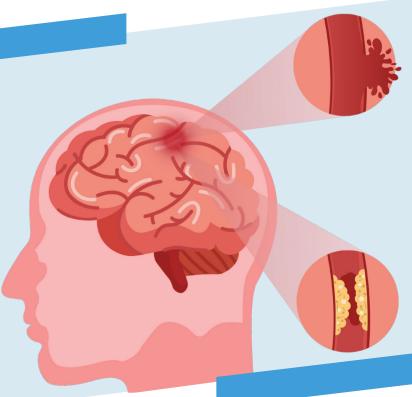
Non-Communicable Diseases Watch





OCTOBER 2025



Be Stroke Aware: Prevent Early · Detect Timely · Every Minute Counts

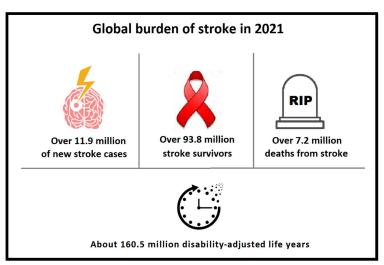
Key Messages

- Stroke has always been considered a condition affecting the elderly. However, the global incidence of stroke among young and middle-aged people is on the rise.
- In Hong Kong, stroke is a leading killer disease. In 2024, stroke was the fourth most common cause of death with 2 911 registered deaths, of which 7.7% were in people aged 55 or below.
- Up to 80% of strokes can be prevented through adherence to a healthy lifestyle and proper management of risk factors like high blood pressure, high cholesterol, diabetes and obesity.
- When stroke occurs, time is brain. Be familiar with the warning signs of stroke and act 'FAST'—'F'ace drooping, 'A'rm weakness, 'S'peech difficulties, 'T'ime to call for medical assistance if indicated.

Stroke is Dangerous and Deadly

Stroke occurs when the blood supply to a part of the brain is cut off, causing damage to the brain tissue. The cause can be either a clot obstructing the flow of blood to the brain, known as an ischaemic stroke, or a blood vessel rupturing and preventing blood flow to the brain, referred to as a haemorrhagic stroke. Depending on the location of the obstruction or bleeding and the extent of brain damage, stroke can lead to varying degrees of disability, such as paralysis on one side of the body, loss of vision, impaired speech and problems with bladder and bowel control. A very severe stroke can cause sudden death.

The global burden of stroke is rising^{1, 2}. Although stroke has always been considered a condition affecting the elderly, the incidence of stroke among young and middle-aged people is on the rise^{3 4}. Between 1990 and 2021, the number of people who had a new stroke, survived stroke and died from stroke increased by about 70%, 86% and 44%, respectively. The number of disability-adjusted life years (DALYs), i.e. years lost due to ill-health, disability, or premature death from stroke, also increased by 32%^{1, 5}. Due to ageing demographics, population growth and a rising prevalence of vascular risk factors including obesity, hypertension, diabetes, hypercholesterolaemia and smoking among younger individuals, it is projected that the number of people who will die and the total number of DALYs from stroke worldwide would increase by 50% and 31% in the next 25 years, respectively⁴.





Stroke is a Leading Killer Disease and the Incidence of 'Young Stroke' has Increased by More Than 30%

Stroke is a major cause of morbidity, disability and mortality among the local population. Thanks to improvements in medical services and the effectiveness of various public health policies such as tobacco control, the age-standardised death rate from stroke has significantly declined in the past two decades (Figure 1). However, stroke was the fourth most common cause of death with 2 911 registered deaths in 2024, of which 7.7% were in people aged 55 or below (provisional figure)⁶.

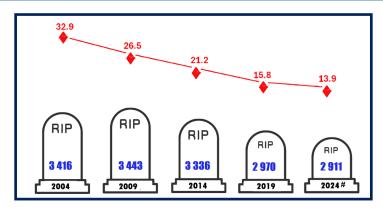


Figure 1: Number of registered deaths (in blue) and age-standardised death rates per 100 000 standard population (in red) due to stroke in Hong Kong from 2004 to 2024 (#provisional figures)

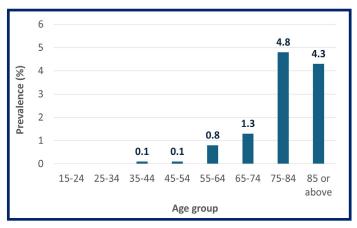


Figure 2: Prevalence of doctor-diagnosed stroke among persons aged 15 or above by age group

Of note, the local incidence of 'young stroke' has increased by more than 30% in 20 years. A study analysed clinical data from the Hospital Authority and found that the crude incidence of stroke occurring in individuals aged 18–55 increased from 41.8 per 100 000 people in 2001 to 54.7 per 100 000 in 2011 and 59.7 per 100 000 in 20218.

According to the Population Health Survey (PHS) 2020-22 conducted by the Department of Health (DH), 0.8% of persons aged 15 or above reported that they had doctor-diagnosed stroke. The prevalence increased with age, showing a notable rise among persons aged 75 years or above (Figure 2)⁷.

To identify the risk factors for young stroke, the study followed up with a cohort of 431 stroke patients aged 18–55. Results showed that 53% of them had hypertension, 44% had hyperlipidemia, 26% had a smoking history, 19% were obese and 17% had diabetes. Such results underscored the importance of stronger awareness and better control of vascular risk factors leading to stroke, especially among the younger population⁸.

Stroke has Many Risk Factors, Mostly Preventable

The Global Burden Disease (GBD) Study in 2021 reported that 84% of the stroke burden worldwide was attributed to 23 modifiable metabolic and physiological, dietary and behavioural as well as environmental risk factors. Among them, 14 were regarded as individually significant risk factors for stroke. As shown in Figure 3. high blood pressure was the largest single risk factor for stroke, accounting for 56.8% of stroke-related ill-health, disability and premature deaths¹.



Figure 3: Fourteen most individually significant risk factors for stroke (as measured by the population attributable fraction of stroke DALYs attributable to the risk factors)

Stroke Prevention Starts with Healthy Living

Studies show that up to 80% of strokes can be prevented through adherence to a healthy lifestyle and proper management of risk factors like high blood pressure, high cholesterol, diabetes and obesity^{1, 2, 9}. Hong Kong residents aged 45 and above with no known medical history of hypertension or diabetes can join the Government's Chronic Disease Co-Care Pilot Scheme (CDCC Pilot Scheme) for subsidised screenings of the 'three highs' (i.e. high blood pressure, high blood glucose and high blood lipids) and consultation services on a co-payment basis in the private healthcare sector through pairing with a family doctor of their choice, with a view to achieve the goal of "early prevention, early identification and early treatment". For more details, please visit the dedicated website of the CDCC Pilot Scheme: www.primaryhealthcare.gov.hk/cdcc/en/.



Eat a balanced diet

There is evidence that a diet rich in fruit and vegetables reduces the risk of developing various chronic diseases and stroke¹⁰. Apart from limiting consumption of fats, free sugars, and salt to less than 5 grams per day¹¹, adults are encouraged to eat at least 2 servings of fruit and 3 servings of vegetables per day.



Be physically active and reduce sedentary behaviours

All levels of physical activity can be beneficial for stroke prevention, even low levels of leisure-time physical activity¹². For substantial health benefits, adults are encouraged to do at least 30 minutes of moderate-intensity aerobic physical activity per day, or an equivalent amount of aerobic physical activity. They should also reduce chair-time and replace sitting time with physical activity of any intensity including light-intensity physical activity¹³.



Do not smoke

Smokers should quit immediately. As soon as the smoker quits, the risk of having a stroke starts to go down. After about five to fifteen years, the risk of stroke can be around the same as someone who has never smoked¹⁴. For free smoking cessation tools and services, please call the Quitline 1833 183 or visit the designated website www.livetobaccofree.hk.



Refrain from alcohol drinking

A prospective study of more than 0.5 million men and women in China showed that drinking uniformly increases blood pressure and stroke risk¹⁵ Thus, non-drinkers should not start drinking. Current drinkers are urged to appraise their drinking habits, recognise the potential health risks associated with drinking and appreciate the health benefits of reducing or stopping alcohol consumption.



Maintain an optimal body weight and waist circumference

This is key to lower stroke risk. Local adults should aim for a body mass index between 18.5 and 22.9, and a waist circumference of less than 90 centimeters (cm) for men and less than 80 cm for women. For overweight and obese individuals, even a modest 5–10% weight loss can induce favourable effects on multiple cardiovascular parameters¹⁶, thereby reducing the risk of stroke.



Keep blood pressure in check

Adults aged 18 or above are recommended to have their blood pressure checked regularly. More frequent testing is recommended when risk factors of stroke are present^{17, 18}.



Keep blood glucose in check

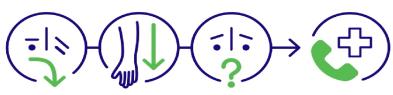
Adults aged 45 or above are recommended to have blood glucose checked regularly. More frequent testing is recommended when risk factors of stroke are present^{17, 19}



Keep blood lipids in check

Adults aged 50–75 are recommended to screen for hyperlipidaemia regularly. More frequent testing is recommended when risk factors of stroke are present²⁰.

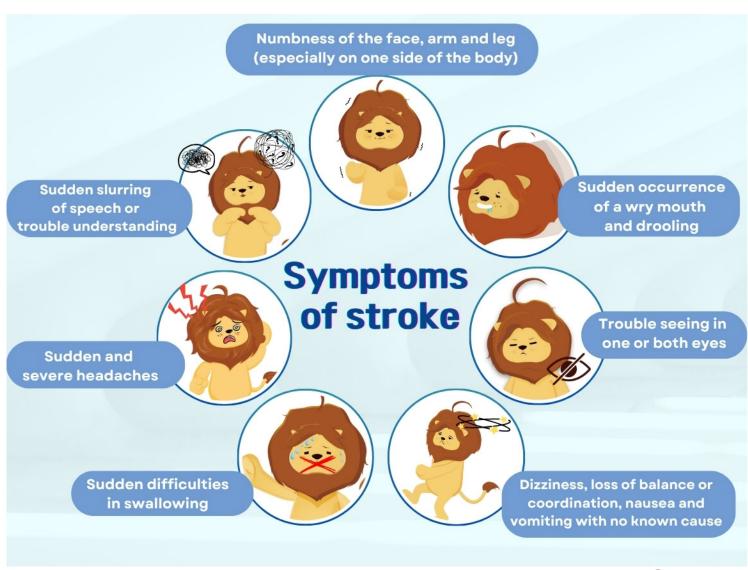




Face Drooping Arm Weakness Speech Difficulties Time to Call

Spot Strokes Early and Act Fast to Save Lives

Stroke is a medical emergency and it can strike without warning. When it occurs, time is brain. Recognising the symptoms of stroke is crucial for timely intervention and better treatment outcomes. Being familiar with the warning signs of stroke and act 'FAST'—'F'ace drooping, 'A'rm weakness, 'S'peech difficulties, 'T'ime to call for medical assistance if indicated²¹— can save life.



Let's start today, stand together and strive for a healthy stroke-free society.



References

- Global, regional, and national burden of stroke and its risk factors, 1990-2021: A systematic analysis for the Global Burden of Disease Study 2021. Lancet Neurology 2024;23(10):973-1003.
- 2. Feigin VL, Brainin M, Norrving B, et al. World Stroke Organization: Global Stroke Fact Sheet 2025. International Journal of Stroke 2025;20(2):132-144.
- Boot E, Ekker MS, Putaala J, et al. Ischaemic stroke in young adults: A global perspective. Journal of Neurology, Neurosurgery, and Psychiatry 2020;91(4):411-417.
- Feigin VL, Owolabi MO. Pragmatic solutions to reduce the global burden of stroke: A World Stroke Organization-Lancet Neurology Commission. Lancet Neurology 2023;22(12):1160-1206.
- GBD Cause and Risk Summaries: Stroke-Level 3 Cause (Last updated 16 May 2024). Seattle WA: Institute for Health Metrics and Evaluation.
- Mortality Statistics. Hong Kong SAR: Department of Health and Census and Statistics Department.
- Population Health Survey 2020-22. Hong Kong SAR: Department of Health.
- News: HKUMed research shows 30% increase in 'young stroke' incidence in Hong Kong and calls for better control of vascular risk factors such as hypertension (27 October 2022). Hong Kong SAR: LKS Faculty of Medicine, The University of Hong Kong. Accessed 1 August 2025: https://www.med.hku.hk/en/news/press/20221027-increase-in-young-stroke.
- Bushnell C, Kernan WN, Sharrief AZ, et al. 2024 Guideline for the Primary Prevention of Stroke: A Guideline From the American Heart Association/American Stroke Association. Stroke 2024;55(12):e344-e424.
- Zurbau A, Au-Yeung F, Blanco Mejia S, et al. Relation of different fruit and vegetable sources with incident cardiovascular outcomes: A systematic review and meta-analysis of prospective cohort studies. Journal of the American Heart Association 2020;9(19):e017728.
- Healthy Diet (29 April 2020). Geneva: World Health Organization.
 Accessed 1 August 2025: www.who.int/news-room/fact-sheets/detail/healthy-diet.
- De Santis F, Romoli M, Foschi M, et al. Risk of stroke with different levels of leisure-time physical activity: A systematic review and meta-analysis of prospective cohort studies. Journal of Neurology, Neurosurgery, and Psychiatry 2024;95(6):504-514.
- WHO Guidelines on Physical Activity and Sedentary Behaviour. Geneva: World Health Organization, 2020.

- Tobacco: Health Benefits of Smoking Cessation (25 February 2020).
 Geneva: World Health Organization. Accessed 1 August 2025: www. who.int/news-room/q-a-detail/tobacco-health-benefits-of-smoking-cessation.
- Millwood IY, Walters RG, Mei XW, et al. Conventional and genetic evidence on alcohol and vascular disease aetiology: A prospective study of 500 000 men and women in China. Lancet 2019;393(10183):1831-1842.
- Brown JD, Buscemi J, Milsom V, et al. Effects on cardiovascular risk factors of weight losses limited to 5-10. Translational Behavioral Medicine 2016;6(3):339-346.
- Diabetes and Hypertension Care For Adults in Primary Care Setting (Revised Edition 2022). Hong Kong SAR: Primary Healthcare Commission, Health Bureau.
- Hong Kong Reference Framework—Hypertension Care for Adults in Primary Care Settings (Revised Edition 2021). Hong Kong SAR: Primary Healthcare Commission, Health Bureau.
- Hong Kong Reference Framework—Diabetics Care for Adults in Primary Care Settings (Revised Edition 2023). Hong Kong SAR: Primary Healthcare Commission, Health Bureau.
- 20. Hong Kong Reference Framework—Preventive Care for Older Adults in Primary Care Settings (Revised Edition 2021). Hong Kong SAR: Primary Healthcare Commission, Health Bureau.
- 21. What is a Stroke (7 April 2017). Hong Kong SAR: Stroke Fund. Accessed 1 August 2025: https://www.strokefund.org.hk/en/what-is-stroke/.

-World Stroke Day

World Stroke Day aims to raise awareness of stroke and the huge burden it places in the millions of people worldwide, and to highlight the ways in which stroke can be prevented.

This year, World Stroke Day will enhance the Every Minute Counts advocacy campaign and underscore the life-saving importance of knowing the signs of stroke and being ready to #ActFAST.

To know more about the World Stroke Day 2025 and relevant activities, please visit the thematic website at www.world-stroke.org/world-stroke-day-campaign.



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