

Good nutrition proves essential to keeping an older brain healthy

What makes us uniquely ourselves? Certainly, memories play a key role in shaping our uniqueness. We are clearly shaped by our past experiences, and the memories of these experiences strongly influence how we relate to the world.

As we age, memory-related concerns develop that are rarely entertained before the age of 50. Surveys show that the top two fears that develop with age are loss of independence and declining health. Memory loss and dementia both relate to these two fears.

For normal function, the body and brain require adequate intake of all essential nutrients. Deficient intake of even one essential nutrient compromises one or more basic body functions. Even consuming water inadequately can compromise concentration and memory along with creating other problems.

Question: What key nutrients are needed for normal brain function and memory?

Answer: Many essential nutrients are associated with brain function and memory, and these nutrients become increasingly important with age.

Vitamin B12

B12 deficiency causes direct damage to nerve structure that results in many problems, including

impaired memory. If caught quickly, B12 deficiency is easily treated and symptoms are reversible. However, there is potential for B12 deficiency in the elderly to be misdiagnosed as Alzheimer's disease.

Brain scanning techniques show that brain shrinkage is associated with mental function decline in older people. One study found that supplementation with vitamins B12, B6 and folic acid helped to slow this brain shrinkage.

Vitamin D

Adequate dietary intake of vitamin D is associated with better cognitive performance in older women and probably men. In addition to likely benefiting brain function, adequate vitamin D also appears to enhance other neural functions in ways that benefit muscle control and decrease the risk of falling.

Vitamin C, E, carotene

Intake of foods and supplements providing the "antioxidant nutrients" vitamin C, vitamin E and carotene is linked to delayed cognitive decline in the elderly. These nutrients, commonly found in fruits, vegetables, nuts, whole grains and vegetable oils, play an important role in protecting cells in all parts of the body from oxidative damage.

These foods, along with herbs and spices, provide a wide variety of

antioxidant nutrients and phytochemicals that likely provide overall benefits difficult to quantify. However, it seems clear that including a wide variety of these wholesome foods balanced with modest amounts of meat and dairy products goes a long way toward benefiting the body and brain in many ways.

Omega-3 fatty acids

The fish oil fatty acid commonly called DHA is a major component of brain tissue. Not surprisingly, low blood levels of DHA are associated with cognitive decline in otherwise healthy elderly individuals. Higher levels of DHA are associated with decreased relative risk of Alzheimer's disease.

The Bottom Line

When calorie needs decline with age, meeting these important nutrient needs becomes more challenging. This is when the judicious use of dietary supplements can potentially fill nutrient gaps and support healthy aging.

But to accomplish this primarily with foods, consider the Japanese bento as a good example. Traditional bentos provide variety and appropriately small portions. This can deliver healthful nutrient variety without calorie overload.

Alan Titchenal, Ph.D, CNS and Joannie Dobbs, Ph.D, CNS
are nutritionists in the Department of Human Nutrition, Food and Animal Sciences,
College of Tropical Agriculture and Human Resources, UH-Manoa.
Dr. Dobbs also works with the University Health Service.
