

Blueberries and strawberries slow cognitive decline

People who eat greater amounts of blueberries and strawberries could delay their cognitive aging by years according to data from a large-scale study conducted over more than three decades.

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In a paper published in the journal *Annals of Neurology*, German and US researchers report that cognitive decline could be delayed by up to two and a half years in elderly people who eat more of the flavonoid-rich berries.

Flavonoids are compounds found in fruits, nuts and vegetables that have been linked to disease prevention through their antioxidant and anti-inflammatory properties. Berries are particularly high in a type of flavonoid called anthocyanidins, which can cross the blood-brain barrier to areas of learning and memory.

The research team used data from the Nurses' Health Study, which has collected information about the diet of 121,700 female, registered nurses since 1980. Between 1995 and 2001, the team measured cognitive function in 16,010 women over the age of 70, at two-year intervals.



Those who ate more berries experienced a delayed cognitive decline by up to two and a half years. But the authors stressed that while they did control for health factors in the modelling, they could not exclude the possibility that participants with preserved cognition may also have been affected by lifestyle choices, such as exercise.

Study leader Elizabeth Devore, from Brigham and Women's Hospital and Harvard Medical School in Boston, said that because the US population was ageing, understanding the health issues facing the elderly was vital. "Our findings have significant public health implications as increasing berry intake is a fairly simple dietary modification to test cognition protection in older adults," Dr Devore said.

Bryce Vissel, Head of Neurodegeneration Research Laboratory at the Garvan Institute of Medical Research in Sydney, said the public policy implications of the research were "sufficiently important to merit further study. However, the implications are further reaching, as they show that research offers the possibility to identify ways to slow dementia. Most importantly, if research can show that lifestyle affects cognitive decline, then it seems logical to suggest that research will also deliver effective treatments that slow cognitive decline, given the chance."

Dr Vissel added: "The potential implications of this type of research are that simple berries could potentially reduce the time before elderly people may need care. However, the broader point is that more research is needed, and it is needed urgently."

Flavonoids appeared not only to influence cognitive function but also visual function, said Peter Howe, a Research Professor in Nutritional Physiology at the University of South Australia.



“What I think is happening here, which is not considered in this paper, is that the flavonoids are acting on the blood vessels in the brain and the eyes to improve the circulation. We’re conducting research at the Nutritional Physiology Research Centre looking at how foods rich in flavonoids, like the ones present in these berries, are able to improve blood flow in the brain, because that may be the key to their cognitive benefits.”

Shawn Somerset, an Associate Professor of Public Health at the Australian Catholic University in Brisbane, said that in elderly Australians the most likely source of flavonoids was wine. Berries were expensive, he said and there were other good sources of anthocyanidins, such as aubergine. “Australians intake of vegetables is inferior to fruit, therefore vegetable consumption needs to be promoted above fruit consumption.”

“The most sensible advice is to consume a wide range of flavonoids, rather than large amounts of specific ones, since excessive amounts of some are problematic. This translates to consuming a range of vegetables and fruits, not just one type.”

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