

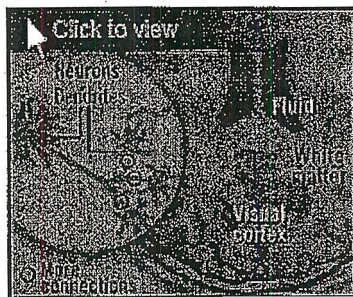
## Keeping Your Brain Fit

**There's plenty you can do to slow the effects of aging. Here's how to keep your thinking and memory sharp**

By *Christine Larson*

Posted January 31, 2008

Marian Conte's brain weighs 1,100 grams, according to Nintendo. "That's up from 800 grams when I started playing," jokes Conte, 52, a real-estate agent from Hamilton, N.J., who recently added the video game Big Brain Academy to her fitness regimen. The better she scores on brainteasers, the larger her fictional brain. Since Conte's mother died of complications from Alzheimer's disease in 2003, she's trying to guard herself any way she can, embracing crossword puzzles, fruits and vegetables, and a new genre of high-tech workouts that aim to slow cognitive loss. This particular game makes no such claim. But regular play certainly can't hurt, Conte figures: "I want to do any little thing I can to protect my brain."



(Stephen Rountree-USN&WR)

If her Nintendo score isn't solid evidence, science increasingly suggests Conte's efforts may pay off. Just within the past few months, several groups of researchers have added support for the growing consensus that plenty can be done to slow the age-related declines in memory, mental speed, and decision making that affect most people. In November, a team from the Mayo Clinic and the University of Southern California announced that one computer--based mental training program appeared to improve older people's cognitive performance by as much as 10 years. That same month, a Harvard researcher found that long-term use of beta carotene supplements delayed cognitive decline by up to a year and a half.

And a new book out last month puts forth evidence that "exercise is the single best thing you can do for your brain," says author John Ratey, a clinical associate professor of psychiatry at Harvard Medical School. The book is *Spark: The Revolutionary New*

"Some of the myths about the brain—that it was not changeable, that there was nothing you could do about cognitive decline—have really been dispelled in the past 10 years," says Lynda Anderson, director of the Healthy Aging Program at the federal Centers for Disease Control and Prevention, whose bold goal is "to maintain or improve the cognitive performance of all adults. The potential payoff is enormous. Alzheimer's now afflicts 4.5 million people in the United States—double the number in 1980—and is expected to reach 16 million by 2050. "Statistics show if we could delay the onset of Alzheimer's by five years, the number of people with the disease would be cut in half," says Yaakov Stern, a cognitive neuroscientist at Columbia University.

What are you up against? The inevitable physical changes start in early adulthood but become especially marked after about age 60 or so. Gradually, the brain shrinks, losing around 0.5 percent to 1 percent of its volume each year after that age threshold; brains with Alzheimer's shrink about twice as fast. The effects are greatest in the prefrontal cortex, the seat of executive function (which includes working memory—responsible for remembering a telephone number while you're dialing, say—and planning, focus, and behavior choices), and sometimes in the hippocampus, involved in memory. Brain cells' dendrites and axons—the slender filaments that transmit electrical impulses—shrink. The brain's white matter, which contains nerve fibers that transmit signals from one brain region to another, starts to degrade around age 50. Result: It gets harder and harder to remember what you wanted to buy at the grocery store, to process and respond to information, and to reason your way through a problem. In your 70s and 80s, executive function starts to fail.

Not every mental skill suffers equally. Vocabulary, for instance, tends to remain, as do skills practiced for a long time, like playing the piano or using a spreadsheet. You might even improve at some things: Intests of experienced crossword puzzlers of all ages, the best were in their 60s and 70s.

**Potential.** The more scientists learn about the brain's decay, the more curious they've become about how well people function anyway. Even among people 85 and older, only 18.2 percent live in nursing homes. "In the past, much of the research has focused on disease and decline," says Gene Cohen, director of the Center on Aging, Health and

Humanities at George Washington University. "Now we're looking at the concept of potential and how older people often continue to thrive and grow even in the face of the most serious illness." Recent studies of both animal and human subjects have found that several factors go hand in hand with better mental performance, including education, professional success, and intellectual, social, and physical activities. A 2003 study reported in the *New England Journal of Medicine*, for example, found that people over 75 who danced, read, or played board games or musical instruments also had a lower rate of dementia.

1 2 3 4 Next Page>

!~  
it: Tags: Alzheimer's disease! brain  
~]

Copyright © 2008 U.S. News & World Report, L.P. All rights reserved.