A UCSF analysis of published studies on the relationship between Alzheimer's disease and smoking indicates that smoking cigarettes is a significant risk factor for the disease. After controlling for study design, quality of the journals, time of publication, and tobacco industry affiliation of the authors, the UCSF research team also found an association between tobacco industry affiliation and the conclusions of individual studies. Industry-affiliated studies indicated that smoking protects against the development of AD, while independent studies showed that smoking increased the risk of developing the disease.

Study findings were published online today in the January issue (19:2) of the Journal of Alzheimer's Disease. An abstract of the paper is available at the link below.

"For many years, published studies and popular media have perpetuated the myth that smoking is protective against the development of AD. The disease's impact on quality of life and health care costs continues to rise. It is therefore critical that we better understand its causes, in particular, the role of cigarette smoking," said Janine K. Cataldo, PhD, RN, assistant professor in the UCSF School of Nursing and lead author of the study.

According to the Alzheimer's Association, 5.3 million Americans currently have the disease, and that number will escalate rapidly as the baby boom generation ages. AD also triples health care costs for Americans aged 65 and older, the organization states.
The UCSF team reviewed 43 published studies from 1984 to 2007. Authors of one-fourth of the studies had an affiliation with the tobacco industry.

The UCSF team determined that the average risk of a smoker developing AD, based on studies without tobacco industry affiliation, was estimated to be 1.72, meaning that smoking nearly doubled the risk of AD. In contrast, the team found that studies authored by individuals with tobacco industry affiliations, showed a risk factor of .86 (less than one), suggesting that smoking protects against AD. When all studies were considered together, the risk factor for developing AD from smoking was essentially neutral at a statistically insignificant 1.05.

Previous reviews of the association between smoking and AD have not controlled for study design and author affiliation with the tobacco industry, according to Cataldo. To determine if study authors had connections to the tobacco industry, the UCSF team analyzed 877 previously secret tobacco industry documents.

The researchers used an inclusive definition of "tobacco industry affiliation" and examined authors' current or past funding, employment, paid consultation, and collaboration or co-authorship on a study with someone who had current or previous tobacco industry funding within 10 years of publication.

"We know that industry-sponsored research is more likely to reach conclusions favorable to the sponsor," said Stanton A. Glantz, PhD, of the UCSF Department of Medicine and a study co-author. "Our findings point to the ongoing corrosive nature of tobacco industry funding and point to the need for academic institutions to decline tobacco industry funding to protect the research process."

More information: Journal of Alzheimer's Disease (January issue,
Provided by University of California - San Francisco


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