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New study shows how shift work affect cognitive functions

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A new study from Uppsala University shows that compared to non-shift workers, shift workers needed more time to complete a test that is frequently used by physicians to screen for cognitive impairment. However, those who had quit shift work more than five years ago completed the test just as quick as the non-shift workers. The findings are published in the journal *Neurobiology of Aging*.

By utilizing data from around 7000 individuals participating in the Swedish cohort study EpiHealth, researchers from Uppsala University and Malmö University sought to examine whether shift work history would be linked to performance. The test that was used is called the "Trail Making Test", which consists of two parts. Part A requires participants to connect circles labeled with numbers 1-25 in an ascending order. In part B, participants must alternate between numbers and letters in an ascending order. Time to complete these tests has been shown to increase with age.
'Our results indicate that shift work is linked to poorer performance on a test that is frequently used to screen for cognitive impairment in humans', says Christian Benedict, associate professor at the Department of Neuroscience at Uppsala University and corresponding author of the study.

'The poorer performance was only observed in current shift workers and those who worked shifts during the past 5 years. In contrast, no difference was observed between non-shift workers and those who had quit shift work more than 5 years ago. The latter could suggest that it

may take at least 5 years for previous shift workers to recover brain functions that are relevant to the performance on this test', says Christian Benedict.

More information: Olga E. Titova et al. Association between shift work history and performance on the trail making test in middle-aged and elderly humans: the EpiHealth study, *Neurobiology of Aging* (2016). DOI: 10.1016/j.neurobiolaging.2016.05.007

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