Diets high in omega 3s may keep brain from shrinking, says study

People with diets high in several vitamins or in omega 3 fatty acids are less likely to have the brain shrinkage associated with Alzheimer's disease than people whose diets are not high in those nutrients, according to a new study published in the Dec. 28, online issue of Neurology, the medical journal of the American Academy of Neurology.

Those with diets high in omega 3 fatty acids and in vitamins C, D, E and the B vitamins also had higher scores on mental thinking tests than people with diets low in those nutrients. These omega 3 fatty acids and vitamin D are primarily found in fish. The B vitamins and antioxidants C and E are primarily found in fruits and vegetables.
In another finding, the study showed that people with diets high in trans fats were more likely to have brain shrinkage and lower scores on the thinking and memory tests than people with diets low in trans fats. Trans fats are primarily found in packaged, fast, fried and frozen food, baked goods and margarine spreads.

The study involved 104 people with an average age of 87 and very few risk factors for memory and thinking problems. Blood tests were used to determine the levels of various nutrients present in the blood of each participant. All of the participants also took tests of their memory and thinking skills. A total of 42 of the participants had MRI scans to measure their brain volume.

Overall, the participants had good nutritional status, but seven percent were deficient in vitamin B12 and 25 percent were deficient in vitamin D. Study author Gene Bowman, ND, MPH, of Oregon Health & Science University in Portland and a member of the American Academy of Neurology, said that the nutrient biomarkers in the blood accounted for a significant amount of the variation in both brain volume and thinking and memory scores.

For the thinking and memory scores, the nutrient biomarkers accounted for 17 percent of the variation in the scores. Other factors such as age, number of years of education and high blood pressure accounted for 46 percent of the variation. For brain volume, the nutrient biomarkers accounted for 37 percent of the variation.
"These results need to be confirmed, but obviously it is very exciting to think that people could potentially stop their brains from shrinking and keep them sharp by adjusting their diet," Bowman said.

The study was the first to use nutrient biomarkers in the blood to analyze the effect of diet on memory and thinking skills and brain volume. Previous studies have looked at only one or a few nutrients at a time or have used questionnaires to assess people's diet.
But questionnaires rely on people's memory of their diet, and they also do not account for how much of the nutrients are absorbed by the body, which can be an issue in the elderly.