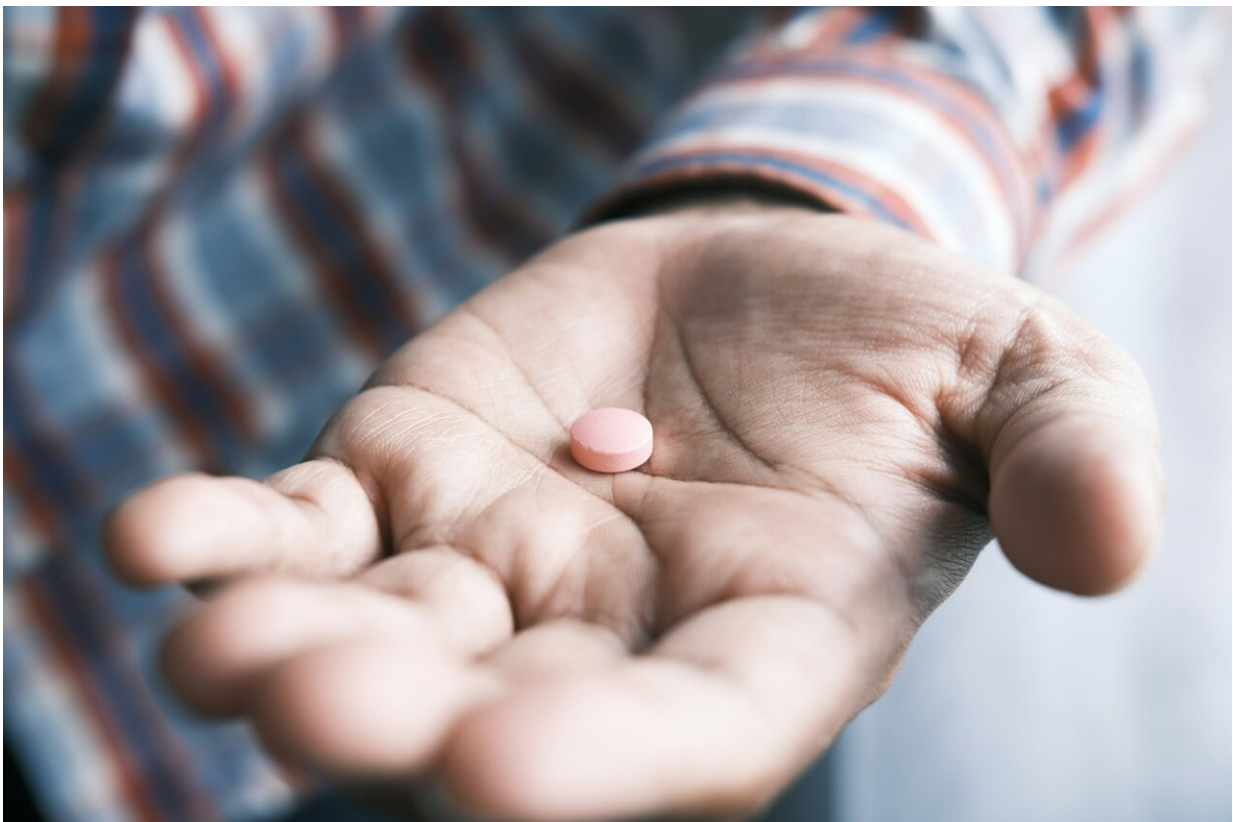


# Researchers say common dementia medication doesn't increase risk of death, life-threatening heart abnormalities

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Researchers with McMaster University have found that a commonly prescribed dementia medication doesn't increase the risk of death or

certain heart rhythm problems, contrary to past warnings.

The [systematic review](#) and meta-analysis, published on April 5, 2024 in the [Journal of the American Geriatrics Society](#), investigated the drug donepezil to find out if people who took the drug were at higher risk of developing specific fatal heart arrhythmias related to the QT interval—the amount of time it takes for the heart's electrical system to do its job and then reset—when compared with people who weren't on the medication.

Donepezil is one of the most prescribed drugs for dementia, with nearly six million prescriptions issued in 2020 in the United States. The medication is prescribed to help slow down the progression of symptoms associated with dementia, like [memory loss](#), but there is controversy over its effectiveness.

The drug can cause its own set of side-effects that can be quite debilitating for patients with dementia, like nausea, loss of appetite, urinary symptoms and diarrhea.

"We found there was no association between donepezil and this specific fatal heart condition," says Tina Nham, co-lead author and a fifth-year geriatric medicine resident with McMaster University's Department of Medicine.

"It's good for prescribers to know that donepezil may not be as high of a risk for this fatal arrhythmia as previously thought. For patients who are taking donepezil, there is a fear that it can lead to several bad side-effects on the heart and this review helps demystify some of those long-held beliefs."

As part of this review, researchers analyzed 60 randomized trials that encapsulated more than 12,000 people. Researchers say previous studies

that warned about the risk of health problems were lacking, with past studies involving a handful of people or not having a proper comparison group.

"Unfortunately our current drug therapies for dementia, including donepezil, fall far short on important outcomes like keeping patients functioning at home with their families, but at least the heart arrhythmia concern and its related death or syncope (fainting) does not seem to be an important problem," says Anne Holbrook, a professor with McMaster University's Department of Medicine and the director of the Division of Clinical Pharmacology & Toxicology and senior author of the study.

"These reviews are so important in demystifying preconceived risks associated with medications like donepezil. We're able to question the prior quality of evidence and ask why things are the way they are," says Cristian Garcia, co-lead author and a second-year [medical student](#) at the University of Toronto's Temerty Faculty of Medicine. "We're able to dig into a deep pool of reliable evidence and provide patients and clinicians with some reassurance."

Dementia is a growing concern as Canada's population ages. As of Jan. 2024, it's estimated that more than [733,000 people are living with dementia in Canada](#). The Alzheimer's Society also estimates that 15 people are diagnosed with [dementia](#) every hour.

Researchers say their review could also help ease clerical work for clinicians who prescribe this medication. This would be reflected with the elimination of warning labels within [electronic medical records](#) (EMRs) that previously and incorrectly associated donepezil with fatal QT interval heart arrhythmias.

"Clinicians get a huge amount of these warnings on the EMRs that we use. Studies show the amount of clicking that we have to do to override

these warnings can lead to things like caregiver burnout and caregiver stress," says Nham.

Researchers say more work is needed to determine how safe donepezil is for different patients, like those with existing heart disease.

**More information:** Tina Nham et al, Proarrhythmic major adverse cardiac events with donepezil: A systematic review with meta-analysis, *Journal of the American Geriatrics Society* (2024). [DOI: 10.1111/jgs.18909](https://doi.org/10.1111/jgs.18909)

Provided by McMaster University

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