

Smoking and stroke

What is a stroke?

Blood is supplied to the brain through blood vessels called arteries. A stroke occurs when an artery to the brain is suddenly blocked or bleeds.¹ Blood supply to the brain can be blocked by a blood clot in the artery. Also, bits of fatty material called plaque can break off from the blood vessel walls and block one of the arteries. Blood supply is also disrupted if the artery breaks or bursts.^{1, 2}

The brain cells supplied by the artery cannot get the oxygen and nutrients they need due to lack of blood. This may result in part of the brain dying, leading to loss of brain function. This can affect movement, thinking, memory, personality, talking and swallowing.^{1, 3} Speedy treatment helps increase the chance of survival and a better recovery from stroke.⁴

There are two types of stroke:

Ischaemic stroke: About 80% of strokes are caused by the blockage of an artery in the neck or brain.

Haemorrhagic stroke: The rest are caused by bleeding into or around the brain.¹

How common is stroke?

Stroke is the third leading cause of death in Australia.⁵ In 2017, 8,145 Australians died as a direct result of stroke. In 2016, there were an estimated 37,800 strokes in Australia – more than 100 every day.⁶

In 2015, around 394,000 Australians had ever had a stroke. Around one in three stroke survivors are aged under 65 years.⁶ Almost 40% of stroke survivors have a disability resulting from their stroke. The risk of stroke increases with age.⁵

Smoking causes stroke

People who smoke are about twice as likely to have a stroke than someone who has never smoked.^{2, 7-10} Smoking increases the risk for different types of stroke.^{2, 7} The more you smoke, the higher your risk of stroke.⁷

People who smoke are more likely to have a stroke earlier than non-smokers. For example, smokers in their sixties are around three times more likely to have a stroke than non-smokers of the same age.⁸

Women who smoke and use oral contraception are almost four times more likely to have a stroke than women who use neither.² This risk increases with age.^{11, 12}

You can reduce your risk of stroke by stopping smoking.^{13, 14} Other risk factors for stroke that can be controlled include high blood pressure, poor diet and lack of exercise, obesity, diabetes, too much alcohol and irregular pulse (atrial fibrillation).¹⁰ The more risk factors you have, the higher your chances of having a stroke.¹⁵ However, smoking by itself increases your risk of stroke.^{8, 10}

Breathing in other people's tobacco smoke (secondhand smoke) can also cause stroke.⁷

How does smoking cause stroke?

There are over 7000 different types of chemicals in cigarette smoke.¹³ Once inhaled into the lungs, many of these chemicals pass through your lung walls, into your bloodstream and are carried around your body.²

Chemicals from smoke affect your blood, making it thicker, stickier and more likely to form clots. They cause fatty material (plaque) to build up on your blood vessel walls faster. This process starts early and can be seen in smokers in their teens and early twenties. Over time, the plaque slowly narrows and blocks your blood vessels making it difficult for your blood to circulate. Bits of plaque can break off from your blood vessel walls and block one of your arteries. Also, the build up of plaque makes your artery walls harder and less elastic, and more prone to break or burst allowing bleeding into the brain.^{2, 13}

Signs of stroke

The **F.A.S.T.** test is an easy way to recognise if someone is having a stroke.

Using the F.A.S.T. test involves asking three simple questions:⁴

- **F** – Check their **FACE**. Has their mouth drooped?
- **A** – Can they lift both **ARMS**?
- **S** – Is their **SPEECH** slurred? Do they understand you?
- **T** – **TIME** is critical. Call 000 if you see any of these symptoms.

There can also be temporary or mini strokes (where symptoms disappear within 24 hours), known as transient ischaemic attacks (TIA).¹⁶ Around one in eleven people who have a TIA will have a stroke within the next 90 days.¹ Therefore, if you have a TIA you should see your doctor promptly.¹⁶

Stopping smoking reduces your risk of stroke

Your risk of stroke decreases after you stop smoking. In some studies, the risk of stroke in ex-smokers becomes similar to people who have never smoked after five to ten years. Other studies show that even after fifteen years, ex-smokers still have a slightly higher risk of stroke than someone who has never smoked. But all studies show the risk of stroke in ex-smokers is much lower than in current smokers. Importantly, stopping smoking reduces the risk of stroke in people with high blood pressure.¹⁴

Switching to cigars or pipes does not reduce your risk of stroke.² Cutting down the number of cigarettes you smoke does not appear to reduce the risk of early death.¹⁷

Stopping smoking has both immediate and long-term health benefits

When you quit:

- Within one day the level of carbon monoxide in your blood drops back to normal.^{18, 19} Your blood can supply oxygen more easily to your heart and muscles.^{2, 19}
- After four weeks, your body is better at fighting off infections in cuts and wounds.^{20, 21}
- After eight weeks your level of good cholesterol has improved.²² This helps slow down the build-up of fatty deposits on your artery walls.^{13, 18}
- Within three months your blood is less thick and sticky, and your blood flow will improve.^{13, 18, 23}
- Within two to five years, there is a large drop in your risk of heart attack and stroke.¹⁴
- After fifteen years your risk of heart disease and stroke is close to that of a person who has never smoked.¹⁴

Who can I talk to for more information?

- Your **doctor** is an important source of information, particularly if you have an illness, or you are taking any other medicines.
- Your **pharmacist** can give you advice about stopping smoking.

- **Quitline 13 7848:** The Quitline is a friendly, confidential telephone service. Your Quitline counsellor is trained to listen carefully and provide practical advice just for you. You can call the Quitline for the usual cost of a local call from your phone or ask us to call you at no cost (Quitline callback). Talking with a Quitline counsellor can increase your chance of stopping smoking successfully.^{24, 25}

Online resources

Quit website www.quit.org.au. Build your personal quit plan with easy-to-find information suited to you. You'll find tips, distractions, a cost calculator and stories from ex-smokers.

QuitCoach www.quitcoach.org.au. QuitCoach is a free web-based computer program that asks you questions and helps you quit by giving free personal advice tailored to your needs.

QuitTxt provides regular SMS messages including tips and encouragement to help you keep on track throughout your quit attempt. To begin, all you need to do is register and complete a brief questionnaire at www.quit.org.au/quittxt.

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