

Types of cardiovascular disease, causes, risk, treatment and prevention

Cardiovascular diseases encompass various types, including coronary artery disease, heart attacks, strokes, heart failure, arrhythmias, peripheral artery disease, congenital heart disease, cardiomyopathy, aortic aneurysm, and rheumatic heart disease, with each type having specific causes, risk factors, treatments, and prevention methods; in 2024, these diseases collectively resulted in significant mortality in Australia, highlighting the importance of maintaining a healthy diet, engaging in regular exercise, quitting smoking, managing blood pressure, cholesterol, and diabetes, maintaining a healthy weight, avoiding excessive alcohol and caffeine, managing stress, and undergoing regular health screenings.

Cardiovascular disease type	No. of deaths 2023 ⁵	Causes	Risk	Treatment	Prevention
1. Coronary artery disease (CAD): CAD is caused by the buildup of plaque in the coronary arteries, leading to reduced blood flow to the heart. This can result in chest pain (angina) and heart attacks. ⁶	17,800	Atherosclerosis (plaque buildup)	High blood pressure, high cholesterol, smoking, diabetes, obesity, sedentary lifestyle, family history, age, and stress.	<ul style="list-style-type: none"> Lifestyle changes: Eat healthy, exercise, quit smoking. Medications: Pills to lower cholesterol and blood pressure. Procedures: Angioplasty (opening blocked arteries) or bypass surgery (creating a new path for blood flow). 	Healthy diet, regular exercise, quitting smoking, managing blood pressure, cholesterol, and diabetes, maintaining a healthy weight, and managing stress.
2. Heart attack (Myocardial Infarction): A heart attack occurs when a part of the heart muscle doesn't receive enough blood, causing damage to the heart tissue. ⁷	6,570 or 18 deaths per day.	Blockage of blood flow to the heart muscle, usually due to a blood clot.	High blood pressure, high cholesterol, smoking, diabetes, obesity, sedentary lifestyle, family history, age, and stress.	<ul style="list-style-type: none"> Medications: Pills to dissolve clots and reduce heart strain. Procedures: Angioplasty or bypass surgery to restore blood flow. 	Healthy diet, regular exercise, quitting smoking, managing blood pressure, cholesterol, and diabetes, maintaining a healthy weight, and managing stress.
3. Stroke: A stroke happens when the blood supply to part of the brain is interrupted. There are two main types: ischemic (due to blockages) and hemorrhagic (due to bleeding).	7,900	Blockage (ischemic stroke) or rupture (hemorrhagic stroke) of blood vessels in the brain.	High blood pressure, high cholesterol, smoking, diabetes, obesity, sedentary lifestyle, family history, age, and atrial fibrillation.	<ul style="list-style-type: none"> Medications: Clot-busting drugs for ischemic stroke. Procedures: Surgery to remove clots or repair blood vessels. Rehabilitation: Therapy to regain skills and strength. 	Healthy diet, regular exercise, quitting smoking, managing blood pressure, cholesterol, and diabetes, maintaining a healthy weight, and managing atrial fibrillation.

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<p>4. Heart failure</p> <p>Heart failure is a condition where the heart can't pump enough blood to meet the body's needs, often resulting from other heart conditions like CAD or high blood pressure.⁸</p>	4,800	Conditions that damage or overwork the heart, such as CAD, high blood pressure, and diabetes.	High blood pressure, CAD, diabetes, obesity, smoking, sedentary lifestyle, and family history.	<ul style="list-style-type: none"> • Medications: Pills to help the heart pump better. • Lifestyle changes: Eat healthy, exercise, quit smoking. • Devices/Surgery: Pacemakers or heart transplants for severe cases. 	Healthy diet, regular exercise, quitting smoking, managing blood pressure, cholesterol, and diabetes, maintaining a healthy weight, and reducing alcohol intake.
<p>5. Arrhythmia</p> <p>Arrhythmia refers to irregular heartbeats, which can be too fast, too slow, or erratic, affecting the heart's efficiency.⁹</p>	17,500	Abnormal electrical impulses in the heart.	Heart disease, high blood pressure, diabetes, smoking, excessive alcohol or caffeine intake, stress, and certain medications.	<ul style="list-style-type: none"> • Medications: Pills to control heart rhythm. • Procedures: Electrical shocks (cardioversion) or catheter ablation (destroying abnormal tissue). • Devices: Pacemakers to regulate heartbeat. 	Healthy diet, regular exercise, quitting smoking, managing blood pressure, cholesterol, and diabetes, maintaining a healthy weight, and avoiding excessive alcohol and caffeine.
<p>6. Peripheral artery disease (PAD)</p> <p>PAD involves the narrowing or blockage of arteries in the limbs, leading to pain and mobility issues.¹⁰</p>	1,800	Weakness in the wall of the aorta.	Smoking, high blood pressure, atherosclerosis, genetic factors, and age.	<ul style="list-style-type: none"> • Monitoring: Regular check-ups to watch the aneurysm. • Medications: Pills to lower blood pressure. • Surgery: Repairing or replacing the damaged part of the aorta. 	Healthy diet, regular exercise, quitting smoking, managing blood pressure and cholesterol, and regular screening for those at risk.

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<p>7. Congenital Heart Disease Congenital heart disease refers to heart abnormalities present at birth, affecting the heart's structure and function.¹¹</p>	150	Genetic factors and environmental exposures during pregnancy.	Genetic factors and environmental exposures during pregnancy.	<ul style="list-style-type: none"> • Medications: Pills to manage symptoms. • Procedures: Catheter procedures or surgery to fix heart defects. • Transplants: Heart transplants in severe cases. 	Prenatal care, avoiding harmful substances during pregnancy, and genetic counselling.
<p>8. Cardiomyopathy Cardiomyopathy is a disease of the heart muscle that makes it harder for the heart to pump blood to the rest of the body. It can lead to heart failure.¹²</p>	5,000	Genetic factors, chronic high blood pressure, heart attacks, and infections.	Family history, high blood pressure, CAD, diabetes, obesity, and excessive alcohol consumption.	<ul style="list-style-type: none"> • Medications: Pills to help the heart pump better. • Lifestyle changes: Eat healthy, exercise, quit smoking. • Devices/Surgery: Pacemakers or heart transplants for severe cases. 	Healthy diet, regular exercise, quitting smoking, managing blood pressure, cholesterol, and diabetes, maintaining a healthy weight, and avoiding excessive alcohol.
<p>9. Aortic Aneurysm An aortic aneurysm is an abnormal bulge in the wall of the aorta, the largest artery in the body, which can rupture and cause life-threatening bleeding.¹³</p>	1,800	Weakness in the wall of the aorta.	Smoking, high blood pressure, atherosclerosis, genetic factors, and age.	<ul style="list-style-type: none"> • Monitoring: Regular check-ups to watch the aneurysm. • Medications: Pills to lower blood pressure. • Surgery: Repairing or replacing the damaged part of the aorta. 	Healthy diet, regular exercise, quitting smoking, managing blood pressure and cholesterol, and regular screening for those at risk.
<p>10. Rheumatic Heart Disease Rheumatic heart disease is damage to the heart valves caused by rheumatic fever, which results from untreated strep throat or scarlet fever.¹⁴</p>	340	Damage to the heart valves from rheumatic fever.	Repeated strep infections, poor access to healthcare, and living in areas with high rates of rheumatic fever.	<ul style="list-style-type: none"> • Medications: Antibiotics to treat infections and pills to manage symptoms. • Surgery: Repairing or replacing damaged heart valves. • Follow-up: Regular medical check-ups. 	Prompt treatment of strep throat with antibiotics, good hygiene, and access to healthcare.

Note: The figures for each type of cardiovascular disease are independent of each other. This means that the death counts for coronary artery disease (**CAD**), heart attacks, stroke, heart failure, arrhythmias, peripheral artery disease (**PAD**), congenital heart disease, cardiomyopathy, aortic aneurysm, and rheumatic heart disease are counted separately and do not overlap.