

A stroke of prevention

The right food to include in your diet to reduce the risk of stroke **BY MELODY CHONG**

Stroke is a significant cause of death and disability in Singapore, according to the Singapore Stroke Registry. In 2013, stroke was the fourth highest cause of death, accounting for 8.9 per cent of total deaths here.

A stroke happens when the blood supply carrying oxygen to the brain is cut off. This disruption could be caused by a leaking or blocked artery stemming from high blood pressure or a weak artery wall from birth. The portion of the brain that is affected by the disrupted blood supply dies. When this happens, functions controlled by that part of the brain are lost.

There is a direct link between diabetes and stroke. When one artery can't function, other arteries can usually serve as a bypass, noted webmd.com. But in diabetic patients, the website noted that the arteries may be hardened or clogged with plaque resulting from the presence of extra glucose. This makes it harder for blood

to reach the brain.

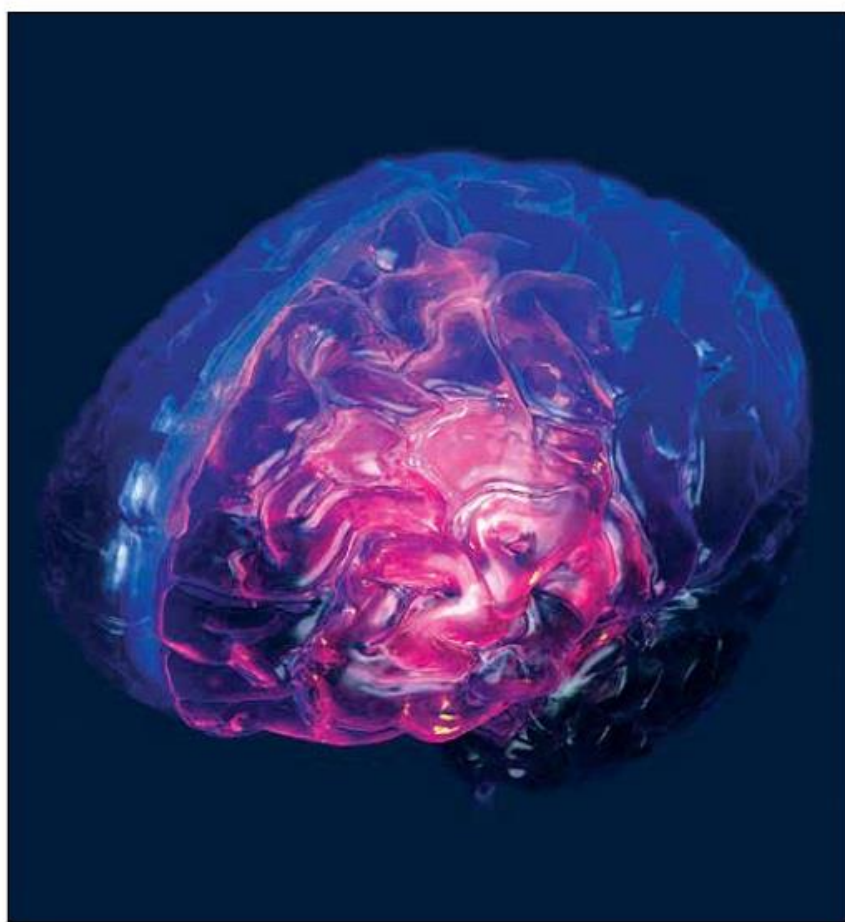
According to the National Stroke Association in the United States, people who have diabetes are two to four times more likely to have a stroke than people who do not have diabetes. They also tend to develop heart disease or have stroke at an earlier age than people without diabetes.

FOODS TO AVOID

As high blood pressure, high cholesterol and diabetes can constrict and damage your blood vessels, thus increasing your risk of stroke, it is important to minimise consuming food that can exacerbate those conditions.

"The regular intake of poor food choices such as those that are high in sodium, saturated fat and sugar can lead to an increased risk of high blood pressure, high cholesterol and diabetes," said Ms Jaclyn Reutens, a dietitian at Aptima Nutrition and Sports Consultants.

Besides knowing what to omit from your plate, it also helps to know what nutrients can help reduce the risk of stroke. Find out what they are and how you can include them in your diet.



Stroke affects the arteries leading to and within the brain. PHOTOS: ISTOCK

1. FIBRE

Eating more fibre may decrease your risk of first-time stroke, according to research published in *Stroke*, a journal by the American Heart Association, in 2013. In the study, researchers found that each 7g increase in total daily fibre intake was linked to a 7-per-cent decrease in first-time stroke risk.

"Soluble fibre helps to lower blood cholesterol levels by binding to fatty deposits and excess cholesterol floating around your blood," said Ms Reutens. "After binding, they are excreted from your body as part of your faeces."

How much is needed: One serving of whole-wheat pasta, plus two servings of fruits or vegetables provide about 7g of fibre, according to



the researchers. Your body requires 25g to 30g of dietary fibre a day, said Ms Reutens.

Where it is found: Oats, barley, rye, sweet potato, beans, lentils, nuts, chickpeas, psyllium husk, peas, broccoli, eggplant, apples, pears, strawberries and oranges.

3. LYCOPENE

In a report published in the journal *Neurology*, Finnish researchers found that subjects with the highest amounts of lycopene in their blood had a 55-per-cent lower chance of having stroke.

How much is needed: Dr Edward Giovannucci, a professor of nutrition and

epidemiology at the Harvard School of Public Health, recommended 10,000 micrograms (mcg) daily. Lycopene can be found in high amounts in tomato-based foods. A 250ml can of tomato juice, for instance, already gives you 25,000mcg of lycopene.

Where it is found: Tomatoes, tomato juice, tomato-based pasta sauce, papaya, watermelon and apricot. Pair them with a healthy oil as the body absorbs it better that way.



2. VITAMIN C

People who suffer from stroke have depleted levels of Vitamin C, said Dr Stephane Vannier from Pontchaillou University Hospital in France, whose research was released by the American Academy of Neurology in 2014. However, he conceded that more work needed to be done to determine how much stroke risk could be attributed to a Vitamin C deficiency. "Vitamin C is a powerful antioxidant and is

linked to lowering blood pressure, one of the strong risk factors for stroke," said Ms Reutens. "Vitamin C may help in maintaining the integrity of blood vessels."

How much is needed: The recommended daily intake of Vitamin C is 85mg to 105mg. A glass of orange juice would give you 97mg of Vitamin C, while half a cup of red pepper provides 95mg.

Where it is found: Citrus fruits like oranges, lemons and grapefruit as well as kiwis, papayas, strawberries, broccoli and capsicum. These foods also have dietary fibre, which is linked to lowering cardiovascular risk.



4. MAGNESIUM

A study in *The American Journal of Clinical Nutrition* in 2012 showed that for every additional 100mg of magnesium per day, people cut their risk of stroke by 8 per cent. While it is unclear how magnesium reduced stroke risk, a diet rich in the mineral is also linked to lower rates of Type 2 diabetes, a risk factor for stroke.

How much is needed: Foods that can

supply close to 100mg of magnesium a day include 28g of almonds or cashews, one cup of brown rice, or a three-quarter cup of cooked spinach.

Where it is found:

Leafy greens, wholegrains, beans, tofu and brown rice.

