

# The Washington Post

---

June 19, 2003, Thursday, Final Edition

A SECTION; Pg. A01

---

## Mind Games May Trump Alzheimer's Study Cites Effects of Bridge, Chess

**Shankar Vedantam,  
Washington Post Staff Writer**

Playing chess, bridge or a musical instrument significantly lowers the risk of developing Alzheimer's disease or other forms of dementia, according to the most comprehensive study to examine the benefits of challenging intellectual activity among the elderly.

Seniors who regularly engaged in pastimes that stretched their minds -- sorry, watching TV doesn't count -- lowered their risk of developing Alzheimer's disease and other dementias by as much as 75 percent, compared with those who didn't exercise their minds, researchers said yesterday.

The report bolsters a growing body of evidence that exercising the mind through board games, social activities and education offers powerful protection against mental deterioration and disease.

"I see a lot of elderly patients -- a lot come with memory complaints," said Joe Verghese, a neurologist at the Albert Einstein College of Medicine in the Bronx, who led the study team. "They have so-called senior moments -- they go in a room and forget why they are there. One thing I advise is for them to increase their participation in cognitively stimulating activities."

Some mental activity appears to be better than none, said Verghese. And the more hours seniors spent doing challenging tasks, the more protection they gained against brain decline. The day may not be far off, he said, when doctors recommend a game of chess and the daily crossword along with physical exercise and a healthy diet.

The benefits of such activities -- widely available and inexpensive -- appear to benefit those at all levels of education and IQ.

The finding comes as researchers race to find ways to slow or prevent disorders such as Alzheimer's disease, which afflicts 4 million Americans. As the large number of people in the baby boom generation age, dementia-related disease is expected to rise, and reducing its toll could have enormous ramifications.

Equally intriguing from a scientific standpoint is the idea that mental activity such as playing bridge can alter the molecular march of a neurological process.

"How can the molecular determinism of Alzheimer's disease be trumped by elderly people's card-playing?" asked Joseph Coyle, a professor of psychiatry and neuroscience at Harvard Medical School, in an analysis of Verghese's study. Both papers are being published today in the *New England Journal of Medicine*.

"The apparent conflict is between biology and psychology," Coyle said in an interview. But neuroscientists are finding that in many ways the brain is "plastic" -- thoughts and experiences change neural structure and chemistry.

"Using the mind actually causes rewiring of the brain, sprouting new synapses -- it may even cause the generation of new neurons," Coyle said. "So psychology trumps biology."

The new study tracked 469 people over age 75, starting in 1980. The researchers measured how often they participated in leisure activities such as reading, walking, dancing and board games. As people aged, researchers tracked how many people developed dementia.

Verghese's team also solved a chicken-and-egg problem that dogged previous research: Do mental activities really prevent dementia, or does dementia cause people to lose interest in mental activities? By screening out anyone who might have had dementia at the outset from their analysis, the researchers showed that

leisure activities influenced dementia in their study, and not the other way around.

Those who played board games had a 74 percent lower risk and those who played an instrument had a 69 percent lower risk. Doing crossword puzzles cut the risk by 38 percent.

Purely physical activities failed to lower the risk, said Verghese, except for dancing, which lowered the risk by a dramatic 76 percent. Of all the physical activities, dancing involved the most mental effort, the researchers noted. A previous study found benefits for gardening, which also involves both mental and physical effort.

