

# Antioxidants for Memory

Many older adults fear the loss of memory as much as any other disability. Now scientists are investigating the possible relationship between what you eat and memory loss.

This new research reported by the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University in Boston has been examining the antioxidant capacity of fruits and vegetables.

Some of their studies are test-tube ones designed to measure the total antioxidant activity of fruits and vegetables. This Oxygen Radical Abhorrence Capacity (ORAC) measures the ability of foods, blood plasma, and other substances to combine with oxygen free radicals and render them harmless. Antioxidants protect tissues against oxygen damage from these free radicals. Oxidative damage is associated with aging, cardiovascular disease, diabetes, cancer, and other diseases. Recently, neuroscientist Jim Joseph at the Jean Mayer USDA lab on Aging thinks that poorer brain function associated with aging and disorders like Alzheimer's and Parkinson's diseases may also be a result of these free radicals.

Fruits with high levels--from most to lesser amounts--of antioxidants are prunes, raisins, blueberries, blackberries, strawberries, raspberries, plums, oranges, red grapes and cherries (ORAC value range: 5,770 for prunes down to 670 for cherries per 100 grams (3.5 ounces) of fruit). The ORAC value of vegetables per 100 grams ranges from 1,770 for kale down to 390 for eggplant. Vegetables listed in order are kale, spinach, brussel sprouts, alfalfa sprouts, broccoli florets, beets, red bell pepper, onion, corn and ending with eggplant.

When four groups of rats were compared, two groups were fed either spinach or strawberry extract. A third group received vitamin E, and the fourth group consumed the unfortified diet. The scientists learned that spinach was the most potent protector of long-term memory and learning ability. The vitamin E diet was less potent and the strawberry and unfortified diet did not prevent motor or movement loss. Of course, animal research is not proof that the same thing is true in humans, but it does suggest avenues for further research.

Another finding relates to what happens when humans are fed double the numbers of servings of fruits and vegetables, i.e. from 5 a day to 10 a day. These subjects increased their antioxidant values in blood plasma. Boosting such values as a result of eating more fruits and vegetables could potentially have important results in protecting mental capacity in older adults.

Source: "Can Foods Forestall Aging." Agricultural Research. U.S.D.A. February 1999, p. 15-17.

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