

# Use It or Lose It

## Part I: Brain Fitness

Georgene Lahm

**W**hen Carol Lupkie moved to Country Meadows in Harrisburg, PA, 5 years ago, she was a busy volunteer who devoted considerable time to her church and one of her favorite causes, the Lupus Foundation.

Then she fractured a hip and discouragement became a constant companion. “I was confined to my room an entire year and I began to feel pretty worthless,” says Lupkie, now 86. “I felt that I wasn’t measuring up because I was not doing anything positive other than trying to get better.” Lupkie noticed something else: the reading that she always enjoyed was becoming much more of a challenge.

So Lupkie enrolled in the care community’s Brain Fitness Program—a series of computer-based exercises designed to improve important brain functions. Along with other residents, she visited a computer lab 1 hour a day for 8 weeks—a total of 40 sessions. Many of the exercises were based on honing recall skills. “The story-telling was good, and the programs were colorful and entertaining,” she adds.

The program provided Lupkie a boost in a number of ways. “I’m much more aware of things I hear on the TV and radio, and while talking to people,” she explains. “And I’m more inclined to try to recall that information.” She’s also taking an art course, a skill she is developing for the first time in her life.

### Brain Fitness Programs

Posit Science ([www.positscience.com/](http://www.positscience.com/)), a company based in San Francisco and funded by both national research grants and private venture capital, and several prestigious organizations have conducted scientific studies on the Brain Fitness Program. Studies, published in the journal *Proceedings of the National Academy of Sciences* ([www.pnas.org/cgi/content/abstract/0605194103v1](http://www.pnas.org/cgi/content/abstract/0605194103v1)) and presented at numerous conferences including the Society for Neuroscience, show that the Brain Fitness Program improves memory by more than 10 years and significantly increases processing speed in healthy aging adults. Importantly, follow-up testing shows that benefits last beyond the end of the program.<sup>1</sup>

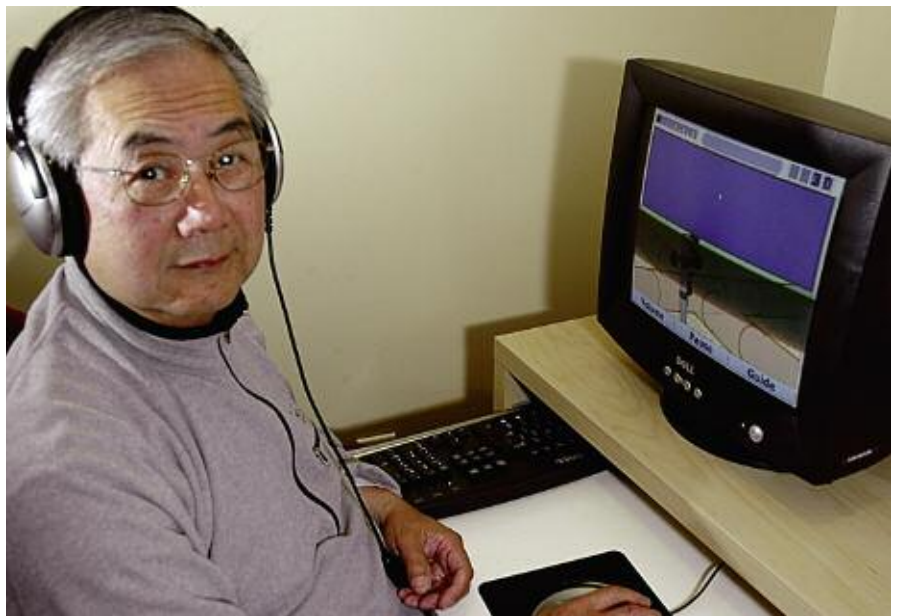


Photo courtesy of Posit Science

According to Posit Science, more studies on the Brain Fitness Program are underway to measure

the effects of cognitive training on memory. These include the largest study ever, called Improvement in Memory with Plasticity-based Adaptive Cognitive Training (IMPACT), conducted on cognitive therapy with this program, which can be done independently versus requiring one-on-one training, according to Posit Science.

Sandy Strathmeyer, Country Meadows Program Director for Dementia Care, has integrated the Brain Fitness Program into the company’s 10 locations throughout Pennsylvania and Maryland, and an Ecumenical Community in Harrisburg, with impressive results.

“One Posit Science graduate went on to study Spanish at the age of 92,” Strathmeyer says. “Another program participant in her mid-80s had a brain tumor re-

moved and lost her confidence. We asked her to speak at graduation about how the program had changed her life; she's now playing piano and quilting. There wasn't a dry eye in the house."

What's more, the results of Brain Fitness Program and other mind-stimulating activities are dispelling myths for senior-care experts in dramatic ways. "For the longest time it was believed that once we reached our mid-20s, we were at maximum capacity for learning, that our brain then started to atrophy," Strathmeyer explains. "I've witnessed that you can build brain plasticity at any point and at any age."

### More Than One Way

As it turns out, there's more than one way to achieve brain fitness. In a successful public education campaign launched earlier this year, the international franchise company Home Instead Senior Care ([www.homeinstead.com/home.aspx](http://www.homeinstead.com/home.aspx)) discovered that a variety of activities, from Scrabble and bridge tournaments to puzzles to reading a newspaper, all can help keep seniors on top of their game. "What we uncovered is that mind fitness really is a case of use it or lose it," says Home Instead Senior Care Co-Founder and CEO Paul Hogan. Consider this:

- Researchers in a study published just last year in *Psychological Medicine* from the University of New South Wales in Sydney, Australia, found that individuals with high brain reserve—the roles of education, occupational complexity, and mentally stimulating pursuits in preventing cognitive decline—have a 46% decreased risk of dementia than those with low brain reserve. The study pointed out that even a late-life surge in mental activity can stave off the effects of dementia.<sup>2</sup>
- In 2003, a study reported in the *New England Journal of Medi-*

**Figure 1.** The Brain Fitness Program is a series of computer-based exercises designed to improve important brain functions.



Photo courtesy of Posit Science

## You can build brain plasticity at any point and at any age.

*cine* found that people who participated in activities such as board games, reading, playing a musical instrument, or working a crossword puzzle were less likely to develop dementia than were people who said they engaged in those types of activities rarely or not at all.<sup>3</sup>

Home Instead Senior Care's "mind games" efforts focus on the importance of companionship as well as activities, which can be a problem, particularly for older adults—even those who live in care communities. "Sometimes sen-

iors just need a little encouragement from family and friends to help them pursue interests that can keep their minds stimulated," Hogan states. That's why his company's campaign has encouraged franchise owners to help older adults put their minds to work in various ways. The company's caregivers go into the homes and care communities of seniors to assist them with their nonmedical needs.

### Scrabble and Bridge

Among the most popular mind games are Scrabble and bridge tournaments, which Home Instead Senior Care franchise owners have helped host in care communities throughout North America. These events are open to care-community residents as well as to seniors still living at home. That's been good news for John P. Costello of St. Louis, MO, a 93-year-old former 7-Up company manager and real estate agent who retired only 3 years ago and lives in a townhouse with his wife. "My mom and dad played bridge, and now it's the favorite pastime for me and my wife," he explains.

“You have to strategize and do a lot of thinking,” Costello says, “because there are different ways to go about it. You stretch your brain. Really though, 50% of it is being with other people.”

Judy Moore, Marketing Director of Friendship Village West in Chesterfield, MO, one of the sites where John Costello plays bridge, confirms that socialization is one of the big draws of the bridge tournaments. “At the beginning of the tournament we wanted to welcome everyone with introductions, but these players were like horses ready to get out of the gate; they just wanted to play bridge, not listen to us. The bridge games keep seniors’ minds engaged, current, and connected to their communities and neighborhoods. Bridge gives them a reason to get up in the morning. I think the goal is to keep an active mind alive and get reconnected to people or meet new people. There is always an air of excitement when the bridge players gather. They can’t wait to get started and enjoy the people, the game, and, of course, the wonderful refreshments served at each tournament.”

Surprisingly, only about 1% of the bridge participants at Friendship Village West actually lives there, which makes the tournaments an effective marketing tool for the community. “Seniors get to view the community, but not under the auspices of taking a tour,” Moore says. “They’re just coming out to play bridge each week in a great environment, with peers and good food.”

Brian Griffith, Co-owner of the Home Instead Senior Care office in St. Louis, has organized *The St. Louis Senior Bridge League*, including the Friendship Village West location, which is one of many hosts of this weekly event. “We structured our League to appeal to both community residents and independent seniors living in their homes. Everyone appreciates a fun activity

where they get to meet new people, visit new communities and socialize with their friends,” he says. “This is another way we’re promoting mental fitness, social interaction, and a fun time for seniors through a healthy event.”

Communities across the country have come up with other creative ways to exercise the brain. Epoch Senior Living in Pittsfield, MA, sponsors not only the Posit Science Brain Fitness Program, but Scrabble and bridge as well, according to Amy McNally, Outreach Coordinator. “The Brain Fitness Program has been very popular,” she states. One graduate of the program said she

## A late-life surge in mental activity can stave off the effects of dementia.

could once again do the *New York Times* crossword puzzle, which she had previously not been able to complete for 2 years.

“We have a lot of card players and word-game activities,” McNally continues. “Mahjong, an ancient Chinese game that involves skill, strategy, and calculation, also is popular,” she adds. The object of the game is to build complete suits—or melds—usually of 3s, from either 13 or 16 tiles. The first person to achieve this goal wins the game. The winning tile completes the player’s set of either 14 or 17 tiles.

### Simple Works as Well

Even the simplest activities can work. Home Instead Senior Care General Manager Tiffany Alcantara

of Pismo Beach, CA, sends caregivers out to their clients with activity tote bags. The bags include hand sanitizer, a first-aid kit, a small recipe book, a word search and small puzzle or a deck of cards, and dominoes. “We give these kits to caregivers to keep on hand after they’ve completed training,” she says. “It’s especially helpful, I think, for those who work 24/7 shifts. It helps them communicate and interact with seniors and, in particular, it keeps those clients who may need diversions focused on something positive in their lives.”

The activity bags have worked wonders in communities as well, according to Alcantara. “We had one care-community client to whom we provided 12 hours of companionship each day,” she relates. “Toward the end of care, she wasn’t very cognitively aware. But as she declined, she was still able to focus on the puzzles that the caregiver brought. A lot of times, seniors don’t even want to come out of their rooms. It can help to have a caregiver who will escort them to the activity room and stay with them until they feel comfortable. Activities are a great way to engage their minds again.” **ALC**

**Georgene Lahm is a writer and communications specialist based in Omaha, NE, who writes about senior-care issues.**

**Part II of this feature will be in the January/February issue of ALC. It will focus on Body Fitness.**

### References

1. Mahncke HW, Connor BB, Appelman J, et al. Memory enhancement in healthy older adults using a brain plasticity-based training program: A randomized, controlled study. *Proc Natl Acad Sci U S A*. 2006 Aug 15; 103(33):12523-8.
2. Valenzuela MJ, Sachdev P. Brain reserve and cognitive decline: a non-parametric systematic review. *Psychol Med*. 2006 Aug;36(8):1065-1073.
3. Verghese J, Lipton RB, Katz MJ, Hall CB, Derby CA, Kuslansky G, Ambrose AF, Sliwinski M, Buschke H. Leisure activities and the risk of dementia in the elderly. *New Engl J Med*. 2003;348:2508-2516.