

# Drinking, Smoking May Raise Early AD Risk

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CHICAGO — Heavy drinking and smoking are associated with a significantly earlier age of development of late-onset Alzheimer's disease, according to findings presented at the annual meeting of the American Academy of Neurology.

In a retrospective analysis of 686 patients diagnosed with possible or probable Alzheimer's disease (AD), people who were heavy drinkers, defined as having more than two drinks of wine, beer, or spirits per day, developed Alzheimer's 5 years earlier than those who were not drinkers (onset 71 vs. 76 years).

People who smoked at least a pack of cigarettes per day developed the disease 2 years sooner than nonsmokers (73 vs. 75 years).

The combination of heavy drinking and smoking reduced the age at onset by 6-7 years, compared with those who did not drink or smoke heavily, lead investigator Dr. Ranjan Duara, medical director of the Wien Center for Alzheimer's Disease and Memory Disorders, Mount Sinai Medical Center, Miami Beach, and associates reported in a poster.



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DR. DUARA

Genetic testing revealed that 27% of patients were positive for the apolipoprotein (APOE) ε4 allele, which has long been considered a risk factor for Alzheimer's. Patients with APOE ε4 developed the disease 3 years sooner than those without the gene variant. Gender had no significant influence on age of onset.

Identification of heavy smoking and heavy drinking as modifiable risk factors may potentially reduce the prevalence of Alzheimer's disease, especially among those with increased genetic risk, Dr. Duara said during a press briefing at the meeting.

Because the prevalence of Alzheimer's increases with age and roughly doubles every 5 years from age 65 years onward, a 5-year delay in disease onset could reduce the prevalence of Alzheimer's by almost 50%, he explained. Late-onset Alzheimer's is the most common form of the disease, representing roughly 85% of cases.

The investigators observed an additive, but not synergistic effect of the three risk factors. The average age at onset was 73 years among patients with the APOE ε4 allele who were also heavy smokers, 74 years for patients with APOE ε4 who drank heavily, and 68.5 years for those with all three risk factors. In contrast, the average age at onset was 77 years among patients with none of the three risk factors.

When asked if physicians should be screening patients in midlife for the APOE ε4 genotype, Dr. Duara responded that the general consensus has been that it is not a

useful screening measure for evaluating overall risk of developing Alzheimer's. However, genetic testing for APOE ε4 could be of potential use in patients with a family history of the disease, and may ultimately be recommended as a risk screen as more information becomes available on the interaction of APOE ε4 with other risk factors.

In the meantime, Dr. Duara suggested that public health agencies and hospitals should emphasize to school-age children

onward the importance of not smoking and limiting alcohol consumption to two or fewer drinks per day, in combination with regular exercise, a healthy diet, and an active social life.

At baseline, the mean Mini-Mental State Examination score was 18, women accounted for 64% of patients, 371 patients never smoked cigarettes, 129 smoked less than one pack per day, 94 smoked one pack per day, and 92 smoked at least one pack per day. In all, 340 patients never

drank, 218 drank less than one drink a day, 78 drank one to two drinks a day, and 50 drank two or more drinks per day.

Dr. Duara acknowledged that the study was limited by several factors, including its retrospective design, use of informant-based reports on age of onset and risk factors, lack of dose-response assessment, and clinic-based population.

The study was funded by the Florida Department of Elder Affairs, and the investigators reported no disclosures. ■

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