

# Irregular heartbeat strong predictor of decline in people at risk of heart disease

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An irregular heartbeat -- atrial fibrillation -- is a strong predictor of cognitive decline and the loss of independence in daily activities in older people at risk of cardiovascular disease, according to a study in *CMAJ* (*Canadian Medical Association Journal*).

Researchers sought to understand whether there was an association between an [irregular heartbeat](#) and the loss of mental and [physical functions](#) in people at risk of cardiovascular disease. They looked at data from two [randomized controlled trials](#): the ONTARGET and TRANSCEND trials, which involved 31 506 patients from 733 centres in 40 countries.

Participants were aged 55 years or older, with cardiovascular disease or diabetes and some organ damage from the disease.

The results of previous studies on the link between atrial fibrillation and cognitive decline have been inconsistent, and few of the studies have looked at the relationship with ability to function independently.

The researchers of the study in [CMAJ](#) assessed cognitive function at the outset, after two years and at the second-last appointment using the mini-mental state examination (MMSE) to determine whether there had been decline, onset of dementia or functional decline. The MMSE uses a point system to measure a variety of cognitive functions such as attention and calculation, recall, naming and repetition, and reading and comprehension.

"The composite outcome of a decrease in MMSE score by three or more points, dementia, admission to a long-term care facility and loss of independence in performing activities of daily living occurred in 7269 (26%) patients without atrial fibrillation and in 1050 (34%) patients with atrial fibrillation (baseline and follow-up)," writes Dr. Koon Teo, Population Health Research Institute, McMaster University, Hamilton, Ontario, with coauthors.

"Our study provides prospective evidence that atrial fibrillation increases the risk of [cognitive decline](#) and dementia, independent of clinically overt stroke and baseline cognitive function," write the authors. "We also saw a significant association between atrial fibrillation and functional decline (loss of independence with activities of daily living) and the need for long-term care."

"Our findings highlight the need to include cognitive and functional measures in clinical trials of patients with atrial fibrillation," they conclude.

**More information:** Paper online:  
[www.cmaj.ca/lookup/doi/10.1503/cmaj.111173](http://www.cmaj.ca/lookup/doi/10.1503/cmaj.111173)

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