

# Add it up: Could this test equal a way to determine dementia risk?

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People whose scores on a dementia risk test indicated a less brain-healthy lifestyle, including smoking, high blood pressure and a poor diet, may also have the following: lower scores on thinking skills tests, more

changes on brain scans and a higher risk of cognitive impairment. That's according to a new study published in the August 25, 2021, online issue of *Neurology*. The study also found that in men, the test scores were associated with poor memory function and markers of brain shrinkage.

"Dementia risk scores might be useful to help identify people at higher risk of dementia earlier, so that potential lifestyle factors can be addressed earlier and monitored more closely," said study author Sebastian Köhler Ph.D., of Maastricht University, the Netherlands. "Our study found that a substantial proportion of brain changes might be attributable to risk factors that can be modified."

The study involved 4,164 people with an average age of 59. All participants took a test called the "Lifestyle for Brain Health" (LIBRA). The [total score](#) reflects a person's potential for developing dementia. This study took into account 11 out of 12 lifestyle factors on the test, including [high blood pressure](#), heart disease, smoking, diet and physical activity. Higher scores reflect higher dementia risk, with scores ranging from -2.7 to +12.7. Overall, the study group had an average score of 1.19. Researchers divided the participants into three groups: those with low risk of dementia, with an average score of -1.47, those with medium risk, with an average score of 1.20, and those with high risk, with an average score of 4.6.

Participants in the study took tests of memory and other thinking skills, such as information processing speed, executive function and attention. Researchers also looked at brain scans for signs of cerebral small vessel disease, which are signs of vascular brain damage often seen in patients who have [dementia](#). They also looked for changes in volumes of white matter and gray matter.

Researchers found that people who were in the high-risk group on the LIBRA test, indicating a less brain-healthy lifestyle, had higher volumes

of brain lesions, 1.27 ml compared to 0.48 ml for those in the lowest risk group. The high-risk group also had lower scores on two tests of thinking: information processing speed and executive function and attention.

Only in men, however, did researchers find associations between higher scores on the LIBRA test and lower volumes of grey matter, as well as lower scores on tests of memory.

"More research is needed to confirm these findings and determine why there were differences between men and women," Köhler said. "It's exciting that a simple [test](#) score may indeed be an index of [brain](#) health. We need to learn whether people can improve their scores by making changes in their diet, increasing physical activity or limiting alcohol to low-to-moderate use."

**More information:** Irene S Heger et al, Associations of the Lifestyle for Brain Health Index With Structural Brain Changes and Cognition: Results From the Maastricht Study, *Neurology* (2021). DOI: 10.1212/WNL.0000000000012572 , [n.neurology.org/content/early/ ... WNL.0000000000012572](https://n.neurology.org/content/early/.../WNL.0000000000012572)

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