

## **BRAIN GYM ; RESEARCHERS FINDING STEPS THAT MAY HELP DELAY OR EVEN PREVENT ALZHEIMER'S; [City Edition]**

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### **Full Text (1908 words)**

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A winter chill penetrates bridge players who hurry from their cars through the aroma of doughnuts and into The Bridge Center behind the Krispy Kreme store. They're learning to play from the Richmond Bridge Association, which, like the center, is dedicated to preserving the demanding game for future generations. Just in time, too, apparently: Playing cards may hedge their bets against developing old-age memory loss.

"Bridge is intellectually challenging," says the association's president, Mike Fine, who started playing in 1960. "It's a very logical game. You have to count to 13 four times, know what's been played, who played what and, in some places, a little bit of poker bluff, although the bridge we play is friendly and all out in the open."

Younger players looking for mental challenge - such as twentysomethings Brett Sanger and Charles Greenwell - are learning bridge, too, playing with people twice their age.

"Bridge is good for your brain," says Alfredo Neuman, 59, who is honing his skills. "It's like sitting down and solving 30 little puzzles every time you play. And you are playing with people you like. I don't like games that involve luck. I like challenge, and bridge is plain challenge."

Emerging research on dementia, including memory-wasting Alzheimer's disease, strongly suggests that deliberately struggling to learn difficult material is good for your brain from birth to old age. So convincing is the research that the Alzheimer's Association is not waiting for the final results. The national organization is launching a program called "Maintain Your Brain" to get people to work on mental functioning the same way they keep blood pressure, cholesterol and glucose under control.

Indeed, keeping those numbers under control is essential for brain health: What's good for your heart is good for your brain and for delaying Alzheimer's, Dr. Howard Fillit, a neurobiologist and Alzheimer's researcher, told International Longevity Center USA fellows last fall. After age 79, one in three people will manifest the disease until age 95, after which the onset of Alzheimer's is rare. One in three people will manifest the disease after the average age of 79 until 95, after which the first development of Alzheimer's is rare.

"This is a disease of forgetting," Fillit says, and "it is a nightmare" for patients and caregivers.

The message coming from the National Institute on Aging, the Alzheimer's Association and independent researchers, such as Fillit's Institute for the Study of Aging, is that people who exercise their minds and bodies tend to keep their wits longer. In many cases, dementia never develops; in some cases, the onset of dementia is delayed, prolonging independence and thereby lowering long-term care costs.

The Alzheimer's Association estimates that today's 4.5 million people with the brain-wasting disease will balloon to between 11 million and 15 million by 2050.

That's when surviving members of the 78 million baby boomers will be in advanced old age, which is when the debilitating effects of Alzheimer's and related dementias most often strike. An estimated 45 percent of the elderly develops dementia, often severe enough to require assisted living and nursing homes.

Nursing-home care in Richmond costs \$64,000 annually, according to a study by MetLife Mature Market Institute. Delayed or prevented dementia could save the nation billions a year.

Nancy Noonan is professionally aware of these statistics. She's a certified financial planner who keeps up with a multitude of complex finances, regulations and insurance for her clients preparing for retirement. "I'm here to use my brain," Noonan says, bridge cards in hand. "I like to keep my mind active, to learn new things. I get bored if I'm not always learning."

Nica Fairbanks, a solutions center analyst at Carmax, agrees: "Most of us are here for fun, friendship and brainpower - you never learn it all."

The Alzheimer's Association's Maintain Your Brain program stresses basic brain-health essentials: Exercise to pump oxygen to the brain, to lower stress and to keep weight normal. Eat healthful, with foods and/or supplements rich in vitamins E and C and folic acid. Lower elevated cholesterol and triglycerides, blood-pressure and glucose levels. And embrace mentally demanding activities, such as cards and word games.

"While we have no absolute proof that this is going to help, it certainly is not going to hurt," says Sherry Peterson, executive director of the Alzheimer's Association Greater Richmond Chapter. "Maintain Your Brain is designed to get the baby boomers' attention, and to provide them with some things that might help.

"There's evidence that if you can delay Alzheimer's just five years, half of the people who might get it won't. And delaying Alzheimer's will help families from going bankrupt and will save millions on long-term care."

Dr. Paul D. Nussbaum, a Pittsburgh neuropsychologist and Alzheimer's researcher, speaks to packed crowds at the American Society on Aging-National Council on Aging annual conventions.

"Alzheimer's is a childhood disorder," he insists. Every aspect of life, from fetal nutrition to infant, child and adult stimulating environments, affects whether a person develops risk factors for devastating memory loss in late life.

Research at the National Institute on Aging, the Alzheimer's Association, universities and at independent laboratories, such as Fillit's, point to additional promising brain health-promoting practices.

Education. More advanced schooling lowers the risk of developing Alzheimer's. Multiple studies have shown that people with advanced degrees have lower rates of Alzheimer's - and "we think this goes for other dementias as well," Nussbaum says.

"Higher levels of education and more sophisticated, mentally challenging occupations that demand more sophisticated problem-solving - things that aren't rote" help "build up higher intellectual reserves." If people who have challenged themselves get Alzheimer's, they have extra brainpower to manifest it later. "It's as if your brain reserve fights off the disease."

Those with poor educations, or few years in school, which typically lead to routine, unstimulating occupations, are at greater risk for dementia.

"Passivity is bad; novel, complex environments are good."

Lifelong learning of new information - such as card playing and word games - helps keep the brain sharper. Ed Kinlaw, 37, a Virginia Farm Bureau internal auditor, started learning bridge 10 years ago for extra mental challenge. He became so convinced about the value of playing he became a Richmond Bridge Association instructor.

One study showed that travel, knitting and gardening seem to reduce the risk of Alzheimer's: All three activities involve planning and successfully using visual and spatial mental skills.

Language. Another risk factor for Alzheimer's is limited language.

Command of correct English or a native language or both, with a wide vocabulary fueled by passion for expression and communication, is a related protection. Aging specialists say that lack of language development and use throughout life impair thinking and memory.

Environment. Rats raised in enriched environments - with socialization, physical exercise and mental stimulation - have healthy brains and less dementia. If rats can thrive in such environments, Nussbaum asks, why not humans?

"If you're in an environment that's impoverished, there will be an effect on the brain. It may be immediate; it may be long-term," Nussbaum says. "There's a link between childhood poverty and Alzheimer's later in life."

Health. Alzheimer's is the leading cause of dementia, but vascular dementia is second. Vascular dementia results from heart disease, high blood pressure (hypertension), diabetes and cholesterol, often leading to memory-robbing conditions, stroke and heart attack. All these chronic, or long-lasting, diseases require treatment, often with significant lifestyle changes and medication.

Yet only a third of Americans who are on hypertensive medications, for example, take what the doctor prescribed, Fillit notes. Limited income, high costs of prescription drugs and lack of perceived improvement are some reasons for this. Elevated "cholesterol is clearly a risk factor for Alzheimer's disease."

Stress. Unrelenting stress from such conditions as post-traumatic stress disorder, depression, overwork, pain, anxiety, fear, worry and trauma damages the hippocampus, an area of the brain that's critically important for memory and information.

Deep, regular relaxation, medication and therapies can ameliorate the effects of stress, as do regular moderate to aerobic exercise, healthful diet and other lifestyle changes, including sufficient sleep.

Sleep. Chronic sleep deprivation can contribute to problems with thinking, judgment, reaction time and learning.

Loud snoring and interrupted breathing are signs of sleep apnea, which can cause your heart to stop briefly and your blood pressure to spike. Weight loss and exercise promote sleep. Schedule sleep - roughly one hour of sleep for every two hours awake.

Supplements. Studies of vitamin E and C point to some protections from memory loss, but those vitamins "are not very good antioxidants" in reaching the brain, Fillit says. Better antioxidants that reach the brain are needed, including ones that target the inflammation process involved in Alzheimer's, Fillit says.

Inflammation is implicated in a variety of chronic diseases, but studies of Prednisone, Celebrex and Motrin failed to show benefits for dementia. However, there is some anecdotal evidence showing that rheumatoid arthritis patients on ibuprofen had lower rates of Alzheimer's. Discuss this with your doctor.

Vitamin B-12 deficiency can cause problems in thinking and gait and may be a risk factor for Alzheimer's, which is why it is being studied by the National Institutes of Health.

Get a doctor's advice on herbal brain supplements, some of which can raise blood pressure and interfere with the effectiveness of prescription medication.

Head trauma. There's fairly good evidence that people who experience head trauma "go on to have a greater risk of Alzheimer's," Fillit warns. There's also some evidence that children who play soccer have cognitive dysfunction if they do headers, he notes.

Also beneficial: better balance and preventing head-cracking falls, both especially important as you age.

Bottom line. Keep your body healthy. Your brain will remember to thank you.

## MAINTAIN YOUR BRAIN

The Alzheimer's Association is launching a campaign for brain health. It estimates that by 2050, there will be between 11 million and 15 million dementia sufferers, up from 4.5 million today. Its recommendations include:

\* **Maintain:** Promote health as you age by lowering blood pressure, cholesterol, blood sugar and weight.

\* **Exercise:** Both body and mind require exercise. Work out, take a class, talk with others, read, play cards, work crossword puzzles - anything mentally challenging.

\* **Feed:** Your brain needs nutrient-dense foods, including foods high in vitamins E and C. Take a multivitamin that includes folic acid. Eat salmon, mackerel or other foods high in omega-3 fatty acids.

## RESOURCES

- \* Alzheimer's Association, [www.alz.org](http://www.alz.org) for research information and a list of chapters, or contact Alzheimer's Association, Greater Richmond Chapter, (804) 967-2580; Helpline, (800) 598-4673; [www.richmondalzheimers.org](http://www.richmondalzheimers.org)
- \* Richmond Bridge Association, A 20-week Friendly Bridge beginner class, 6-8:30 p.m. Sundays at The Bridge Center, 1911 Bishop Road. For more information, call Mike Fine, (804) 644- 5277; Linda and Bob MacCleave, (804) 744-6577; Ed Kinlaw, (804) 744-4870; or visit <http://richmondbridge.net/>
- \* "Friendly Bridge Book," by Ed Kinlaw and Linda MacCleave.
- \* "Brain Health and Wellness," by Dr. Paul Nussbaum.
- \* "Cognitive Decline: Strategies for Prevention," edited by Drs. Howard M. Fillit and Robert N. Butler.
- \* "Delaying the Onset of Late- Life Dysfunction," edited by Drs. Robert N. Butler and Jacob A. Brody.
- \* "Aerobics of the Mind: Keeping the Mind Active in Aging : A New Perspective on Programming for Older Adults," by Marge Engelman.
- \* "Brocklehurst's Textbook of Geriatric Medicine," by Raymond Tallis and Howard M. Fillit.
- \* Web sites: Visit [www.caromont.org/12625.cfm](http://www.caromont.org/12625.cfm); [www.hollandandbarrett.com/healthnotes/Concern/ARCD.htm](http://www.hollandandbarrett.com/healthnotes/Concern/ARCD.htm);  
[www.hon.ch/News/HSN/514115.html](http://www.hon.ch/News/HSN/514115.html); [www.infoaging.org/1-nutr-17-r-cognitive.html](http://www.infoaging.org/1-nutr-17-r-cognitive.html)

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