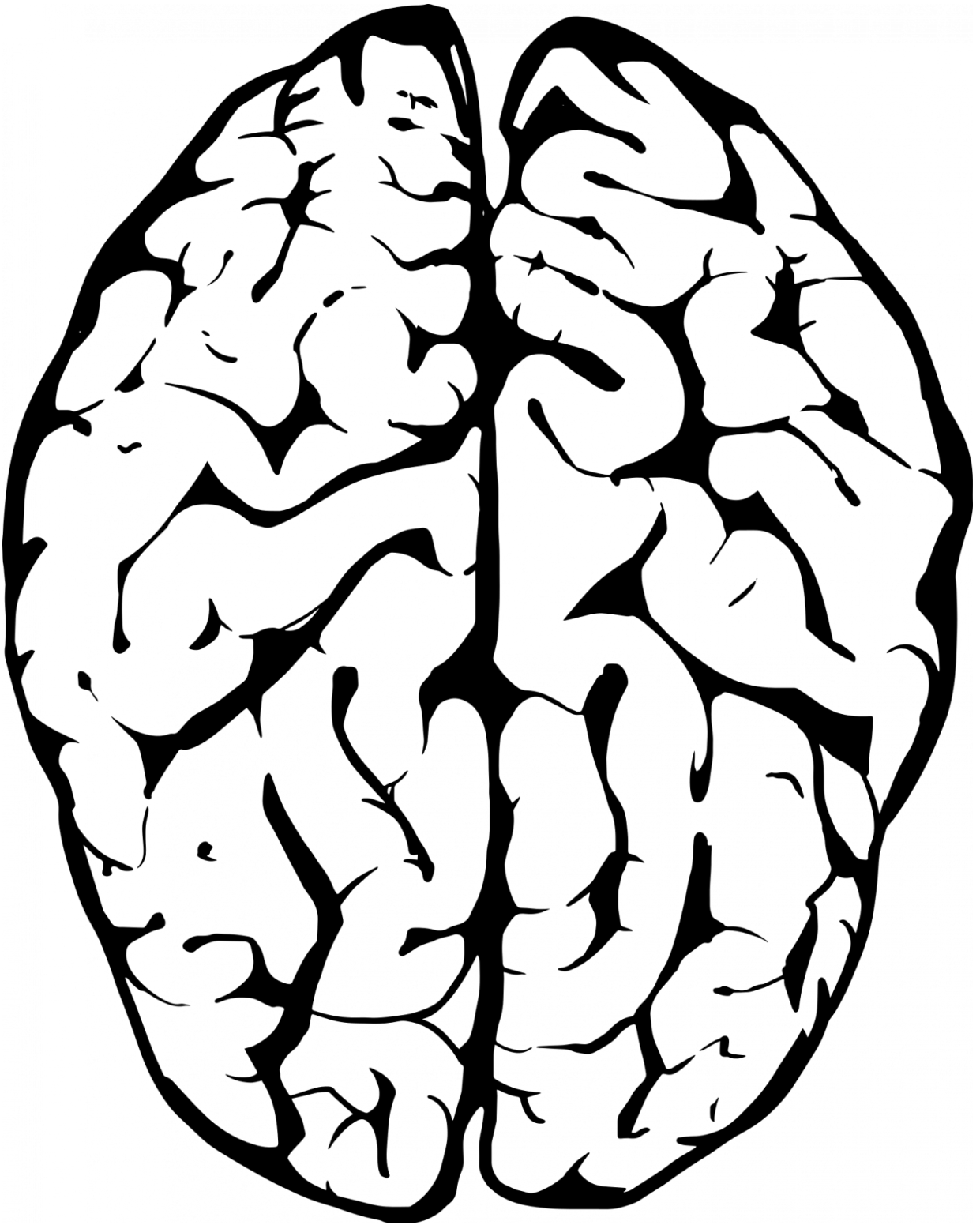


Study explores nicotine patch to treat mild cognitive impairment

November 6 2017, by Nancy Humphrey



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Three years ago Reece Dean, of Nashville's Bellevue community, retired at age 69 from a career as a busy truck driver. Mary Ann, his wife, began to notice some changes in his memory and behavior since he was home more consistently.

"He had a crazy schedule as a truck driver and was gone a lot, but when he retired, I noticed that he was having trouble remembering things and recalling words, and there were some mood issues," Mary Ann said. "It's been a slow progression."

Vanderbilt University Medical Center (VUMC) is one of 29 sites participating in a national study to determine whether a daily transdermal nicotine patch will have a positive effect on attention and early memory impairment in older adults diagnosed with Mild Cognitive Impairment (MCI).

Paul Newhouse, M.D., director of the Center for Cognitive Medicine at VUMC, is the national director of the study.

More than 8 million Americans are currently diagnosed with MCI, a condition that affects memory or other thinking skills. Recent evidence shows that adults with MCI are at a higher risk for subsequently developing Alzheimer's disease.

MCI is diagnosed when memory problems become more apparent than would be expected in normal aging. Symptoms include [memory loss](#), problems with attention, as well as mild difficulties learning and retaining new information.

Mary Ann said that Reece confuses words, and remembers certain details about a memory, but not the outcome.

"It's frustrating for him, and for me. Sometimes he's OK with not

remembering, and sometimes he just gets really frustrated and really upset when things aren't going as they should," she said. "He might be OK with something today, and if the same thing happens tomorrow, he's not. Things just weigh on his mind."

Mary Ann, who has two children with Reece and seven grandchildren, said he also has trouble prioritizing. "He'll be working on something in the garage and won't quit to get ready for an appointment. It's hard for him to change the path he's on sometimes."

Mary Ann said she tries to balance keeping tabs on her husband's responsibilities with making sure that he has the independence to do them.

"I don't want to have to check behind him, to make sure something gets done, but I have to."

People participating in the Memory Improvement Through Nicotine Dosing (MIND) study will participate in 12 visits over a two-year period at one of the 29 sites.

In an earlier study, adults with MCI who were prescribed the nicotine patch for six months had improved attention and memory, and there were no serious side effects or signs of nicotine withdrawal.

"These results were encouraging and justify this larger study, funded by the National Institute on Aging," said VUMC's Newhouse, Jim Turner Professor of Cognitive Disorders and professor of Psychiatry and Behavioral Sciences.

"I am convinced that we will find a way to help improve early memory loss and make a real difference in people's lives. In this study, we have an inexpensive, widely available potential treatment."

Nicotine, a natural plant alkaloid, is a "fascinating drug with interesting properties," Newhouse said. "People think of it as a potentially noxious substance, but it's a plant-derived medication just like a lot of other medications."

Nicotine binds to very specific receptors in the brain that are important for thinking and memory and may have neuroprotective effects. People with Alzheimer's disease are known to lose some of those receptors.

The MIND study is seeking 300 healthy, non-smoking adults, age 55 and older who have been diagnosed with MCI or who show symptoms of early memory loss—such as problems with [memory](#), language thinking and judgment that are greater than normal age-related changes.

Those who meet the study qualifications will be placed on either daily [nicotine](#) or placebo patches.

More information: Potential study volunteers can learn more, including how to enroll, by visiting the MIND study website at MINDstudy.org or by calling 866-MIND150.

Provided by Vanderbilt University

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