

High blood pressure and stroke

What is a stroke?

How is high blood pressure related to stroke?

What are the symptoms of stroke?

How can I spot a stroke?

Who is at risk of getting a stroke?

What can I do to prevent a stroke?

What is the treatment for stroke?

References

What is a stroke?

The brain, like all parts of the body, needs oxygen, which it gets from the blood. A stroke happens when blood flow to the brain is cut off. When brain cells are starved of oxygen, they become damaged, and the symptoms that follow are called a stroke.

The word stroke comes from the similarity of the condition to receiving a 'strike' or 'blow' as that is how quickly strokes appear—all of a sudden people are struck by this illness.



How is high blood pressure related to stroke?

High blood pressure (BP) is the most consistent and powerful predictor of stroke. Since BP levels are so closely associated with the risk for stroke, it also means that you can reduce your risk of suffering from a stroke if you lower your BP.

There are two types of stroke depending on the problem in the blood vessels supplying the brain. An ischaemic stroke is caused by blockage in the blood vessel, whereas a haemorrhagic stroke is due to bleeding in the blood vessels. The majority of strokes are due to blockages.

Ischaemic stroke

Blockage of blood vessels; lack of blood flow to affected area

- Blockage strokes are usually due to the build-up of fatty material in blood vessels called atherosclerosis.
- This fatty material build-up may lead to a clot which blocks the blood supply to the brain, just like in a heart attack.
- This is why a stroke can be thought of as a 'brain attack'.
- A clot may occur within the brain or it can travel from another part of the body, commonly the blood vessels in the neck.
- Clots can also travel from the heart, which may happen when you have an irregular heartbeat called 'atrial fibrillation'.

Haemorrhagic stroke

Rupture of blood vessels; leakage of blood

- Bleeding strokes happen when a blood vessel bursts suddenly, causing blood to leak in or around the brain.
- In these strokes, blood in the brain can lead to swelling—a serious problem which may require surgery in some cases.

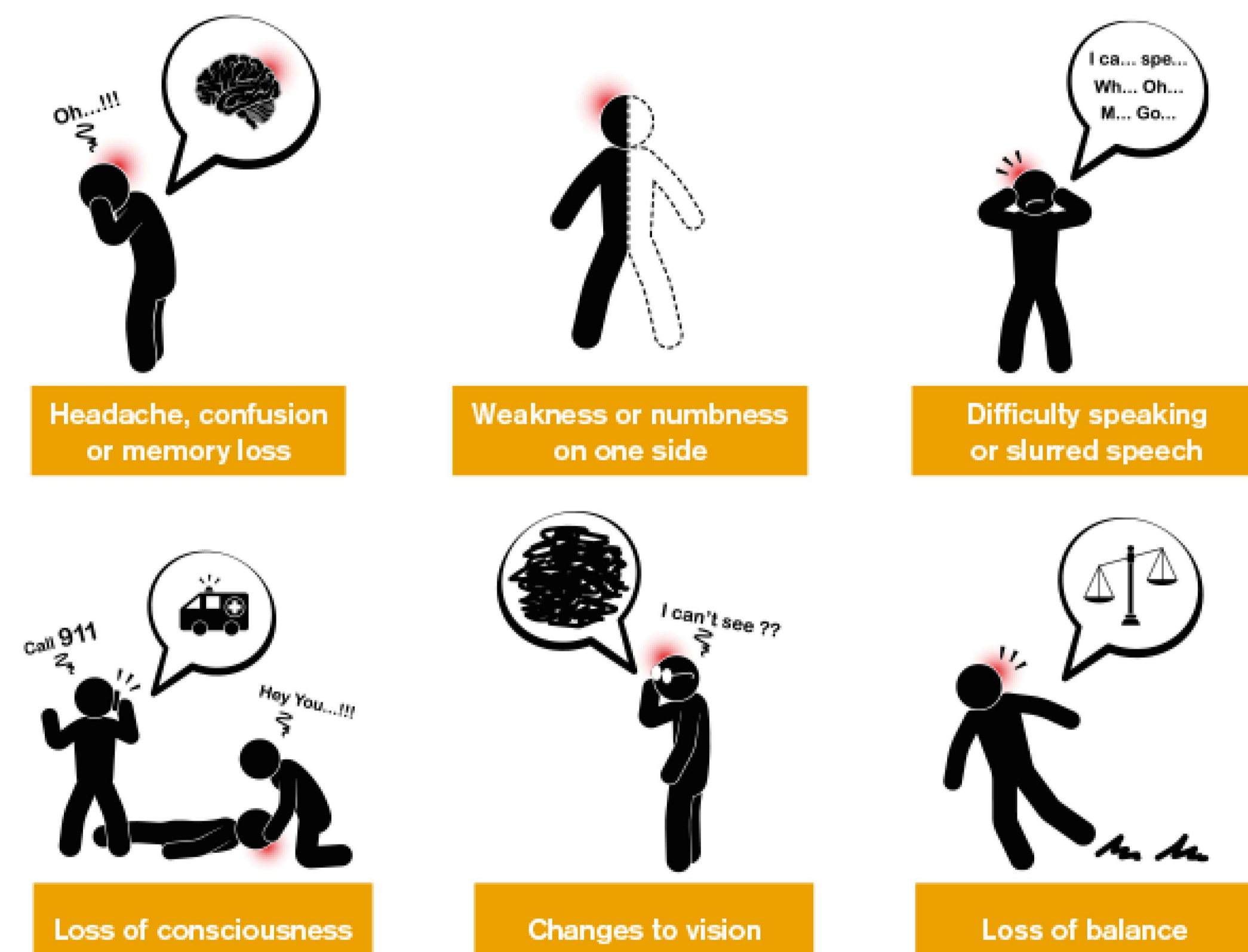
High BP damages arteries throughout the body. This results in increased risk for blood flow to the brain to be cut-off or weak arteries that rupture easily.

The numbers

- Every year, more than **17 million** people worldwide have a stroke.⁵
- Of these, **six million** die and another **five million** are left disabled.⁶
- Stroke has been recorded as the **second leading** cause of death in Malaysia.⁷

What are the symptoms of stroke?

As the brain controls the whole body, the symptoms of stroke can be wide-ranging, depending on which parts of the brain are affected. Symptoms include:



How can I spot a stroke?

The acronym **FAST** can be used to help you identify and help someone who is experiencing a stroke.



Learn about how you can help a stroke victim [here](#).

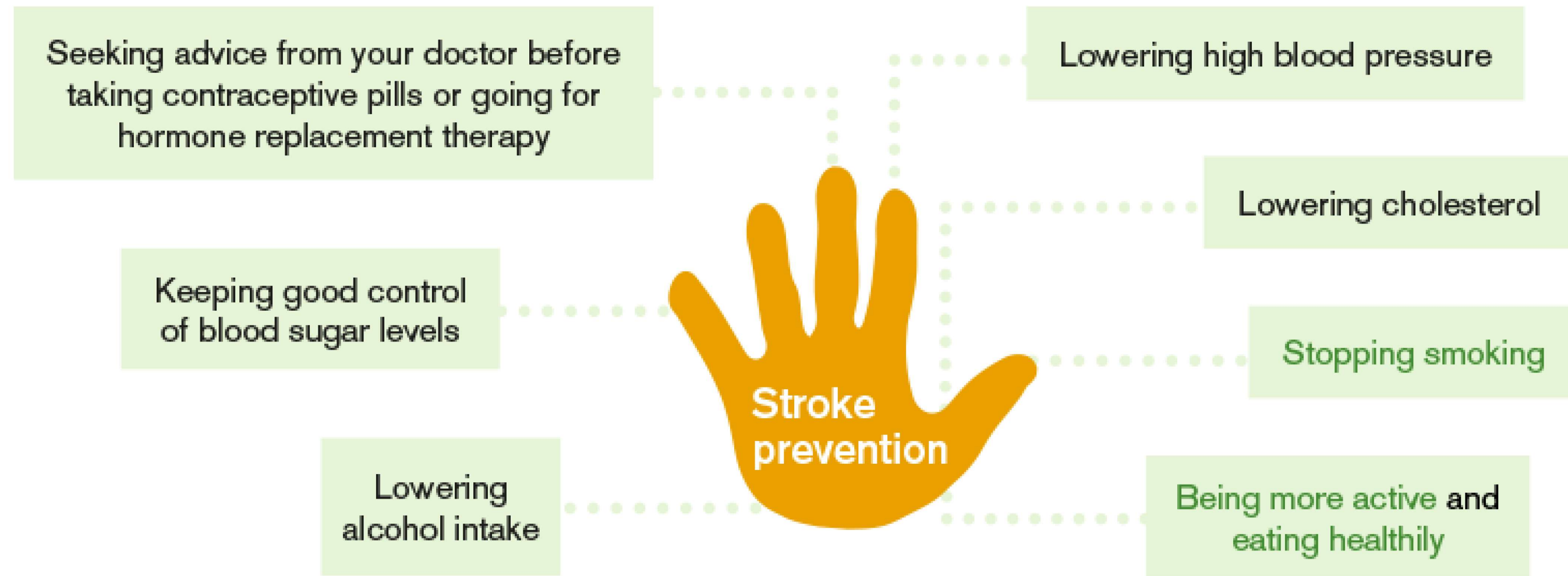
Who is at risk of getting a stroke?

While most strokes occur in people over the age of 65, they can occur in much younger people too. The following are habits or characteristics that may increase a person's risk of getting a stroke:



What can I do to prevent a stroke?

Up to 80% of all strokes are preventable. You should not ignore stroke warning signs even if they disappear after a few hours. People who experience the FAST symptoms, even if they fade afterward (ie, transient ischaemic attack [TIA]), should rush to the hospitals because TIA can be a warning sign of a full stroke in the future. There are many small steps you can take to reduce your future risk of having a stroke such as:



What is the treatment for stroke?



A sudden stroke (acute ischaemic stroke) can be treated with a thrombolytic agent or "clot buster" to dissolve the clot. This treatment is called thrombolysis.

Other treatments focus on preventing another stroke by treating risk factors associated with strokes, such as atherosclerosis and high blood pressure (BP). Treatment of high BP is a very important way to prevent a stroke.

Blood thinning medicines such as aspirin may be given to prevent further blood clots. Sometimes surgery may be recommended to repair a burst blood vessel or to remove blockages from larger arteries.

Following treatment of an acute stroke, rehabilitation is often required to help regain any lost function. The National Stroke Association of Malaysia (NASAM) is one of the organizations that provide rehabilitation services to stroke survivors to help them improve function and gain as much independence.

They offer speech, physical, occupational and recreational therapies according to the needs of the individual. Early rehabilitation is crucial in ensuring fuller and faster recovery.



References

- Blood Pressure UK. Stroke and high blood pressure. Available at <http://www.bloodpressureuk.org/BloodPressureandyou/Yourbody/Stroke>. Accessed 8 October, 2019.
- Johns Hopkins Medicine. Health library. Available at http://www.hopkinsmedicine.org/healthlibrary/conditions/nervous_system_disorders/history_of_stroke_85,P00223/. Accessed 19 September, 2019.
- American Heart Association. Stroke and high blood pressure. Available at http://www.heart.org/heartorg/conditions/highbloodpressure/whybloodpressurematters/stroke-and-high-blood-pressure_ucm_301824_article.jsp#Vv4ywZx94dU. Accessed 19 September, 2019.
- Ministry of Health Malaysia. Clinical practice guidelines: Management of hypertension (4th Edition); 2013.
- Feigin VL, et al. Lancet 2014;383:245–254.
- World Heart Federation. Stroke. Available at <http://www.world-heart-federation.org/cardiovascular-health/stroke/>. Accessed 19 September, 2019.
- Hoy DG, et al. Int J Stroke 2013;8Suppl A 100:21–27.
- American Stroke Association. Learn more stroke warning signs and symptoms. Available at <https://www.stroke.org/en/about-stroke/stroke-symptoms/learn-more-stroke-warning-signs-and-symptoms>. Accessed 8 October, 2019.
- National Stroke Association of Malaysia. Who is at risk? Available at <https://www.nasam.org/what-is-stroke/>. Accessed 8 October, 2019.
- National Stroke Association of Malaysia. What can you do to reduce the risk of stroke? Available at <https://www.nasam.org/about-us/>. Accessed 8 October, 2019.
- WebMD. High blood pressure and stroke. Available at <http://www.webmd.com/hypertension-high-blood-pressure/guide/hypertension-high-blood-pressure-stroke?page=2>. Accessed 19 September, 2019.
- Malaysian Society of Hypertension. Stroke. Available at <http://msh.my/education/stroke/>. Accessed 8 October, 2019.
- National Stroke Association of Malaysia. Available at <http://www.nasam.org/>. Accessed 19 September, 2019.