

## Adult ADHD significantly increases risk of common form of dementia

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Adults who suffer from attention-deficit and hyperactivity disorder (ADHD) are more than three times as likely to develop a common form of degenerative dementia than those without, according to research in the January issue of the *European Journal of Neurology*.

Researchers from Argentina confirmed the link during a study of 360 patients with degenerative [dementia](#) and 149 healthy controls, matched by age, sex and education. The dementia patients comprised 109 people with dementia with Lewy bodies (DLB) and 251 with Alzheimer's.

"Our study showed that 48 per cent of patients with DLB - the second most common cause of degenerative dementia in the elderly after Alzheimer's - had previously suffered from adult [ADHD](#)" says lead author Dr Angel Golimstok. "This was more than three times the 15 per cent rate found in both the control group and the group with Alzheimer's.

"DLB is thought to account for around ten per cent of dementia cases in older people, but it tends to be under-diagnosed because it shares some characteristics with both Alzheimer's and Parkinson's.

"It is a degenerative neurological condition that has a progressive and disabling effect on a person's mental and physical skills. Other symptoms can include recurrent and realistic visual hallucinations, fluctuations in the person's everyday abilities and spontaneous movement problems similar to those observed in Parkinson's.

"ADHD is one of the most common behaviour disorders in child and adolescent psychiatry and the problems it causes, such as difficulty paying attention, hyperactivity and doing things impulsively, can continue into adulthood.

"It is believed that the same neurotransmitter pathway problems are involved in the development of both conditions, so our research set out to test the theory that adult ADHD often precedes DLB."

The average age of the study subjects was 75 in the DLB group and 74 in the Alzheimer's and control groups. Approximately two-third of the participants were female and length of education was very similar. None of the patients were taking psychostimulant drugs.

Patient selection was restricted to people with mild to moderate dementia, measuring 14 to 26 on the mini mental status examination scale and one to two on the clinical dementia rating scale.

In the healthy controls, previous ADHD symptoms were assessed using information from the subjects and direct informants. In patients with cognitive impairment, the assessment was based on symptoms described by direct informants who had known the patient for at least 10 years and had information obtained from a close relative who knew the patient in childhood.

Two neurologists, who were unaware of the objectives of the study, were independently asked to assess all the patients for adult ADHD using:

- the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), which has been produced by the American Psychiatric Association to diagnose psychiatric disorders

- the validated Wender Utah Rating Scale, which is specially designed to retrospectively assess ADHD.

This produced agreement levels of 98 per cent in the DLB group, 96 per cent in the Alzheimer's group and 97.5 per cent in the control group.

A third neurologist provided their judgement in the small number of cases where the first two disagreed and a diagnosis of ADHD was recorded if two out of the three neurologists agreed. The results were then checked by a fourth neurologist fully informed about the objectives of the study.

These results provided an overall diagnosis of previous adult ADHD for the two dementia groups and the control. They also showed that impulsivity and [hyperactivity](#), which are major symptoms of ADHD, were significantly higher in the DLB group than the Alzheimer's group and the control group (measuring 14.7, 5.9 and 6.4 respectively on the Wender Utah Rating Scale).

"We believe that our study is the first of its kind to examine the clinical association between adult ADHD symptoms and DLB and that it has established a clear link between the two conditions" says Dr Golimstok.

"Our theory is that this association can be explained by the common neurotransmitter dysfunction present in both conditions. There is clearly a common process involved in both illnesses and it appears that ADHD often develops into DLB as the patient ages."

**More information:** Previous adult attention-deficit and hyperactivity disorder symptoms and risk of dementia with Lewy bodies: a case-control study. Golimstok et al. European Journal of Neurology. 18, pp78-84. (January 2011). [DOI: 10.1111/j.1468-1331.2010.03064.x](https://doi.org/10.1111/j.1468-1331.2010.03064.x)

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