

Dementia tied to hormone-blocking prostate cancer treatment

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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/)

Alzheimer's disease may be a risk for older prostate cancer patients given hormone-blocking treatment, a large, U.S. government-funded analysis found.

Previous evidence has been mixed on whether the treatment might be linked with mental decline. But experts say the new results stand out

because they're from a respected national [cancer](#) database and the men were tracked for a long time—eight years on average.

Among 154,000 [older patients](#), 13% who received hormone-blocking treatment developed Alzheimer's, compared with 9% who had other treatment or chose no therapy, the study found.

The risk for [dementia](#) from strokes or other causes was higher: It was diagnosed in 22% of those who got hormone-blocking treatment, versus 16% of the other patients.

The results, using perhaps one of the largest and most reliable databases, suggests there truly may be a connection, said Dr. Sumanta Pal, a prostate cancer expert with the American Society of Clinical Oncology. Pal was not involved in the study.

The analysis from University of Pennsylvania researchers was published Friday in *JAMA Network Open*.

The results aren't proof but experts say they underscore the importance of discussing [potential risks](#) and benefits when choosing [cancer treatment](#).

The researchers analyzed data from a National Cancer Institute database of cancer cases and treatment and covers almost 30% of the U.S. population. The study focused on men in their 70s, on average, with local or [advanced prostate cancer](#) diagnosed between 1996 and 2003. They were followed until 2013. Medicare records indicated dementia or Alzheimer's diagnosis.

Hormone-blocking treatment can include testes removal to reduce levels of testosterone, which fuels prostate cancer growth. But it more typically involves periodic drug injections or implants that achieve the same

result.

Most U.S. men who receive this treatment are in their 70s or older. It's sometimes used in men who might not be healthy enough to tolerate other cancer treatments including surgery to remove the prostate and radiation.

It's unclear how the treatment might be linked with mental decline. The researchers noted that it can lead to diabetes, which also has been linked with dementia—perhaps because blood vessel damage from diabetes can restrict blood flow to the brain. Hormone treatment also raises risks for [heart disease](#) and depression, which both have been linked with dementia.

Researcher Grace Lu-Yao of the Sidney Kimmel Cancer Center in Philadelphia, said the potential dementia risks from hormone-blocking treatment may outweigh any benefit for younger, healthier patients with longer expected life spans.

While the study doesn't prove that the [treatment](#) causes dementia, she said, it is important to tell patients "because of the potential impact of Alzheimer's disease or dementia on the quality of life of patients and their family." She was not involved in the study.

More information: Ravishankar Jayadevappa et al. Association Between Androgen Deprivation Therapy Use and Diagnosis of Dementia in Men With Prostate Cancer, *JAMA Network Open* (2019). [DOI: 10.1001/jamanetworkopen.2019.6562](https://doi.org/10.1001/jamanetworkopen.2019.6562)

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