What is Cardiovascular Disease?

Statistics

- **Prevalence:** About 1 in 6 Australians (approximately 4.5 million people) live with cardiovascular disease (**CVD**), which includes heart disease, stroke, and blood vessel diseases.
- **Mortality:** CVD is responsible for around 24% of all deaths in Australia, equating to about 120 deaths per day.
- **Hospitalisations:** Every day, over 1,500 Australians are hospitalised due to CVD, making it a significant burden on the healthcare system.
- **Gender disparity:** Men are 40% more likely to die from CVD compared to women.[1]
- **Heart disease is the leading cause of death:** Heart disease is the leading cause of death globally, accounting for approximately 17.9 million deaths each year.[2]
- **Silent heart attacks:** About 1 in 5 heart attacks are "silent," meaning the damage is done, but the person is not aware of it.[3]

Cardiovascular disease (**CVD**), which includes heart, stroke, and vascular diseases, is a broad term encompassing various conditions that affect the heart and blood vessels. The most prevalent and severe forms of CVD are coronary heart disease, stroke, and heart failure.

Despite a decline in mortality and hospitalisation rates, CVD continues to be a significant health issue in Australia.[4]

Important to know

Understanding your family history, current lifestyle choices, and knowing how to respond in case of a cardiovascular event is important. Making lifestyle changes and considering life insurance, especially if there's a family history or unhealthy habits, can be beneficial.

1. **Prevention:** Preventing cardiovascular diseases involves a healthy lifestyle and regular check-ups.

2. **Recognising the signs:** Early action and knowing what to do during a heart attack can save lives. Recognising the warning signs of a heart attack or stroke and seeking immediate medical attention can significantly improve outcomes. Symptoms can include chest pain, shortness of breath, nausea, and discomfort in the arms, neck, back, or jaw.

3. **Rehabilitation:** After a heart attack or stroke, rehabilitation programs are key for recovery and improving quality of life.

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.	• 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.	• 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.	• 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.

Cardiovascular disease type	No. of deaths 2023[5]	Causes	Risk	Treatment	Prevention
4. Heart failure 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]	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.	• 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.
5. Arrhythmia Arrhythmia refers to irregular heartbeats, which can be too fast, too slow, or erratic, affecting the heart's efficiency.[9]	17,500	Abnormal electrical impulses in the heart.	Heart disease, high blood pressure, diabetes, smoking, excessive alcohol or caffeine intake, stress, and certain medications.	• 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.
6. Peripheral artery disease (PAD) PAD involves the narrowing or blockage of arteries in the limbs, leading to pain and mobility issues.[10]	1,800	Weakness in the wall of the aorta.	Smoking, high blood pressure, atherosclerosis, genetic factors, and age.	• 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.

Cardiovascular disease type	No. of deaths 2023[5]	Causes	Risk	Treatment	Prevention
7. Congenital Heart Disease Congenital heart disease refers to heart abnormalities present at birth, affecting the heart's structure and function. [11]	150	Genetic factors and environmental exposures during pregnancy.	Genetic factors and environmental exposures during pregnancy.	• 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.
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]	5,000	Genetic factors, chronic high blood pressure, heart attacks, and infections.	Family history, high blood pressure, CAD, diabetes, obesity, and excessive alcohol consumption.	• 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.
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]	1,800	Weakness in the wall of the aorta.	Smoking, high blood pressure, atherosclerosis, genetic factors, and age.	• 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.
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]	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.	• 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.

Resources

Australia offers several valuable resources for information and support related to cardiovascular disease:

1. **Australian Institute of Health and Welfare:**
   Their reports provide comprehensive data on heart, stroke, and vascular diseases, including prevalence, risk factors, and treatment options

2. **Heart Foundation:**
   This organisation offers a wealth of information on cardiovascular health, including statistics, prevention tips, and support for those affected by heart disease

3. **Cardiac Society of Australia and New Zealand:**
   They provide guidelines, research, and professional development resources for healthcare providers focused on cardiovascular health.

These resources can help you stay informed and take proactive steps towards maintaining a healthy heart.

Lifestyle changes make a difference

Adopting a healthy lifestyle, including a balanced diet, regular exercise, and quitting smoking, can greatly reduce the risk of developing CVD.[15]

Healthy diet:
Eat a balanced diet rich in fruits, vegetables, whole grains, and lean proteins.

Regular exercise:
Engage in at least 150 minutes of moderate-intensity exercise per week.

Quit smoking:
Avoid tobacco products to reduce the risk of heart disease.

Manage blood pressure:
Keep your blood pressure within a healthy range through diet, exercise, and medication if needed.

Control cholesterol:
Maintain healthy cholesterol levels with diet, exercise, and medication if necessary.

Manage diabetes:
Keep blood sugar levels under control through diet, exercise, and medication.

Maintain a healthy weight:
Achieve and maintain a healthy weight to reduce strain on the heart.

Limit alcohol:
Avoid excessive alcohol consumption.

Manage stress:
Practice stress-reducing techniques like mindfulness, meditation, or yoga.

Regular screening:
Get regular health check-ups to monitor risk factors and catch any issues early.

Steps to take during a heart attack[16]

If you suspect someone is having a heart attack in Australia, it's crucial to act quickly. Here are the steps you should follow:

Call Emergency Services:
Dial 000 (or your local emergency number) immediately.
This is the fastest way to get lifesaving treatment.

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Administer aspirin:
If the person is not allergic to aspirin and has no medical conditions that prevent its use, give them a 300mg aspirin tablet to chew slowly. This can help to minimise heart damage.

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Help them rest:
Keep the person calm and seated in a comfortable position. Loosen any tight clothing and ensure they are in a well-ventilated area.

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Use prescribed medication:
If the person has been prescribed chest pain medication (like nitroglycerin), help them take it.

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Monitor their condition:
Keep an eye on their symptoms and be ready to provide information to emergency responders when they arrive.

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Perform CPR if necessary:
If the person becomes unconscious and unresponsive, check for a pulse. If there is no pulse, start CPR immediately.

Maintaining cardiovascular health is essential for a long and active life. By understanding the signs of a heart attack and knowing how to respond quickly, you can make a significant difference in emergency situations. Remember to prioritise regular check-ups, a balanced diet, and an active lifestyle to keep your heart healthy. Stay informed, stay prepared, and take proactive steps to protect your cardiovascular health.

References

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