

A banana a day': Starch supplement may reduce the risk of some hereditary cancers

ISLAMABAD: Resistant starches (RS) are carbohydrates that pass undigested through the small intestine and are digested, or fermented, in the large intestine.

They are present in plant-based foods including beans, oats, breakfast cereals, rice, cooked and cooled pasta, peas, and slightly unripe bananas. RS forms part of dietary fiber, which is known to reduce the risk of colorectal cancer and many other non-communicable diseases.

Researchers at Newcastle University and the University of Leeds in the United Kingdom found that a RS powder supplement may help prevent cancer in people with Lynch syndrome. The experts ran a multinational trial called CAPP2 involving almost 1,000 people with Lynch syndrome. They gave the participants a 30g dose of RS for an average of two years.

The supplementation did not affect colorectal cancers as expected. However, unexpectedly, its protective potential was most apparent in the upper digestive tract, where cancers are aggressive and not usually caught early.

These findings appear in *Cancer Prevention Research*.

What is Lynch syndrome? Lynch syndrome, an inherited condition, predisposes people to colon cancer, gastric cancer, and several other cancers.

Medical News Today spoke with Dr. Anton Bilchik, surgical oncologist and division chair of general surgery at Providence Saint John's Health Center and chief of medicine at Saint John's Cancer Institute in Santa Monica, CA.

Dr. Bilchik, who was not involved in the study, shared that LS is caused by a genetic mutation that stops the DNA from being able to correct itself after cell division as effectively as it should, which can give rise to cancers. It occurs in about 1% of patients with colorectal cancer. The



U.K.'s National Institute for Health and Care Excellence (NICE) recommends that people with LS take aspirin daily for at least two years to help prevent colorectal cancer.

Until now, prophylactic surgery

Source to remove noncancerous organs or glands was considered the only preventive measure against LS-related cancers outside the colon.

An unripe banana a day. The CAPP2 trial analyzed the long-term effects of as-

pirin and RS on cancer onset in patients with Lynch syndrome. Earlier research Trusted Source during the trial found that aspirin reduced colorectal cancer by 50%.

A total of 463 participants took 30 g of

RS daily for up to four years, and 455 subjects took a placebo.

The dose used was equivalent to eating one slightly unripe banana daily. Bananas at this stage resist breakdown in the small intestine, reaching the large intestine and feeding the microbiome there.

The researchers planned a 10-year follow-up and investigated data from the U.K.'s National Cancer Registry over 20 years.

They found no difference in the number of colorectal cancer cases. However, fewer participants receiving the supplement developed non-colorectal LS cancers compared to those taking the placebo.

The study noted: "The reduction in non-colorectal cancer LS cancers was detectable in the first 10 years and continued in the next decade."

Protection against some cancers

RS supplementation over an average of 25 months did not lower colorectal cancer risk in LS patients, the team found.

They reported: "Dietary supplementation with RS for this limited time period does not emulate the apparently protective effect of diets rich in [dietary fiber] against colorectal cancer in the general population."

Surprisingly, the participants taking RS were 60% less likely to be diagnosed with non-colorectal LS cancers.

The protective effect was most evident with upper GI cancers, including stomach, bile duct, pancreatic, and duodenal cancers. The researchers found five cancers in five participants on RS compared to 21 cancers in 17 of the control group.

Currently, the researchers are leading another multinational trial involving over 1,800 individuals with Lynch syndrome. The CaPP3 study aims to determine if smaller doses of aspirin can help reduce cancer risk. —Online

Can zero-calorie sweeteners raise your risk for cardiovascular disease?



A massive study involving French citizens that spanned more than a decade evaluated their use of artificial sweeteners. The observational study periodically checked the participants' food and drink intake and had the participants regularly report on their health. By the end of the study, the researchers learned that the participants who consumed higher levels of artificial sweeteners experienced cardiovascular disease events at a higher rate than participants who did not consume artificial sweeteners. While artificial sweeteners may seem like a good alternative to sugar to reduce caloric intake, a study published in *The BMJ* Trusted Source suggests there may be a connection between such sweeteners and an increased risk for cardiovascular disease (CVD), including stroke. The research, conducted by the French National Institute for Health and Medical Research, is not the first study to suggest a connection between artificial sweeteners and increased risk for heart disease, however, it is the largest to date. The study included data from more than 100,000 participants. When people try to cut sugar out of their diets, for reasons such as trying to lose weight or trying to control their blood sugar, they may turn to artificial sweeteners. Artificial sweeteners have been around for more than 100 years. Saccharin, for example, which is found in the sugar substitute Sweet'N Low, was first discovered Trusted Source in 1879. Since then, researchers have discovered numerous other artificial sweeteners, including sucralose, aspartame, stevia, and xylitol. There has almost always been controversy surrounding artificial sweeteners. As the Harvard School of Public Health notes, concerns include the development of type 2 diabetes and weight gain but the evidence is varied and inconclusive. Despite the concerns, the Food and Drug Administration Trusted Source considers the approved sweeteners generally safe to use, as long as people do not exceed the acceptable daily intake for each type. For example, with sucralose (which is found in Splenda), a 132-pound person could consume 23 packets before going over the recommended limit. —Online

Keep moving: 10,000 steps a day may halve dementia risk



Dementia affects more than 55 million people worldwide and is the seventh leading cause of death globally. With the proportion of older people in the population increasing, the number of dementia cases is also on the rise. There is mounting evidence that regular physical exercise not only benefits general health, but is also one of the most effective ways to reduce the risk of developing dementia.

In good news for those who struggle to fit exercise into their daily routine, a new study has shown that walking around 4,000 steps a day may reduce dementia risk by 25%. Upping their daily step count to just under 10,000 could halve a person's risk of developing dementia. As the global population ages, cases of dementia are also on the rise worldwide. The World Health Organization (WHO) states that some 55 million Trusted Source people currently have dementia, and the number is set to rise to 139 million by 2050. The Centers for Disease Control and Prevention (CDC) estimate that Alzheimer's disease, the commonest form of dementia, affects around 5.8 million Trusted Source people in the United States alone. The greatest risk factors for dementia, according to the Alzheimer's Society, are aging and genetics. Dementia is most common in those aged over 75, and having a close relative with dementia may increase a person's risk Trusted Source of developing the disorder. Other risk factors that we cannot control include sex — females are more at risk than males — and ethnicity. However, lifestyle changes, such as increasing physical exercise, controlling blood pressure, and keeping the brain stimulated, can decrease a person's risk of dementia, even for those who have one or more risk factors. Dr. Anton Porsteinsson, professor and director of the Alzheimer's Disease Care, Research and Education Program (AD-CARE) at the University of Rochester Medical Center, told Medical News Today: "A broad, healthy approach factoring in lifestyle, diet, exercise, cognitive stimulation, socialization, and sleep all make a difference. Many of them [can be effective] even if started later in life." And physical exercise need not mean sweating it out at the gym or taking up a new sport. According to a study recently published in *JAMA Neurology* Trusted Source, simply increasing the number of steps

Hypertension: Cocoa flavanols may be able to reduce blood pressure

ISLAMABAD: The health of the heart and blood vessels is critical to overall well-being. The heart pumps blood throughout the body, providing it with the oxygen and nutrients it needs to function. Researchers are constantly examining factors that impact and improve cardiovascular health.

One area of interest is how a component of cocoa—specifically cocoa flavanols—may impact blood pressure and arterial stiffness. A recent study found that cocoa flavanols can effectively lower blood pressure in people with ideal blood pressure, but not when it was already low, as well as reduce arterial stiffness. The importance of cardiovascular health Cardiovascular disease Trusted Source is an umbrella term that refers to disorders of the heart and blood vessels. Certain risk factors can increase a person's chances of developing cardiovascular diseases.

For example, the Centers for Disease Control and Prevention (CDC) Trusted Source notes that high blood pressure, unhealthy cholesterol levels, and obesity can all increase someone's risk for developing heart disease. Controlling these factors, such as through medications and lifestyle changes, can help improve cardiovascular health and reduce the risk for more severe health problems. However, the intervention plan will look different for each person. Healthy individuals can take specific health steps to reduce their chances of developing certain risk factors such as high blood pressure. The CDC states that high blood pressure is a major risk factor for heart disease, and says it is considered the 'silent killer' Trusted Source as there is no way to know you have it other than to measure your blood pressure. The National Heart, Lung, and Blood Institute notes that people can lower their blood pressure "with lifestyle changes such as eating healthy, staying active, and watching your weight" to reduce their risk of developing heart disease and experiencing a heart attack.

They also advise those concerned about their blood pressure to talk with healthcare professionals about ways to control it. Cocoa, blood pressure, and arteries. Researchers of the current study note that previous controlled clinical intervention studies have demonstrated the blood pressure-decreasing and arterial stiffness-reducing effects of cocoa flavanols (CF) in healthy



humans. However, as these studies were in tightly controlled settings, the researchers wanted to see how well this intervention played out in real-life scenarios. The researchers used an n-of-1 study design, where a small number of participants were exposed to the same intervention or the placebo multiple times. They then compared the results for each individual as well as between individuals. The study included eleven healthy adults who received alternating doses of cocoa flavanol capsules and placebo capsules for eight days. They received the doses at the same time in the morning after the baseline collection of blood pressure, heart rate, and pulse wave velocity which they had been shown how to do using a blood pressure cuff and a finger clip for the first two days, and then entered data into an iPod touch on their own. Researchers use pulse wave velocity to measure arterial stiffness. The participants took these measurements every hour for the first three hours after taking the capsule and then hourly for twelve hours throughout the day. The results showed that cocoa flavanols were effective

in lowering blood pressure and reducing arterial stiffness. One concern about using cocoa flavanols to lower blood pressure is the risk of the blood pressure dropping too low. However, in this study, researchers found that the cocoa had less impact when blood pressure was lower, indicating it was a potentially safe intervention. Prof. Christian Heiss, study author and professor of cardiovascular medicine, explained to MNT:

"The study confirms that cocoa flavanols can lower blood pressure and improve arterial stiffness. The new thing is that it does so in the normal life of healthy people and only lowers it if it is 'high' even in the 'normal range.'" Too early to call cocoa 'a miracle drug' The study adds to growing evidence of the effectiveness of cocoa flavanols in improving cardiovascular health. However, the study authors did note a few limitations and implications. First, the study had a small sample size, researchers did not collect blood samples, and dietary influences on results were not evaluated. They also note that the cocoa supplements also included methylxanthines, which can impact health. However, based on their research, they believe that the effects of the intervention were due to the cocoa flavanols. The devices they used in the study had to be manually activated, which limited some data collection and made implementing this kind of monitoring in everyday life unlikely. Researchers note that the increase in heart rate found among participants must be considered a potential side effect. This increase could mask the effects of lowered blood pressure. They also noted that it's unclear why cocoa flavanols improve components like arterial stiffness, and further research could focus on this mechanism. The participants' responses also varied, so developing individualized treatment methods for cardiovascular health will be essential. Prof. Heiss explained that future research could focus on the "Development of personal health monitoring devices and accessible biomarkers of health to allow people to effectively improve their health." Furthermore, Prof. Heiss said that experts could also seek to "Evaluate if cocoa flavanols and other bioactives can improve the health of patients and how they can be effectively incorporated in the medical management together with or instead of drugs."