 2019; March 2019; New Orleans, LA

¹⁶ Otto CM, Pearlman AS, Gardner CL. Hemodynamic progression of aortic stenosis in adults assessed by Doppler echocardiography. *J Am Coll Cardiol* 1989;13:545–50.

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