

Anti-epileptic drugs increase risk of Alzheimer's and dementia

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Credit: University of Eastern Finland

The use of anti-epileptic drugs is associated with an increased risk of Alzheimer's disease and dementia, according to a new study from the University of Eastern Finland and the German Center for Neurodegenerative Diseases, DZNE. Continuous use of anti-epileptic drugs for a period exceeding one year was associated with a 15 percent increased risk of Alzheimer's disease in the Finnish dataset, and with a 30 percent increased risk of dementia in the German dataset.

Some anti-epileptic drugs are known to impair cognitive function, which refers to all aspects of information processing. When the researchers compared different anti-epileptic drugs, they found that the risk of Alzheimer's disease and [dementia](#) was specifically associated with drugs that impair cognitive function. These drugs were associated with a 20 percent increased risk of Alzheimer's disease and with a 60 percent increased risk of dementia.

The researchers also found that the higher the dose of a [drug](#) that impairs cognitive function, the higher the risk of dementia. However, other anti-

epileptic drugs, i.e. those which do not impair cognitive processing, were not associated with the risk.

"More research should be conducted into the long-term cognitive effects of these drugs, especially among older people," Senior Researcher Heidi Taipale from the University of Eastern Finland says.

Besides epilepsy, anti-epileptic drugs are used in the treatment of neuropathic pain, bipolar disorder and generalised anxiety disorder. This new study is the largest research on the topic so far, and the first to investigate the association in terms of regularity of use, dose and comparing the risk between anti-epileptic drugs with and without cognitive-impairing effects. The results were published in the *Journal of the American Geriatrics Society*.

The association of anti-epileptic drug use with Alzheimer's disease was assessed in Finnish persons diagnosed with Alzheimer's disease and their controls without the disease. This study is part of the nationwide register-based MEDALZ study, which includes all 70,718 persons diagnosed with Alzheimer's [disease](#) in Finland during 2005-2011 and their 282,862 controls. The association of anti-epileptic drug use with dementia was investigated in a sample from a large German statutory health insurance provider, Allgemeine Ortskrankenkasse (AOK). The dataset includes 20,325 persons diagnosed with dementia in 2004-2011, and their 81,300 controls.

More information: Heidi Taipale et al. Use of Antiepileptic Drugs and Dementia Risk-an Analysis of Finnish Health Register and German Health Insurance Data, *Journal of the American Geriatrics Society* (2018). [DOI: 10.1111/jgs.15358](https://doi.org/10.1111/jgs.15358)

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