

Trouble sleeping? It may affect your memory later on

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The amount and quality of sleep you get at night may affect your memory later in life, according to research that was released today and will be presented at the American Academy of Neurology's 64th Annual Meeting in New Orleans April 21 to April 28, 2012.

"Disrupted sleep appears to be associated with the build-up of amyloid plaques, a hallmark marker of Alzheimer's disease, in the brains of people without [memory problems](#)," said study author Yo-El Ju, MD, with Washington University School of Medicine in St. Louis and a member of the American Academy of Neurology. "Further research is needed to determine why this is happening and whether sleep changes may predict [cognitive decline](#)."

Researchers tested the [sleep patterns](#) of 100 people between the ages of 45 and 80 who were free of [dementia](#). Half of the group had a [family history](#) of Alzheimer's disease. A device was placed on the participants for two weeks to measure sleep. Sleep diaries and questionnaires were also analyzed by researchers.

After the study, it was discovered that 25 percent of the participants had evidence of amyloid plaques, which can appear years before the symptoms of Alzheimer's disease begin. The average time a person spent in bed during the study was about eight hours, but the average [sleep time](#) was 6.5 hours due to short awakenings in the night.

The study found that people who woke up more than five times per hour

were more likely to have amyloid plaque build-up compared to people who didn't wake up as much. The study also found those people who slept "less efficiently" were more likely to have the markers of early stage Alzheimer's disease than those who slept more efficiently. In other words, those who spent less than 85 percent of their time in bed actually sleeping were more likely to have the markers than those who spent more than 85 percent of their time in bed actually sleeping.

"The association between disrupted sleep and amyloid plaques is intriguing, but the information from this study can't determine a cause-effect relationship or the direction of this relationship. We need longer-term studies, following individuals' sleep over years, to determine whether disrupted sleep leads to [amyloid plaques](#), or whether brain changes in early Alzheimer's disease lead to changes in sleep," Ju said. "Our study lays the groundwork for investigating whether manipulating sleep is a possible strategy in the prevention or slowing of Alzheimer disease."

Provided by American Academy of Neurology

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