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CMAJ headlines:

- ☐ **Study provides 10-year risk estimates for dementia, which may help with prevention in high-risk individuals**

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A Danish study provides 10-year absolute risk estimates for dementia specific to age, sex and common variation in the *APOE* gene, which may help identify high-risk individuals who potentially could benefit from early targeted prevention. The study is published in *CMAJ (Canadian Medical Association Journal)*.

Dementia is a major cause of disability in older adults worldwide, yet no effective treatment is currently available. Reduction of risk factors for dementia may have the potential to delay or prevent development of the disease. Age, sex and common variation in the *APOE* gene identify high-risk individuals with the greatest potential to benefit from targeted interventions to reduce risk factors.

The apolipoprotein E (APOE) protein is key for metabolizing cholesterol and to clear β-amyloid protein from the brain in individuals with Alzheimer disease.

“Recently, it was estimated that one-third of dementia most likely can be prevented. According to the Lancet Commission, early intervention for hypertension, smoking, diabetes, obesity, depression and hearing loss may slow or prevent disease development. If those individuals at highest risk can be identified, a targeted prevention with risk-factor reduction can be initiated early before disease has developed, thus delaying onset of dementia or preventing it,” says Ruth Frikke-Schmidt, professor at the University of Copenhagen, and at the Department of Clinical Biochemistry, Rigshospitalet, Copenhagen, Denmark.

The study looked at data on 104 537 people in Copenhagen, Denmark, and linked it to diagnoses of dementia. Researchers found that a combination of age, sex and a common variation in the *APOE* gene could identify high-risk groups, with a 7% risk for women and 6% risk for men in their 60s; a 16% and 12% risk, respectively, for people in their 70s; and a 24% and 19% risk, respectively, for those aged 80 years and older.

The generalizability of the study is limited as it included only people of white European background.

"The present absolute 10-year risk estimates of dementia by age, sex and common variation in the *APOE* gene have the potential to identify high-risk individuals for early targeted preventive interventions," the authors conclude.

"Absolute 10-year risk of dementia by age, sex and APOE *genotype: a population-based cohort study"* is published September 4, 2018.

MEDIA NOTE: Please use the following public links after the embargo lift:

Research: http://www.cmaj.ca/lookup/doi/10.1503/cmaj.180066

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