

Prostate cancer treatment linked to dementia risk

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Micrograph showing prostatic acinar adenocarcinoma (the most common form of prostate cancer) Credit: Wikipedia, [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/)

New research has highlighted a possible link between a prostate cancer treatment called androgen deprivation therapy (ADT) and the risk of dementia. The findings are published today (Wednesday 3 July) in the Journal *JAMA Network Open*.

Androgens are a group of male hormones that includes testosterone.

These hormones play a number of important roles in the body but can also stimulate the growth of [prostate](#) cancer cells in those affected by the [disease](#).

Androgen deprivation therapy blocks the effect of androgens on prostate cancer cells and is one approach doctors may use to tackle the disease. Some previous research has suggested a potential link between ADT and the [risk of dementia](#), but the evidence is not clear.

In this study, researchers analysed data from the Surveillance, Epidemiology and End Results (SEER)-Medicare linked database. Medicare is the federally funded program that provides [health insurance](#) for [older people](#) in the US.

The researchers reviewed the [medical records](#) of 154,089 men over the age of 65 with prostate cancer, including 62,330 who had received ADT within two years of their diagnosis.

Dementia can be caused by a number of different diseases with Alzheimer's disease being the most common cause. The researchers looked for evidence of a link between ADT therapy and subsequent diagnoses of either Alzheimer's disease or dementia.

The team found that, ten years on from a diagnosis of prostate cancer, patients who didn't receive ADT had a 15.8% risk of being diagnosed with dementia compared to a 21.6% risk for those who did receive the therapy. The findings were similar when they looked at the association with a diagnosis of Alzheimer's.

Patients who received five to eight doses of the treatment showed a slightly higher increased risk than those who had received more than eight doses.

Dr. Sara Imarisio, Head of Research at Alzheimer's Research UK, said:

"This study is part of an active area of research into the role that sex hormones like testosterone could be playing in the brain in dementia. Studies like this, which take advantage of the rich data held in medical records, can be very useful for highlighting trends and potential risk factors for further research.

"Previous research into the relationship between [androgen deprivation therapy](#) and dementia risk has been conflicting, but this large, long-term, well conducted study represents strong evidence in support of a potential link.

"While these results suggest an association between androgen deprivation therapy and an increased risk of [dementia](#), they do not show that ADT is definitely causing this increased risk or how this therapy could be affecting the health of the brain. We need to better understand the impact of sex hormones in the brain in diseases like Alzheimer's to delve deeper into the possible reasons for this link.

"In the meantime, it is important to bear in mind that prostate cancer is a serious disease and any possible risks of ADT need to be carefully weighed against its role in treating prostate cancer. If anyone receiving ADT has any concerns, they should seek advice from their doctor."

Provided by Alzheimer's Research UK

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