

Phosphodiesterase-5 inhibitors not tied to alzheimer disease risk

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Phosphodiesterase-5 (PDE5) inhibitors seem not to be associated with a reduced risk for Alzheimer disease and related dementia, according to a study published online Oct. 4 in *Brain Communications*.

Rishi J. Desai, Ph.D., from Brigham and Women's Hospital and Harvard Medical School in Boston, and colleagues compared the incidence of Alzheimer disease and related dementia after initiation of a PDE5 inhibitor versus an endothelin receptor antagonist among patients with [pulmonary hypertension](#) in propensity-score matched analyses controlling for 76 confounding variables.

The researchers found no evidence for a reduced risk for Alzheimer disease and related dementia (ADRD) with PDE5 inhibitors across four separate analytic approaches designed to address specific types of bias including informative censoring, reverse causality, and outcome misclassification, with hazard ratios of 0.99 (95 percent confidence interval, 0.69 to 1.43), 1.00 (0.71 to 1.42), 0.67 (0.43 to 1.06), and 1.15 (0.57 to 2.34). In most cell culture-based phenotypic assays, no evidence was seen indicating that sildenafil ameliorated molecular abnormalities relevant to Alzheimer disease.

"Our study did not provide evidence to support the [hypothesis](#) that PDE5 inhibitor use reduces risk of incident ADRD. While wider use of routinely collected health care data to evaluate biological hypotheses for drug repurposing is a welcome development, caution is warranted to avoid common pitfalls and consequent overinterpretation of estimates

generated from these data," the authors write.

Several authors disclosed ties to the pharmaceutical and medical device industries.

More information: [Abstract/Full Text](#)

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