

## Alzheimer's Dementia Linked with Benzodiazepine Use

A recent case-control study posted in the *British Medical Journal* has linked the use of benzodiazepines to Alzheimer's Dementia (AD), causing many practitioners to rethink their current prescribing practices. The investigators found that patients exposed to 180 days of benzodiazepine use had a nearly 50% increase in the incidence of AD over the course of five years relative to those with no exposure. Upon further analysis of subgroups within the study, it was found that long acting benzodiazepines (e.g. diazepam, clonazepam, triazolam) were more likely to be used in those developing AD relative to short acting agents (e.g. alprazolam, lorazepam). It is also noted that lower doses and infrequent dosing of benzodiazepines did not have as strong of a correlation to disease development. The authors adjusted the study results for confounding variables, including depression and anxiety, as many mental disorders are previously tied to the development of AD. However, early symptoms of AD may manifest as agitation or insomnia (two indications that many benzodiazepines may treat), and therefore the use of such medication in this population may have skewed study results.

The United States continues to have an increasingly larger elderly population. Benzodiazepines have previously been implicated to be potentially inappropriate agents to use in such patients by the American Geriatrics Society in 2012, and despite the well-documented effects they have on cognitive function, physicians continue to prescribe them due to their availability and efficacy in treating certain mental disorders. Furthermore, benzodiazepines should, in general, be prescribed for short term use (e.g. three months or less) to treat conditions such as anxiety or insomnia, thereby making current long-term use of such medications potentially inappropriate regardless of new data.

Despite the claims of proper study design and protocol by the study's authors, it is unknown if benzodiazepine use definitively causes the development of Alzheimer's Dementia. However, there appears to be a correlation between the two entities, and physicians and doctors alike should consider the risks and benefits for long term use in each patient. While highly unlikely to be proven with a randomized, experimental, placebo-controlled trial, further studies will help supplement current research and strengthen the argument of benzodiazepines causing Alzheimer's Dementia.

### Referenced Articles:

- Yaffe K, Boustani M. Benzodiazepines and risk of Alzheimer's disease. *BMJ*. 2014; 349: g5312
- Healy M. Drugs used for anxiety, sleep are linked to Alzheimer's disease in older people. *The Los Angeles Times*. Accessed October 6<sup>th</sup>, 2014 from <http://www.latimes.com/science/la-sci-sn-anxiety-drug-alzheimers-20140909-story.html>
- Fox M. Anxiety Drugs Linked With Alzheimer's. NBC Health News. Access October 6<sup>th</sup>, 2014 from <http://www.nbcnews.com/health/health-news/anxiety-drugs-linked-alzheimers-n199501>