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Sugar substitute linked to increased risk of stroke and heart attack

New Straits Times · 26 Jun 2024 · 9

PRESENT in many everyday foods, a sugar substitute known as xylitol is now under scientific scrutiny for its potentially harmful effects on health.



New research from the United States suggests that this natural sweetener, sometimes called “birch sugar”, may promote the formation of blood clots, and by extension the risk of strokes and heart attacks.

“This study again shows the immediate need for investigating sugar alcohols and artificial sweeteners, especially as they continue to be recommended in combating conditions like obesity or diabetes,” says Dr Stanley Hazen, chair of Cardiovascular and Metabolic Sciences at Cleveland Clinic’s Lerner Research Institute in the US.

Dr Hazen, who led the research, and colleagues evaluated the effects of xylitol — a sugar substitute frequently used in certain confectionery products, chewing gums and toothpastes. The research involved a large-scale patient analysis, preclinical research models and a clinical intervention study.

Involving more than 3,000 American and European patients, the research, published in the ‘European Heart Journal’ identifies an association between xylitol and an increased risk of cardiovascular events, such as stroke and heart attack. The researchers note that one third of patients with the highest levels of xylitol in their plasma were more likely to suffer a cardiovascular event. They also report that in pre-clinical testing, xylitol was associated with platelet coagulation and an increased risk of thrombosis.

This is not the first time that this research team shed light on the harmful effects of a sweetener on health. Last year, a similar association was made between cardiovascular risk and erythritol, which is also found in certain foods and beverages.

“Xylitol is not as prevalent as erythritol in keto or sugar-free food products in the US, but is common in other countries,” the researchers said.

However, the scientists conclude that it is “high levels” of xylitol that increase the risk of cardiovascular events. This is an important detail, especially since the research demonstrated an association, not a direct cause-and-effect link.

“It does not mean throw out your toothpaste if it has xylitol in it, but we should be aware that consumption of a product containing high levels could increase the risk of blood clot related events,” said Dr Hazen.

Scientists said further research was needed to assess the cardiovascular impact of this sweetener.

In the meantime, they advise talking to a doctor or dietician “to learn more about healthy food choices and for personalised recommendations”.