

By [KELLY GREENE](#)

SAN FRANCISCO -- Linda Hale Bucklin, a 63-year-old writer, signed up on the spot when she saw a new "gym for the brain" in her neighborhood here. She now works out three times a week and credits a computer "visual processing" program for helping her find her car keys faster and sharpen her tennis skills.

On the court, "my game is just at a different level," says Ms. Bucklin. "I'm playing with 40-year-olds, and I'm holding my own really well."



Linda Hale Bucklin

Vibrant Brains, the business that drew her in, has attracted about 200 members since December 2007, according to its owners. Patrons pay \$60 a month to work out on 20 computer stations loaded with "mental fitness" software, including a "neurobics circuit" that purports to stretch the brain. Ms. Bucklin says she's addicted to an art-auction game that displays a dozen Monets for purchase. "Then they'll intersperse them with other Monets, and you have to tell them apart," she says. "I minored in art history, and I still find it difficult."

Thousands of Americans are choosing to join a small, but growing, number of "brain gyms" springing up around the country. Similar brain-teaser programs are available on home computers, sometimes free of charge. The scientific jury is still out on the efficacy of such software.

The centerpiece of most outlets is a computer lab equipped with software from companies with names like Posit Science Corp., CogniFit Ltd., Lumos Labs Inc. and Happy Neuron Inc. Like gym rats who hit the weight machines or take Pilates classes, some users of the new technology say they prefer working with personal trainers. In this context, sessions are spent doing things like mental-fitness assessments and relaxation exercises in addition to basic cognitive training.

Sparks of Genius, in Boca Raton, is a Florida start-up drawing older adults with "scientific-based brain-fitness workouts." In southern California, a dozen "Nifty after Fifty" fitness clubs are combining traditional exercise with time in front of computer screens, claiming that mental calisthenics work best after physical exercise. Canyon Ranch, a Tucson, Ariz.-based spa operator, has added a series of "Memory & More" programs at its Lenox, Mass., resort, which include classes in brain nutrition, genetic workups, and cognitive training.

WSJ's Kelly Greene reports on a new kind of workout that's taking hold across the U.S. Aging Americans are using "neurobics" to exercise their brain and keep dementia at bay.

Brain exercise is spreading beyond gym walls, too. In Chicago, "Marbles: The Brain Store" offers classes on improving mental health. The New England Cognitive Center, a nonprofit group in Hartford, Conn., is teaching

trainers to take its "Brain G.Y.M.M." program to community centers around the country. More than 700 retirement communities have added computerized brain-fitness centers in the past three years, according to Alvaro Fernandez, co-founder of SharpBrains Inc., a firm that surveys the brain-fitness software market.

"We saw this area explode last year," says Mr. Fernandez. He estimates that consumers spent more than \$80 million in 2008 on mental fitness. "You have an industry with tools and coaches. This is more real than people think."

The industry pins its claims for brain exercise on a relatively new scientific discovery: neuroplasticity, the brain's ability to rewire itself throughout life by creating neural connections in response to mental activity. In a study published in 2006 in the Journal of the American Medical Association, a clinical trial involving 2,832 older adults concluded that "cognitive training" -- such as identifying patterns in a series of letters or words -- helped improve memory and reasoning skills.

## Brain Workout

*Can you name who painted "The Persistence of Memory"? Fold a piece of paper into a brain shape? Try some exercises designed to test your mental fitness.*

- [Brain Trivia Crossword Puzzle](#): Test your knowledge
- [Origami Brain](#): Make a brain model out of paper
- [Cool Brain Trick](#): See hidden 3D images
- [Brain Aerobics](#): Test your memory and attention skills
- [Speed](#): Brain response to sounds

A more recent study, of 487 adults aged 65 and older, found that people who trained on brain-fitness software for 40 hours over eight weeks noted significant improvement with memory and attention skills. The study is scheduled to be published in the April edition of the Journal of the American Geriatrics Society.

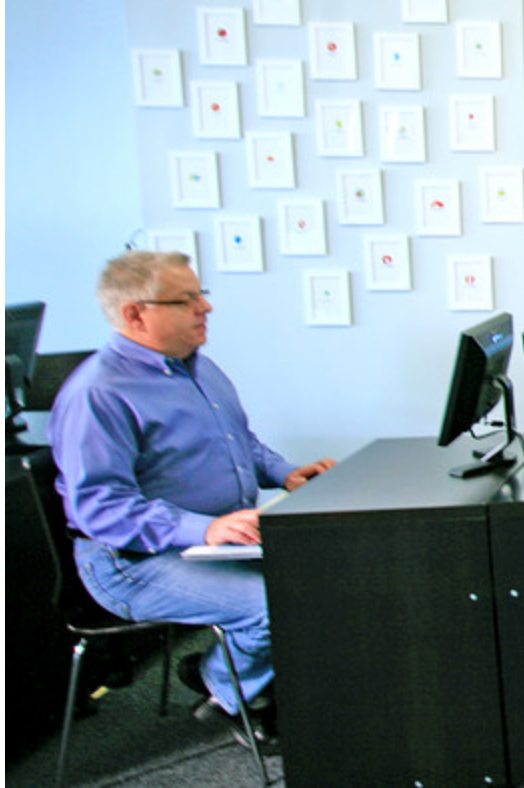
That said, "mental fitness" is still a squishy concept. Some scientists consider brain gyms simply the latest gimmick to trade on the public's fear of age-related dementia. An estimated 5.3 million Americans already have Alzheimer's disease. And as the huge baby-boom generation continues to gray, the Alzheimer's Association predicts that, by 2010, nearly a half-million new cases will develop every year -- a trend that will last for decades.

Some neuroscientists say it's simply too early to tell whether a specific form of brain exercise will result in lasting benefits or a lower incidence of dementia.

"Cognitive activity is probably good, and it may make someone sharper. But there's very little evidence that shows that these things in a controlled trial reduce Alzheimer's disease or affect everyday function," says David Loewenstein, a psychiatry professor at the University of Miami's Miller School of Medicine.

But the "worried well" and people already in the early stages of dementia aren't waiting for research findings. More than 5.5 million copies of Nintendo Co.'s "Brain Age" games have been sold in the U.S. since 2006, the company says, jumpstarting awareness of the brain-exercise field.

While many brain-flexing centers are marketed primarily toward baby boomers, that generation's parents are signing up, as well. Last year, Eva Slane, an 80-year-old retired theatrical agent, joined Neurobics Club, a brain gym in Sarasota, Fla. "I would like to stay as sharp as I am," she says. Her favorite piece of equipment at the moment: the Dakim BrainFitness System, a touch-screen computer that uses a game-show-like format with stories, voiceovers and pre-1950s film and music clips.



*Photo: vibrantBrains*

Working out at Vibrant Brains, a 'brain gym' in San Francisco.

Marshall Kahn, an 82-year-old family doctor in Fullerton, Calif., says he got such a boost from brain exercises he started doing at a "Nifty after Fifty" club that he decided to start seeing patients again part-time. "Doing all the mental exercise," he says, "I realized I've still got it."

Lisa Schooner, the 41-year-old co-founder of Vibrant Brains LLC, says she first looked into cerebral gyms after her mother was diagnosed with frontotemporal dementia -- an often fast-progressing form of memory loss. Her partner, Jan Zivic, had used earlier versions of brain games after a car accident 11 years ago left her in a coma and compromised much of her memory. Both were struck by the idea of bulking up the brain, what brain scientists refer to as "cognitive reserve." The theory: People engaged in greater degrees of mental stimulation increase their brain mass and neural pathways, protecting them if a brain injury or dementia starts chipping away at brain connections.

The duo's first storefront, dubbed vibrantBrains, has a small retail area, computer lab and a lounge stocked with walnuts and green tea. (Some nutritionists say such snacks promote brain health.) A second location opened in January.

Customer Gail Moore, 63, says it was tough to adjust to never feeling like she "won" at the exercises. "I simply hate this one called 'Master Gardener.' All the leaves look exactly alike to me, and I keep missing it. But I keep telling myself that the point is not getting very good at something, the point is doing it."

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