

Stroke prevention

In 2012, Australians will suffer around 60,000 new and recurrent strokes – that's one stroke every 10 minutes. Stroke is Australia's second biggest killer after heart disease.

Strokes can be fatal but the risk can be reduced. Many stroke risk factors are lifestyle related, so everyone has the power to reduce their risk of having a stroke.

Causes of stroke

'Stroke' is a term used to describe the interruption of blood flow to an area of the brain. This can occur in the following ways:

- **Haemorrhagic stroke** – an artery may rupture and cause bleeding into the brain tissue.
- **Ischaemic stroke caused by atherosclerosis** – an artery may become blocked by progressive thickening of its walls.
- **Ischaemic stroke caused by embolism** – a clot blocks an artery and prevents blood getting to part of the brain.

The brain cells in the immediate area are killed because they are deprived of oxygen. The dead area that results from stroke is known as an infarct. Without prompt medical treatment, the area of brain cells surrounding the infarct will also die.

Risk factors of strokes

Some stroke risk factors can't be controlled. These include gender, age and family history. However, many stroke risk factors are lifestyle related. Everyone can reduce their risk of having a stroke by making a few simple lifestyle changes.

Lifestyle-related factors that increase your risk of stroke include:

- High blood pressure
- Cigarette smoking
- Diabetes
- High blood cholesterol levels
- Heavy drinking
- Diet high in fat (particularly saturated) and salt, but low in fibre, fruit and vegetables
- Lack of regular exercise
- Obesity.

Another important risk factor, particularly as you get older, includes atrial fibrillation (irregular heartbeat).

Overall risk increases when multiple risk factors are present. Your doctor should assess this overall risk (called 'absolute risk') using a tool that calculates your risk of stroke and heart disease based on your age, sex, blood pressure, smoking history, cholesterol levels, and if you have diabetes.

Reduce high blood pressure

High blood pressure (hypertension) is the most significant risk factor for stroke. Blood pressure refers to the pressure inside the arteries. Hypertension means that the blood is exerting more pressure than is normal or healthy. Over time, this weakens and damages blood vessel walls, which can lead to stroke, particularly cerebral haemorrhage.

Hypertension may also cause thickening of the artery walls, resulting in narrowing and eventual blockage of the vessel (ischaemic stroke). In atherosclerosis (hardening of the arteries), the pressure of your pumping blood could 'hose off' debris from damaged artery walls. The circulating debris (embolism) can cause a stroke by lodging in and blocking a blood vessel in the brain.

Strategies to reduce high blood pressure include:

- Check your blood pressure regularly and know your numbers.
- Maintain a healthy weight for your height.
- Exercise regularly.
- Choose a low fat, high-fibre diet.
- Reduce or eliminate salt from your diet.
- Limit your alcohol intake to two or less standard drinks per day.
- Stop smoking.
- Take antihypertensive medications to help control high blood pressure.

Quit smoking

Smoking can double or even quadruple your risk of stroke. Some of the chemical ingredients in cigarette smoke (such as nicotine and carbon monoxide) accelerate the process of atherosclerosis (narrowing of arteries). Clots are more likely to form because smoking thickens the blood and makes clotting factors, such as platelets, much more 'sticky'. Cigarette smoke forces arteries to constrict – a narrowed diameter makes it harder for the thickened blood to move through the vessels.

Strategies to quit smoking include:

- Call the Quitline on 137 848 for further advice and support.
- See your doctor for information and advice.
- Decide on a strategy, such as 'cold turkey' or using nicotine replacement therapy.
- Keep a smoking diary so that you are aware of your smoking triggers (such as stress or boredom).
- Ask your family and friends for support.
- Don't be discouraged by a slip-up. If you smoke a cigarette, put it behind you and keep going.

Manage your diabetes

Diabetes is a chronic condition in which the body is unable to utilise blood sugar. A person with diabetes is around twice as likely to have a stroke as someone of the same gender and age who doesn't have diabetes. This is because the high blood sugar levels contribute to the development of atherosclerosis (narrowing of arteries). It is very important that diabetes be kept under control.

Strategies to reduce the effects of diabetes include:

- See your doctor regularly for check-ups.
- Monitor your blood sugar levels regularly.
- Maintain a healthy weight for your height.
- Exercise regularly.
- Choose a low fat, high fibre diet.
- If you are on medication, make sure you are taking it correctly.

Keep cholesterol levels in check

Cholesterol is a fat-like substance that is made by the human body. It has many essential roles to play, but it becomes a problem if levels in the blood are too high. Blood cholesterol contributes to the formation of a substance called atheroma, which sticks to artery walls and leads to atherosclerosis (narrowing of arteries).

Strategies to lower blood cholesterol levels include:

- Have your blood cholesterol levels checked regularly by your doctor.

- Consume a high-fibre diet.
- Reduce your intake of saturated fats (commonly found in animal products).
- See your doctor for information and advice. Medications may be recommended.

Avoid heavy drinking

Some studies have indicated that drinking moderate amounts of alcohol (such as one or two standard drinks per day) can actually reduce the risk of stroke. However, people who drink heavily are three times more likely to have a stroke, regardless of their age. It is important to limit your alcohol intake.

Suggestions include:

- Limit your consumption to no more than two standard drinks per day.
- Have at least two alcohol-free days every week.
- See your doctor for information and referral if you are finding it difficult to limit your alcohol intake.

Eat a healthy diet

Various studies show that diet is an important risk factor in the development of stroke. Suggestions include:

- Limit or moderate salt intake.
- Choose fresh rather than processed foods.
- Increase your intake of vegetables, fruit and whole grains.
- Cut out or reduce sugary and fatty foods like cakes, lollies and junk food.
- See a dietitian who can help you plan a well-balanced diet.

Exercise regularly

A sedentary lifestyle increases the likelihood of obesity, high blood pressure and high blood cholesterol levels. These are all important risk factors for stroke.

Suggestions include:

- See your doctor for a check-up if you haven't exercised for a while.
- Choose a range of activities you enjoy.
- Start your new exercise program slowly and only increase the intensity and duration as you become fitter.
- Exercise with a friend or join a team sport to add a fun social element to the activity.
- Remember to warm up and cool down.
- Contact a physiotherapist or gymnasium instructor for advice and information regarding appropriate exercise.
- Try to get moderate exercise for at least 30 minutes on (at least) five days of the week.

Where to get help

- Your doctor
- An accredited practising dietitian, contact the Dietitians Association of Australia
- National Stroke Foundation StrokeLine Tel. 1800 787 653
- Heart Foundation Heartline Tel. 1300 36 27 87
- Quitline Tel. 13 7848 (13 QUIT)

Things to remember

- A stroke interrupts blood flow to an area of the brain.
- Most stroke risk factors are lifestyle related, so everyone has the power to reduce their risk of having a stroke.
- Some stroke risk factors, such as gender, age and family history, can't be controlled.

- Lifestyle factors that increase your risk of stroke include high blood pressure, smoking, diabetes, high blood cholesterol levels, heavy drinking, high salt and high fat diet and lack of exercise.

This page has been produced in consultation with, and approved by:

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