Reviewer's report

Title: Smoking, dementia and cognitive decline in the elderly, a systematic review

Version: 1 Date: 8 April 2008

Reviewer: Jose A Luchsinger

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This is an interesting metaanalysis of studies relating smoking to dementia.

Major comments:
the discussion does not have comments on potential mechanisms explaining the associations. Is smoking causative of Alzheimer’s disease, is it a precipitant, is this association mediated through cerebrovascular disease? Although this cannot be addressed directly with the data, some discussion can be done based on existing literature.

Minor comments
In page 7 there is the following statement " For the publications from the Washington Heights data set, the cohort analysis reporting possible or probable Alzheimer’s disease was used in preference to the case control analysis incorporating Alzheimer’s disease"...this statement is confusing. Are you saying that this study reported both a cohort and a case-control analysis (not the case, it reported only cohort analyses).

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
'I declare that I have no competing interests'