

May 3, 2008

## Exercise Your Brain, or Else You'll ... Uh ...

By [KATIE HAFNER](#)

SAN FRANCISCO — When David Bunnell, a magazine publisher who lives in Berkeley, Calif., went to a [FedEx](#) store to send a package a few years ago, he suddenly drew a blank as he was filling out the forms.

“I couldn’t remember my address,” said Mr. Bunnell, 60, with a measure of horror in his voice. “I knew where I lived, and I knew how to get there, but I didn’t know what the address was.”

Mr. Bunnell is among tens of millions of baby boomers who are encountering the signs, by turns amusing and disconcerting, that accompany the decline of the brain’s acuity: a good friend’s name suddenly vanishing from [memory](#); a frantic search for [eyeglasses](#) only to find them atop the head; milk taken from the refrigerator then put away in a cupboard.

“It’s probably one of the most frightening aspects of the changes we undergo as we age,” said Nancy Ceridwyn, director of educational initiatives at the American Society on Aging. “Our memories are who we are. And if we lose our memories we lose that groundedness of who we are.”

At the same time, boomers are seizing on a mounting body of evidence that suggests that brains contain more plasticity than previously thought, and many people are taking matters into their own hands, doing brain fitness exercises with the same intensity with which they attack a treadmill.

Decaying brains, or the fear thereof, have inspired a mini-industry of brain health products — not just supplements like coenzyme Q10, ginseng and bacopa, but computer-based fitter-brain products as well.

[Nintendo](#)’s \$19.99 Brain Age 2, a popular video game of simple math and memory exercises, is one. Posit Science’s \$395 computer-based “cognitive behavioral training” exercises are another. MindFit, a \$149 software-based program, combines cognitive assessment of more than a dozen different skills with a personalized training regimen based on that assessment. And for about \$10 a month, worried boomers can subscribe to Web sites like [Lumosity.com](#) and [Happy-Neuron.com](#), which offer a variety of cognitive training exercises.

Alvaro Fernandez, whose brain fitness and consulting company, SharpBrains, has a Web site focused on brain fitness research. He estimates that in 2007 the market in the United States for so-called neurosoftware was \$225 million.

Mr. Fernandez pointed out that compared with, say, the physical fitness industry, which brings in \$16 billion a year in health club memberships alone, the brain fitness software industry is still in its infancy. Yet it is growing at a 50 percent annual rate, he said, and he expects it to reach \$2 billion by 2015.

From Hula Hoops to Corian countertops, marketers have done very well over the six decades guessing the desires of the generation born after World War II. Now they are making money on that generation’s fears, and it is not just

computerized flash card makers with the money-making ideas. Doctors and geneticists have also tapped into the market.

Boomers believe they have ample reason to worry. There is no definitive laboratory test to detect [Alzheimer's disease](#). Doctors rely on symptoms to make the diagnosis, and most think that by the time symptoms show up the brain damage is already extensive.

By 2050, according to the Alzheimer's Association, 11 million to 16 million Americans will have the disease.

"Most people when they turn 50 begin to look at [forgetfulness](#) with more seriousness," said Dr. Gene Cohen, the director of the Center for Aging, Health and Humanities at [George Washington University](#).

"When you misplace your keys when you're 25, you don't pay any attention to it," he said. "But when you do the identical thing at 50 or older, you raise an eyebrow."

Lisa C., 47, a clinical psychologist in the San Francisco Bay area, who preferred not to disclose her last name for fear that friends and colleagues would question her mental faculties, misplaced her cellphone one day a few years ago.

She called it from her home phone but heard nothing. Finally, while making dinner a few hours later, she found it — in the freezer.

She was so unnerved, not just by that but also by the poor results of a subsequent mental status test, that she had an [MRI](#) done on her brain. The diagnosis: perfectly normal. Dr. Cohen said people can also overreact, attributing absent-minded actions to failing brains, when it is actually simple distractibility that is to blame.

Nancy Cutler, 51, a publication designer in Piedmont, Calif., grew worried about her brain a few years ago when she drove her car to work one day, then, forgetting she had done so, took the bus home.

"It was pretty embarrassing to have my kid call me and say, 'what do you mean you're on the bus?' "

Ms. Cutler reminded herself that she was preparing for her son's bar mitzvah, going through a stressful period and was very distracted. But she was concerned enough to report the incident to her physician, and ask if there were certain supplements she should be taking. The doctor told her to take up activities that challenged her mind. (Ms. Cutler said she had not done anything yet, because it is "a real time commitment.")

Dr. Cohen, who recently conducted a study of people born from 1946 to 1955, the first half of the baby boom, said he was struck by the number of respondents who believe they can do things on their own to enhance the vitality of their brains.

"There is a gradual growing awareness that challenging your brain can have positive effects," Dr. Cohen said. He said the plasticity of the brain is directly related to the production of new dendrites, the branched, tree-like neural projections that carry electrical signals through the brain "Every time you challenge your brain it will actually modify the brain," he said. "We can indeed form new brain cells, despite a century of being told it's impossible."

In pursuit of his own dendritic growth, Dr. Cohen plans to take up the piano again after years of not playing. He is also sketching out a science-fiction novel he hopes to write.

Dr. Cohen says that although he understands the fear of Alzheimer's, many people are unduly anxious about it.

"The bottom line question to ask is, Is your forgetfulness fundamentally interfering with how you function?" said Dr. Cohen. "If it doesn't fundamentally mess up your work or social life, it's among the normal variants."

Relief — or heightened [anxiety](#) — can come with a better sense of one's genetic risk. Start-ups like Navigenics, 23andMe and [deCODE genetics](#) are charging around \$1,000 to test an individual's DNA for various risk factors, including Alzheimer's.

Mr. Bunnell, whose magazine, Eldr, is aimed at aging boomers, took the 23andMe test and learned that his genetic risk is below average. Still, Mr. Bunnell is not sure he trusts the report, as one of his grandparents had [dementia](#), and his mother may have had Alzheimer's although no diagnosis was made.

To keep such moments as his FedEx embarrassment to a minimum, Mr. Bunnell now does regular brain calisthenics, largely avoiding expensive software in favor of simpler solutions. He works at memorizing the numbers that swirl around his daily life — credit cards, PINs and phone numbers — and devises mnemonics for remembering people's names. "Smart people find new ways to exercise their brains that don't involve buying software or taking expensive workshops," he said.

[Copyright 2008 The New York Times Company](#)

[Privacy Policy](#) | [Search](#) | [Corrections](#) | [RSS](#) | [First Look](#) | [Help](#) | [Contact Us](#) | [Work for Us](#) | [Site Map](#)

---