Long-term use of pills for anxiety and sleep problems may be linked to Alzheimer's

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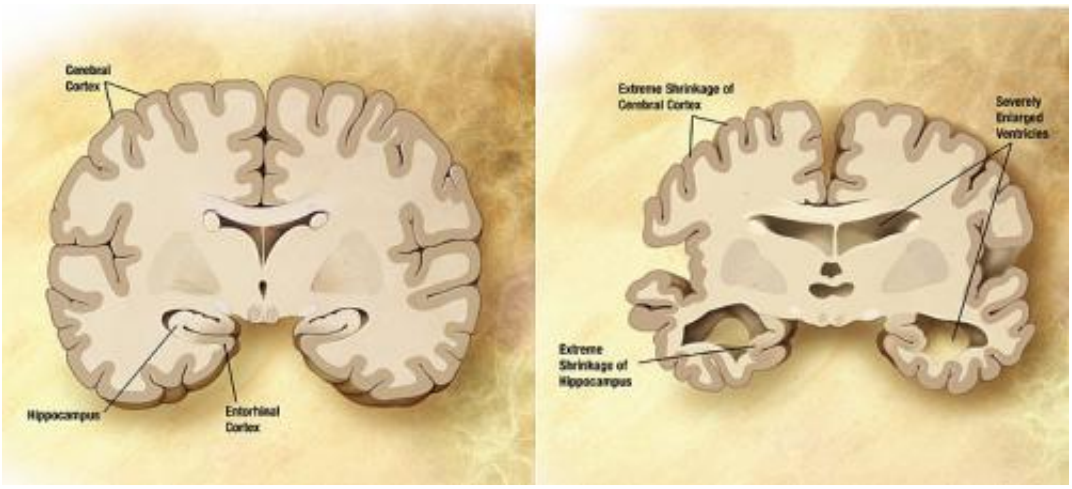

Diagram of the brain of a person with Alzheimer's Disease. Credit: Wikipedia/public domain.

Taking benzodiazepines—widely prescribed drugs to treat anxiety and insomnia—is associated with an increased risk of developing Alzheimer's disease, particularly for long-term users, suggests a study published in *BMJ* today.

The researchers warn that unwarranted long-term use should be considered a public health concern.

Dementia currently affects about 36 million people worldwide and this number is expected to double every 20 years, reaching 115 million by

2015. Although a increased risk of dementia has been identified in benzodiazepine users, the nature of this association, whether causal or not, remains unclear.

So a team of researchers based in France and Canada set out to investigate the relationship between the risk of Alzheimer's disease and benzodiazepine exposure over a several years, as well as a potential dose-response relationship.

Using data from the Quebec health insurance program database (RAMQ), they tracked the development of Alzheimer's disease in a sample of elderly residents living in Quebec, Canada who had been prescribed benzodiazepines.

Over a period of at least six years, they identified 1,796 cases of Alzheimer's disease. They then compared each case with 7,184 healthy people matched for age, sex, and duration of follow-up.

Results show that past use of benzodiazepines for three months or more was associated with an increased risk (up to 51%) of Alzheimer's disease. The strength of association increased with longer exposure and with use of long-acting benzodiazepines rather than short-acting ones.

Further adjustment for symptoms that might indicate the start of dementia, such as anxiety, depression or sleep disorders, did not meaningfully alter the results.

In this large case-control study, benzodiazepine use was associated with an increased risk of Alzheimer's disease, say the authors. They emphasise that the nature of the link is still not definitive, but say the stronger association seen with long-term exposures "reinforces the suspicion of a possible direct association, even if benzodiazepine use might also be an early marker of a condition associated with an increased

risk of dementia."

Benzodiazepines are "indisputably valuable tools for managing anxiety disorders and transient insomnia" they write, but warn that treatments "should be of short duration and not exceed three months."

They conclude that their findings are of "major importance for public health, especially considering the prevalence and chronicity of benzodiazepine use in elderly populations and the high and increasing incidence of dementia in developed countries."

In view of the evidence, they conclude that "it is now crucial to encourage physicians to carefully balance the benefits and risks when initiating or renewing a treatment with benzodiazepines and related products in elderly patients."

In an accompanying editorial, Professor Kristine Yaffe of the University of California at San Francisco and Professor Malaz Boustani of the Indiana University Center for Aging Research, point out that in 2012 the American Geriatrics Society updated its list of inappropriate drugs for older adults to include benzodiazepines, precisely because of their unwanted cognitive side effects.

Yet almost 50% of older adults continue to use these drugs, they say. And without any formal monitoring system, the potential long term consequences on brain health are likely to be missed, adding to the growing prevalence of cognitive impairment among older people, they suggest.

Given the expanding numbers of older people likely to be treated with several drugs at a time, and/or who are at risk of Alzheimer's disease, this gap needs to be plugged, they say.

More information: www.bmj.com/cgi/doi/10.1136.bmj.g5205
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