Medical Xpress

A silly pat on the head helps seniors remember daily med, study suggests

July 28 2009, By Gerry Everding

Remembering to take daily medications can be a challenge, but new research offers tips for strengthening those memories. Photo by Janet Gumpert

(PhysOrg.com) -- Doing something unusual, like knocking on wood or patting yourself on the head, while taking a daily dose of medicine may be an effective strategy to help seniors remember whether they've already taken their daily medications, suggests new research from Washington University in St. Louis.

We've all heard warnings that some medications may be habit-forming, but research also shows that "getting into the habit" of taking a daily medicine in a routine and precise fashion can be a befuddling challenge

for some older adults, many of whom tend to err on the side of over-medication, taking a dangerous second dose when in doubt about the first.

"In extended medication-taking situations, the habitual nature of the task may make it difficult for older adults to remember whether or not they took the medication on a particular day, especially if pill boxes are not used," explains Mark McDaniel, Ph.D., lead author of the study and a professor of psychology in Arts & Sciences at Washington University.

"To remedy this potential problem, older adults could be instructed to take their medication while placing one hand on their head or in some other unusual or silly way, like crossing their arms," he suggests. "Our results indicate that older adults can use these sorts of more complex motor tasks to effectively reduce repetition errors in habitual prospective memory tasks, such as taking a daily medication."

The study, published in a recent issue of the journal Aging, Neuropsychology, and Cognition, is co-authored by Julie M. Bugg, Ph.D., postdoctoral research scholar in psychology at Washington University; Grit M. Ramuschkat of the Department of Psychology at the University of Heidelberg, Germany; Matthias Kliegel of the Department of Psychology, Technische Universität Dresden, Germany; and Giles O. Einstein, professor and chair of psychology at Furman University in South Carolina.

McDaniel and Einstein co-authored a 2004 book on "Memory Fitness: A Guide for Successful Aging" and a 2007 book on the latest research into the nuances of prospective memory, the process of remembering to perform an action at an appropriate time in the future.

In previous research, they've shown that older adults are more likely to incorrectly repeat an action in situations where a prospective memory

task has become routine or habitual in nature.

Extending that line of research, the current study examines whether the tendency of older adults to err on the side of repeating a poorly remembered habitual task could be reduced by providing advance instructions to omit doing a task if in doubt about whether it was previously executed. The study also tested whether doing something unusual while executing a task would help seniors remember having done the task.

Specifically, participants were asked to push the F1 key on a computer keyboard once — and only once — at some point at least 30 seconds into a series of relatively simple, three-minute-long, letter-recognition tasks, such as pushing the computer key for the letter that comes next in the alphabet after a letter being displayed on the monitor (see a "g" and push an "h").

One subset of the older study participants was instructed to put a hand on their heads whenever they pushed the F1 key.

In another phase of the experiment, participants were asked to do the letter-recognition task while simultaneously carrying out an additional more complicated and distracting task — listening to a series of random numbers and pushing a clicker whenever they heard two odd numbers in a row.

The performance of older adults averaging 72 years of age was compared with results from a group of college students put through the same trials.

"When ongoing task demands were challenging, older adults committed more repetition errors than younger adults, regardless of whether they'd been told in advance to err on the side of omission — told not to push

the F1 key if they had any doubt about whether it had already been pushed once in the same trial," says McDaniel.

However, older adults asked to carry out the more complex motor task (placing hand on head) while pushing the F1 key made significantly less repetition errors than older adults not making use of this memory enhancing technique.

And, in situations where the ongoing tasks were not overly complicated and distracting, older adults using this memory technique were able to reduce their repetition errors to levels comparable with those of younger adults.

This finding, along with other data from the study, suggests that older participants can learn to monitor their output and make better mental notes regarding the completion of a prospective memory task.

"For applied purposes, using a distinct motor activity to minimize repetition errors in older adults' prospective memory tasks would seem to have great potential. In light of these findings, it seems reasonable to conclude that, at least in a context in which the ongoing activity is not overly demanding, older adults can implement strategies that are effective for supporting execution and output monitoring of habitual prospective memory tasks," McDaniel concludes.

Provided by Washington University in St. Louis (news : web)

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