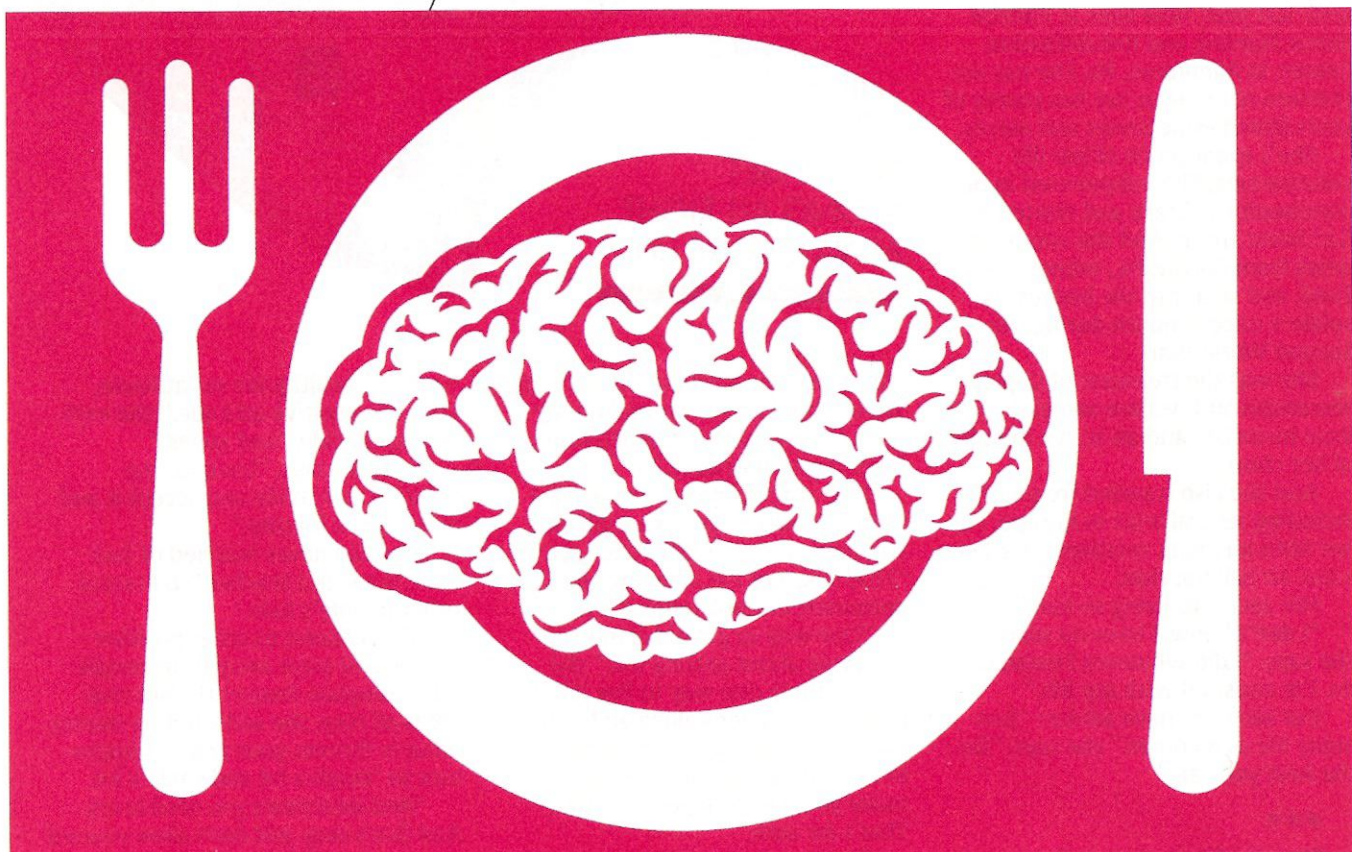


# BRAIN FOOD

# VITAMIN B

A groundbreaking study has discovered B vitamins can slow brain atrophy. // **By Celia Shatzman for USA TODAY**



“THE B VITAMINS LOWER THE LEVELS OF HOMOCYSTEINE AND THAT IS ASSOCIATED WITH A SLOWING OF THE RATE OF SHRINKAGE BY UP TO 50 PERCENT.”

**A**ccording to research from Oxford University, high doses of vitamin B can slow brain shrinkage, which often leads to dementia and Alzheimer’s disease.

Brain shrinkage is linked to high levels of homocysteine, an amino acid that is toxic to nerve cells. Because B vitamins can help break down homocysteine, Oxford researcher David Smith and his team tested whether reducing homocysteine levels could slow the rate of brain shrinkage.

The super high dosage of vitamins B6, B9, and B12 the team gave study participants was more than people could get from traditional supplements or food. For two years the researchers examined 168 volunteers over age 70 with mild cognitive impairment; half of the volunteers took high-dose vitamin B pills daily and the other half took a placebo. By the end of the study, the homocysteine levels had dropped by nearly 23 percent for the participants taking the pills, while



## WHAT IS VITAMIN B?

Once believed to be a single vitamin, vitamin B is actually a family of eight related vitamins (called the vitamin B complex) that often coexist in the same foods. The eight B vitamins are thiamine (B1), riboflavin (B2), niacin (B3), pantothenic acid (B5), pyridoxine (B6), biotin (B7), folate (B9), and cobalamin (B12). Among its vast array of benefits, vitamin B helps regulate metabolism, maintain healthy skin, make red blood cells, and protect against heart disease, certain cancers, and birth defects.

**DID YOU KNOW?**  
**FOLATE** IS FOUND  
NATURALLY IN FOODS,  
WHILE **FOLIC ACID**  
IS MAN-MADE  
AND FOUND IN  
SUPPLEMENTS OR  
FORTIFIED FOODS.

the placebo group's rose by almost 8 percent. "The B vitamins lower the levels of homocysteine and that is associated with a slowing of the rate of shrinkage by up to 50 percent," Smith says.

But Smith doesn't recommend everyone start popping high-dose B vitamins. "People can have their blood homocysteine levels measured to determine if they are at a high risk for accelerated brain shrinkage or Alzheimer's," he says. "Anything over 10 is a risk and if over 15, the risk is greater. Also, if people have memory problems as well as high homocysteine, their risk is greater." If you fall into that high-risk category, he recommends starting high-dose B vitamins. Since the strength used in the study was prescription-only, consult your doctor.

Eating foods fortified with vitamin B can also lower homocysteine, so Smith recommends loading up on vitamin B-rich foods.

The study has drawn some criticism. Carl Heneghan, deputy director of the Centre for Evidence-

Based Medicine, has cited the fact that the study started with 271 participants and dwindled to 168, potentially producing misleading results.

Smith and his research team are planning a larger trial to test whether the same treatment in people with mild cognitive impairment will slow down or prevent Alzheimer's disease. A positive outcome of the new research could improve the lives of countless people, since nearly 5 million people in the United States are faced with memory problems.

## A LITTLE IS INEVITABLE

**Everyone experiences some brain shrinkage** as they begin to age, starting around age 50. People whose brains shrink at a faster rate—which is about one in six people over age 70—suffer from mild cognitive impairment, which causes problems with memory, concentration, and language. "Brain shrinkage with age at about 0.5 percent per year seems to be a normal phenomenon and we do not know if it has any consequences, but when the rate of shrinkage reaches 1 percent per year, it is associated with memory problems and other cognitive deficits," explains researcher David Smith. "If the rate is 1 percent per year or greater then there is about a 50 percent likelihood that Alzheimer's will develop in the next five years. When it reaches 2 to 3 percent per year, then it is associated with Alzheimer's disease."

## THE B LIST

**For premium sources of vitamins B6, B9, and B12, check out these foods:**

### B6

- > Yellowfin tuna
- > Bananas
- > Chicken breast
- > Cod
- > Salmon

### B9

- > Breakfast cereals fortified with folic acid
- > Spinach
- > Asparagus
- > Romaine lettuce
- > Broccoli

### B12

- > Sardines
- > Shrimp
- > Scallops
- > Salmon
- > Beef tenderloin