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Examining the Role of Cigarette Smoking and Cessation on Combined Risk of Incident Dementia, Nursing Home Placement, and Death in Cognitively Healthy and Mild Cognitively Impaired Adults

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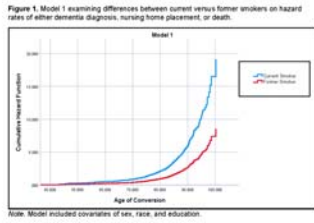
Abstract Text:

Background: Cigarette smoking directly and indirectly accounts for a 70% increased risk of AD/DRD onset with smoking cessation lowering this risk. However, this risk may be underestimated due to challenges disentangling key outcomes (i.e. death or nursing home placement prior to dementia diagnosis). Further, the magnitude of these risks remains unexplored in smokers with mild cognitive impairment (MCI). We sought to examine the impact of smoking status, duration of smoke exposure, and duration of abstinence on key outcomes of diagnosis of dementia, nursing home placement, or death (Dem/NH/Death). **Method:** We conducted three Cox-regression proportional hazard analyses to model conversion to event (Dem/NH/Death) using the NACC dataset, stratified by baseline cognitive status (cognitively healthy [CH; N = 10852; M_{age} = 72.0; 64.6% Female; 81.4% Caucasian] vs. MCI [N = 4931; M_{age} = 73.4; 49.1% Female; 81.5% Caucasian]). Time delayed entry methods accounted for varying age of entry. **Model 1:** smoking status (former vs. current smoker). **Model 2:** pack years (PY) comparing never (0 PY) smokers to low (>0 - <20 PY), moderate (20 - <40 PY), and heavy (\geq 40 PY) users. **Model 3:** duration of abstinence (i.e., not quit, >0->10 years, 10->20 years, 20->30 years, \geq 30 years) compared to never smokers. **Result:** (1) CH current smokers had higher rate of conversion (HR = 2.18; 95% CI 1.74-2.75; $p < 0.001$). (2) CH heavy use smokers had higher rate of conversion (HR = 1.36; 95% CI 1.16-1.59; $p < 0.001$). (3) CH current smokers had increased rate of conversion than never smokers (HR = 2.14; 95% CI 1.71-2.67; $p < 0.001$). After 10 years of quitting, former smokers did not differ from never smokers in rates of Dem/NH/Death (HR = 1.65; 95% CI 1.25-2.18; $p < 0.001$). None of the results from the MCI group were significant (p 's > .05). **Conclusion:** Using a more comprehensive outcome suggests an even greater negative impact of smoking on dementia and highlights the benefit of quitting on these risks. The lack of significant findings in the MCI group may

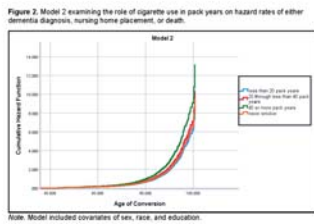
be related to diagnostic confounders (e.g., race, socioeconomic status). Future research is needed among this group of smokers.

Tables and Figures:

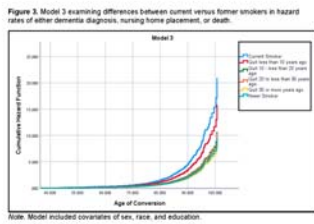
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Title:

Examining the Role of Cigarette Smoking and Cessation on Combined Risk of Incident Dementia, Nursing Home Placement, and Death in Cognitively Healthy and Mild Cognitively Impaired Adults

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Preferred Presentation Format:

Oral Presentation Preferred, but will do Poster Presentation if so assigned

Was this research funded by an Alzheimer's Association grant?

No

Abstract Submission Affirmations:

I agree to the Abstract Submission Affirmations.

Do you plan to upload figures or tables to supplement your abstract text?

Yes

Theme:

Public Health and Psychosocial

Topic:

Epidemiology

Sub Topic:

Risk and protective factors in MCI and dementia

Learning Objectives:

- Examine the impact of smoking status, duration of smoke exposure, and duration of abstinence on key outcomes of diagnosis of dementia, nursing home placement, or death.
- Differentiate the impact of smoking on key dementia outcomes by baseline cognitive status of cognitively healthy and mild cognitive impairment (MCI).

Keywords:

mild cognitive impairment (MCI), nursing home and risk factor

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