

# Challenging work tasks may have an upside for the brain

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Professionals whose jobs require more speaking, developing strategies, conflict resolution and managerial tasks may experience better protection against memory and thinking decline in old age than their co-workers, according to a new study published in the April 29, 2015,

online issue of *Neurology*, the medical journal of the American Academy of Neurology.

"Our study is important because it suggests that the type of [work](#) you do throughout your career may have even more significance on your brain health than your education does," said study author Francisca S. Then, PhD, with the University of Leipzig in Germany. "Education is a well-known factor that influences dementia risk."

For the study, 1,054 people over the age of 75 were given tests that measured their memory and [thinking](#) abilities every one-and-a-half years for eight years.

The researchers also asked the participants about their work history and categorized the tasks they completed into three groups: executive, verbal and fluid. Examples of executive tasks are scheduling work and activities, developing strategies and resolving conflicts. Examples of verbal tasks are evaluating and interpreting information and fluid tasks were considered to be those which included selective attention and analyzing data.

Memory and thinking abilities were examined through a clinical test, the Mini-Mental State Examination (MMSE). In this [clinical test](#), a small decline in points can indicate a clinically relevant deficit.

The study found that people whose careers included the highest level of all three types of tasks scored highest on the thinking and memory tests by two MMSE points over people with the lowest level. People with the highest level of all three types of tasks also had the slowest rate of cognitive decline. Over eight years, their rate of decline was half the rate of participants with a low level of mentally demanding work tasks. Among the three types of work tasks, high levels of executive and verbal tasks were distinctively associated with slower rates of memory and

thinking decline.

Participants with a high level of executive tasks scored two MMSE points higher on memory and thinking tests at the beginning of the study and five MMSE points higher after eight years in the study compared to participants with a low level of these tasks. Participants with a high level of verbal tasks declined an average two MMSE points less than those with a low level.

"Challenges at work may indeed be a positive element, if they build up a person's mental reserve in the long-term," said Then.

Provided by American Academy of Neurology

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