

# Video games improve mental agility

WASHINGTON, USA: Playing video games can prevent and even reverse deteriorating brain functions such as memory, reasoning and visual processing, according to a study released on Wednesday (1 May).



The University of Iowa study of hundreds of people age 50 and older found that those who played a video game were able to improve a range of cognitive skills and reverse up to seven years of age-related declines.

"We know that we can stop this decline and actually restore cognitive processing speed to people," said Fredric Wolinsky, a University of Iowa professor of public health and lead author of the paper published in the journal PLOS One.

"So, if we know it helps with mental health, shouldn't we be helping people? It's fairly easy and older folks can get the training game so they learn how to play it," Wolinsky said.

The study is the latest in a series of research projects examining why people, as they age, lose "executive function" of the brain, which is needed for memory, attention, perception and problem-solving.

Wolinsky and colleagues separated 681 generally healthy patients in Iowa into four groups. Each patient was split into two groups with people in one group aged between 50 and 64 years and those over 65 in the second group

One group was given computerised crossword puzzles to do, while other groups were asked to play a video game called "Road Tour," which revolves around identifying a type of vehicle displayed fleetingly on a license plate.

## Video game improves function by 70%

Participants were asked to re-identify the vehicle type and match it with a road sign displayed from a circular array of possibilities.

The player must succeed at least three times out of every four tries to advance to the next level, which speeds up the vehicle identification and adds more distractions.

"The game starts off with an assessment to determine your current speed of processing. Whatever it is, the training can

help you get about 70% faster," Wolinsky said.

The groups that played the game for at least 10 hours, either at home or in a laboratory at the university, gained at least three years of cognitive improvement when tested after a year.

A group that got four additional hours of training with the game did even better, improving their cognitive abilities by four years, according to the study.

"We not only prevented the decline (in cognitive abilities), we actually sped them up," Wolinsky said.

The key appeared to lie in improving the brain's processing speed, which can also widen one's field of view.

"As we get older, our visual field collapses on us," Wolinsky explained.

"We get tunnel vision. It's a normal function of aging. This helps to explain why most accidents happen at intersections because older folks are looking straight ahead and are less aware of peripherals," he said.

The study builds on research begun in the 1990s on efforts to improve memory, reasoning and visual processing speed.

The researchers found those who played "Road Tour" scored far better than the crossword puzzle group in functions such as concentration, nimbleness with shifting from one mental task to another and the speed at which new information is processed.

The improvement ranged from 1.5 years to nearly seven years in cognitive improvement, the study found.

"It's the 'use it or lose it' phenomenon," Wolinsky said. "Age-related cognitive decline is real, it's happening and it starts earlier and then continues steadily. The good news is we can do something about it," he added.

Source: AFP via I-Net Bridge

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