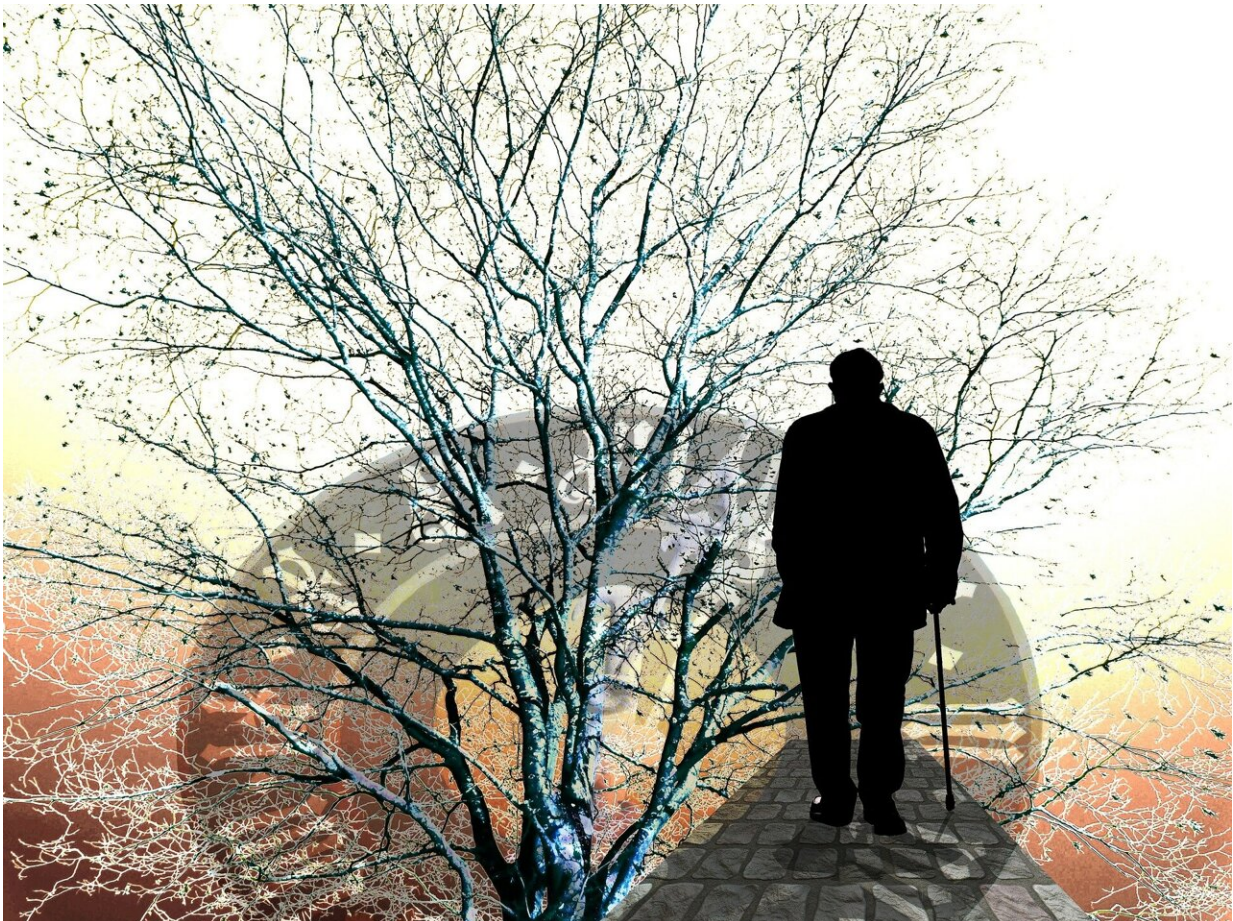


Drugs for enlarged prostate may also protect against dementia with Lewy bodies

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A new study suggests that certain drugs commonly used to treat enlarged

prostate may also decrease the risk for dementia with Lewy bodies (DLB). This observational finding may seem surprising, but it mirrors previous work by the University of Iowa Health Care team that links the drugs to a protective effect in another neurodegenerative condition—Parkinson's disease. The new findings were published online on June 19, 2024, in *Neurology*.

The UI researchers think that a specific side effect of the drugs targets a biological flaw shared by DLB and Parkinson's disease, as well as other neurodegenerative diseases, raising the possibility that they may have broad potential for treating a wide range of neurodegenerative conditions.

"Diseases like dementia with Lewy bodies, or Parkinson's disease, or Alzheimer's disease, are debilitating and we don't really have any good treatments that can modify the [disease progression](#). We can treat symptoms, but we can't actually slow the disease," explains lead study author Jacob Simmering, Ph.D., UI assistant professor of internal medicine.

"One of the most exciting things about this study is that we find that same neuroprotective effect that we saw in Parkinson's disease. If there is a broadly protective mechanism, these medications could potentially be used to manage or prevent other neurodegenerative diseases."

DLB is a neurodegenerative disease that causes substantial and rapid cognitive decline and dementia. While less common than Parkinson's disease, DLB affects about one in 1,000 people per year, and accounts for 3 to 7% of all dementia cases. Because aging is a key risk factor for DLB, it is likely to become more common as our population gets older.

For the new study, the UI researchers used a large database of patient information to identify more than 643,000 men with no history of DLB

who were newly starting one of six drugs used to treat [benign prostatic hyperplasia](#) (enlarged prostate).

Three of the drugs, terazosin, doxazosin, and alfuzosin (Tz/Dz/Az), have an unexpected side effect; they can boost [energy production](#) in brain cells. Preclinical studies suggest that this ability may help slow or prevent neurodegenerative diseases like PD and DLB.

The other drugs, tamsulosin and two 5-alpha-reductase inhibitors (5ARIs) called finasteride and dutasteride, do not enhance energy production in the brain and therefore provide a good comparison to test the effect of the Tz/Dz/Az drugs.

The team then followed the data on these men from when they started taking the medication until they left the database or developed dementia with Lewy bodies, whichever happened first. On average, the men were followed for about three years.

Because all the participants were selected to start a drug that treats the same condition, the researchers reasoned that the men were likely similar to each other at the outset of the treatment. The researchers also matched the men using propensity scores for characteristics like age, the year they started the medication, and other illnesses they had before starting the treatment, to further reduce the differences between the groups.

"We found that men who took Tz/Az/Dz drugs were less likely to develop a diagnosis of dementia with Lewy bodies," Simmering says. "Overall, men taking terazosin-type medications had about a 40% lower risk of developing a DLB diagnosis compared to men taking tamsulosin, and about a 37% reduction in risk compared to men taking five alpha reductase inhibitors."

Meanwhile, there wasn't a statistically significant difference in risk between men taking tamsulosin and 5-alpha reductase inhibitors.

This was an [observational study](#) and therefore the results show only an association between taking the Tz/Dz/Az drugs and a [reduced risk](#) of developing DLB rather than a causal relationship.

In addition, the study only included men because the drugs are prescribed for prostate problems, which means that the researchers don't know if the findings would apply to women. However, Simmering and his colleagues are excited by the potential of these drugs, which are already FDA approved, inexpensive, and have been used safely for decades.

"If terazosin and these similar medications can help slow this progression—if not outright preventing the disease—this would be important to preserving cognitive function and quality of life in people with DLB," Simmering says.

More information: Association of Terazosin, Doxazosin, or Alfuzosin Use and Risk of Dementia With Lewy Bodies in Men, *Neurology* (2024). DOI: [10.1212/WNL.0000000000209570](https://doi.org/10.1212/WNL.0000000000209570)

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