


Sphere It!
Digg It!
Newsvine
Del.icio.us
Facebook



No Life Insurance?
It Could Cost Your Family A Fortune!

	age	male
10-Yr Level Term Life Insurance	35	\$16.19
\$500,000 Policy (monthly premiums)	40	\$21.88
	45	\$34.56
	50	\$56.00

Get a **FREE QUOTE**
[CLICK HERE](#)

AccuQUOTE
Saving You Money For Life

HOME THE MAGAZINE INTERNATIONAL EDITION

Newsweek

SEARCH SITE WEB

Lab Notes

- Latest
- Featured
- RSS
- Author
Sharon Begley
- Email | Bio
- Categories
 - Annals of the Former World
 - Debunker
 - Explainer
 - Lab Results
 - Studies

More Newsweek Blogs

- Checkpoint Baghdad
- Countdown to Beijing
- The Gaggle
- Level Up
- I, Breeder
- The Gold Digger
- Lab Notes
- The All-Starr Blog
- Soldier's Home
- Stumper
- Why it Matters

Featured Postings

Exercise---and Be Happy

1:00 PM, December 2, 2007 | [Comments \(3\)](#)

Scientists are sticklers for not really believing what until someone explains how . That is, they'll see that something happens, but until research reveals how it happens the phenomenon remains a bit dodgy. So it is with the power of exercise to spur...

A, My Name is Alice: Moniker Madness

5:20 PM, November 7, 2007 | [Comments \(147\)](#)

Andy Grove: Where are the Cures?!

4:00 PM, November 4, 2007 | [Comments \(3\)](#)

Archives

[See All from November](#)

[Previous](#)

November 2007

[Next](#)

Sun Mon Tue Wed Thu Fri Sat

				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

SPONSORED LINKS

Prepare to be Shocked

Millions have already taken this amazing test. What's your RealAge?
www.RealAge.com

Brain Builder Software

Strengthen memory and learning Proven brain building methods
www.rmlearning.com

Improve Your Brain Power.

Scientifically Designed Program Register Free with 14 Day Trial.
www.lumosity.com

[Full Post](#)

Posted Saturday, November 17, 2007 11:29 AM

Brain Training: How It Works

Sharon Begley

With the nation's 78 million baby boomers approaching the age of those dreaded "where did I leave my keys?" moments, it's no wonder the market for computer-based brain training has shot up from essentially zero in 2005 to \$80 million this year, [according to the consulting firm SharpBrains](#).

But while the puzzles, math questions, reading exercises and other challenges in, say, Nintendo's Brain Age are billed as just entertainment, other brain software claims to do more. And it does: if you practice eye-hand coordination, do memory exercises and sharpen your problem-solving acumen, you get better at them (at least in the immediate aftermath of training), as the MindFit brain-exercise software from Israel's [CogniFit Ltd.](#) has been found to do after people used it for three months.

Now comes the largest and most rigorous study of a commercially-available training program, and it shows that there is hope for aging brains. This morning, at the meeting of the [Gerontological Society of America](#), scientists are presenting data showing that after eight weeks of daily one-hour sessions with Brain Fitness 2.0 from [Posit Science](#), elderly volunteers got measurably better in their brain's speed and accuracy of processing. And unlike every other training program tested before, the improvements "generalize to broad measures of cognition and are noticeable in everyday life," [Elizabeth Zelinski](#) of the University of Southern California, who led the IMPACT (Improvement in Memory with Plasticity-based Adaptive Cognitive Training) Study, reports.

Perhaps surprisingly, Brain Fitness exercises hearing, not what people generally think of as, well, thinking. You determine whether a swooping sound rises in frequency or falls, for instance, follow a series of instructions using a computer mouse (move the boy to the ice-cream store and the girl to the post office . . .), and tell apart similar sounds. The program is auditory-based, explains Posit CEO Jeff Zimman, because most people take in most everyday information through hearing.

For the IMPACT study, 468 participants, all healthy adults 65 and over, were divided into two groups. One received an hour a day of training on BrainFitness for eight to ten weeks, and the other (the control group) got the same amount of computer-based learning. That choice of control group is significant. It means that Brain Fitness was being compared not to staring into space or some similarly unhelpful activity, but to one that might reasonably be expected to improve mental ability.

On processing speed, the Brain Fitness group got twice as fast, going from 116 milliseconds to respond to a test stimulus to just 51 second. The control group showed no improvement, their processing speed essentially unchanged (120 milliseconds to 113).

On overall memory, as tested by recalling digits in reverse order to that they had heard, the Brain Fitness group also improved, from a score of 97 to 101. The controls barely budged, rising from 97 to 98.

Most important, the "everyday cognition" of the Brain Fitness group improved, from a raw score of 2240 to 2170 (lower is better). The control group actually got worse, going from a score of 2210 to 2240.

Because the Brain Fitness group showed greater improvements than the controls, including on tasks that the computer-based exercises did not explicitly target, it suggests that the auditory training has altered something fundamental in the brain and not just specific circuits for, say, memory.

"This is the first study to show that the gains are generalizable, that people can improve on tasks they did not specifically practice," says Henry Mahncke, Posit's vice-president for research and outcomes. "By targeting listening skills, rather than giving people tips and tricks to help them remember things, we are working on the brain in a fundamentally different way." Improving the speed and accuracy of auditory processing, Mahncke says, "probably causes neuronal networks that represent information to become bound together more tightly."

The gains held up 90 days after the elderly volunteers stopped using the program, and scientists are optimistic that the improvements will not fade away. Zimman draws an analogy to bicycle riding: even if you have not ridden a bike in years, once you've learned you never forget, probably because the circuitry that underlies that skill has become hard-wired in the cerebellum.

So it may be with training like Posit's that "re-wires the brain" in an enduring way. (Some of the researchers involved in Brain Fitness also developed a [computer-based exercise](#) that rewires the auditory cortex of children with dyslexia, producing lasting improvements in reading ability even after the kids graduate out of the training.)

"There are brain games for entertainment and there is cognitive training that changes brain function," says Zimman. "There is room for both, but people should know which is which."



Permalink: <http://www.blog.newsweek.com/blogs/labnotes/archive/2007/11/17/brain-training-how-it-works.aspx>

[Sphere It!](#)

[Digg It!](#)

[Newsvine](#)

[Del.icio.us](#)

[Facebook](#)

Type Size

[Print](#)

[Email](#)

[RSS](#)

[Social Networks](#)

Permalink: <http://www.blog.newsweek.com/blogs/labnotes/archive/2007/11/17/brain-training-how-it-works.aspx>

TrackBack URL: <http://www.blog.newsweek.com/blogs/labnotes/trackback.aspx?PostID=70715>

You must be a registered user to comment. [Click here](#) to register. Already a user? [Click here](#) to login.

Member Comments

Posted By: [domainnameshg](#) » [Blog Archive](#) » [Brain Training: How It Works](#) (November 18, 2007 at 8:27 PM)

PingBack from <http://domainnameshg.cn/?p=2686>

[Report Abuse](#)

Posted By: » [Posit Science's Gerontological Society of America Poster Session](#) « [Brain Fitness Revolution at SharpBrains](#) (November 20, 2007 at 11:54 AM)

PingBack from <http://www.sharpbrains.com/blog/2007/11/20/posit-sciences-gerontological-society-of-america-poster-session/>

[Report Abuse](#)

Posted By: » [Brain Training: No Magic Bullet, Yet Useful Tool. Interview with Elizabeth Zelinski](#) « [Brain Fitness Revolution at SharpBrains](#) (December 18, 2007 at 7:42 PM)

PingBack from <http://www.sharpbrains.com/blog/2007/12/18/brain-training-no-magic-bullet-yet-useful-tool-interview-with-elizabeth-zelinski/>

[Report Abuse](#)

Posted By: [Trusted.MD Network](#) (December 23, 2007 at 5:11 AM)

Sharon Begley, Newsweek's science reporter, recently wrote that

- "With the nation's 78 million baby boomers approaching the age of those dreaded "where did I leave my keys?" moments, it's no wonder the market for computer-based brain training

[Report Abuse](#)

What's Inside

SECTION HIGHLIGHTS

- [Periscope](#)
- [News](#)
- [Politics](#)
- [Tech / Business](#)
- [Culture / Ideas](#)
- [Health](#)
- [Tip Sheet](#)

FIRST PERSON



In the Slums of Nairobi, The Star of Africa Fades

[Preview Article](#) | [Comments](#)

SPECIAL SECTIONS

- [Enterprise](#)
- [Leadership](#)
- [Boomer Files](#)
- [Project Green](#)
- [Giving Globally](#)
- [CES Coverage](#)
- [Education](#)

COMPETITION



Hooray for Bollywood

Jason Overdorf
India's film industry has long been prolific and chaotic. Now, with modern business leaders, it's coming of age—and taking aim at Hollywood, U.S.A.

[Preview Article](#) | [Comments](#)

Traveling Homepage Newsweek
 Take it to every page with you.

MUST READ NEWS Newsweek
 and interactive information
HEALTH COVERAGE

Commentary, Analysis And Debate
NEWSWEEK VOICES. see what they have to say



- [Give a Gift](#)
- [Change Your Address](#)
- [Pay Your Bill](#)
- [Renew](#)

Only \$20/year!

First Name Last Name
 Email Address **NEXT**

NEWSWEEK SERVICES & TOOLS

- Make Newsweek Your Homepage
- RSS Newsletters
- Podcasts
- Newsweek Radio

[HOME](#) | [CURRENT ISSUE](#) | [INTERNATIONAL EDITION](#) | [THE CW](#) | [PERSPECTIVES](#) | [CARTOON](#) | [MY TURN](#)

[ABOUT NEWSWEEK](#) | [ADVERTISING INFORMATION](#) | [SUBSCRIBER SERVICES](#) | [PRESSROOM](#)
[EDUCATION PROGRAM](#) | [CONTACT US](#) | [USER AGREEMENT](#) | [PRIVACY POLICY](#)
[BACK COPIES](#) | [RIGHTS AND REPRINT SALES](#) | [SHOWCASE ADS](#) | [ONLINE AND DISTANCE LEARNING DIRECTORY](#)

PARTNERS
[washingtonpost.com](#) [Slate](#) [BudgetTravel](#) [KAPLAN UNIVERSITY](#)

© 2008 Newsweek, Inc.