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Brain Food

Winston J. Craig

Andrews University, wcraig@andrews.edu

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Grapes and berries improve your memory.

Brain Food

BY WINSTON J. CRAIG

Walnuts can improve brain function.



Consumers are increasingly interested to learn how their diet can help protect them against a decline in cognitive ability. An increasing number of products have appeared in the marketplace, which supposedly improve brain health. For example, some beverages provide a variety of antioxidants such as vitamins C and E and fruit concentrates to protect against oxidative damage in the brain.

Blueberries, blackberries and other berries contain a high level of anthocyanins and other protective antioxidants. The berries protect the brain from age-related changes and its ability to process information. Blueberry extracts increase the activity of brain kinases that are involved in mediating cognitive function. They are also rich in anti-inflammatory compounds that slow neurodegeneration.

Rats fed blueberry extracts were better able to find or remember the location of an underwater platform. Aged rats fed a blackberry-enriched diet improved their motor performance on tasks that rely on balance and coordination, and had a better short-term memory performance. The polyphenols in berries improve nerve signaling and can promote the generation of new nerve cells.

Berries contain resveratrol, a flavonoid that has cancer-fighting properties, and is also purported to have anti-aging properties. Purple grape juice also slows down memory decline in an aged brain. Older adults fed grape juice for three months improved their short-term retention and spatial memory. In addition, grape seed extract contains polyphenolics that decrease cognitive deterioration.

DHA is an omega-3 fatty acid essential for brain health. Higher DHA blood levels were found to produce improved listening comprehension and vocabulary skills in four-year-olds who were given DHA supplements for four months. Omega-3 fatty acids have been linked to improving vari-



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ous conditions that involve brain function including Alzheimer's and Parkinson's disease, schizophrenia, depression and attention deficit hyperactivity disorder. Plant sources of omega-3 include flaxseed, soy and walnuts.

At Tufts University, diets containing walnuts were found to slow down aging of the brain, as well as reverse age-related motor and cognitive deficits in old mice. The polyphenolics in walnuts can inhibit the breakdown of the important neurotransmitter acetylcholine.

In a British study, middle-aged persons with high levels of HDL (good) cholesterol (60 mg/dl or higher) exhibited better short-term verbal memory than those with low HDL levels (less than 40 mg/dl). Healthy HDL levels can be maintained by regular exercise, losing weight and avoiding trans fat.

A number of supplements have shown some promise to improve brain function. Phosphatidylserine, a soy-derived lipid, is approved to help reduce the risk of cognitive dysfunction and dementia in the elderly. S-adenosylmethionine (SAM-e), an important compound found naturally in the body, is claimed to provide relief as an anti-depressant. When given to centenarians for six months, L-carnitine reduced fatigue and improved their cognitive function. Citicoline, also known as CDP-choline, is used by the brain to make phosphatidylcholine. Studies suggest that citicoline ameliorates memory impairment.

Winston Craig, Ph.D., RD, is a professor of nutrition at Andrews University.