Brain Food

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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 various 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.

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