

Heavy smoking in midlife may be associated with dementia in later years

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Heavy smoking in middle age appears to be associated with more than double the risk for Alzheimer's disease and other forms of dementia two decades later, according to a report posted online today that will be published in the February 28 print issue of *Archives of Internal Medicine*.

Current estimates suggest smoking is responsible for several million deaths per year from causes such as [heart disease](#) and cancer, according to background information in the article. Although smoking increases risks of most diseases and of death, some studies have shown a reduced risk of Parkinson's disease and other neurodegenerative conditions among smokers. "The link between smoking and risk of Alzheimer's disease, the most common subtype of [dementia](#), has been somewhat controversial, with some studies suggesting that smoking reduces the risk of [cognitive impairment](#)," the authors write.

Minna Rusanen, M.D., of University of Eastern Finland and Kuopio University Hospital, Kuopio, Finland, and colleagues analyzed data from 21,123 members of one [health care system](#) who participated in a survey between 1978 and 1985, when they were 50 to 60 years old. Diagnoses of dementia, Alzheimer's disease and vascular dementia were tracked from Jan. 1, 1994 (when participants were an average of 71.6 years old), through July 31, 2008.

A total of 5,367 participants (25.4 percent) were diagnosed with dementia during an average of 23 years of follow-up, including 1,136 with Alzheimer's disease and 416 with vascular dementia. Those who

smoked more than two packs per day in middle age had an elevated risk of dementia overall and also of each subtype, Alzheimer's disease and vascular dementia, compared with non-smokers. Former [smokers](#), or those who smoked less than half a pack per day, did not appear to be at increased risk.

Associations between smoking and dementia did not vary by race or sex. Smoking is a well-established risk factor for stroke, and may contribute to the risk of vascular dementia through similar mechanisms, the authors note. In addition, smoking contributes to oxidative stress and inflammation, believed to be important in the development of Alzheimer's disease. "It is possible that smoking affects the development of dementia via vascular and neurodegenerative pathways," the authors write.

"To our knowledge, this is the first study evaluating the amount of midlife smoking on long-term risk of dementia and dementia subtypes in a large multiethnic cohort," they conclude. "Our study suggests that heavy smoking in middle age increases the risk of both Alzheimer's disease and [vascular dementia](#) for men and women across different race groups. The large detrimental impact that smoking already has on public health has the potential to become even greater as the population worldwide ages and dementia prevalence increases."

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