Reviewer's report

Title: Occupation, smoking and chronic obstructive respiratory disorders in an industrial area of Catalonia, Spain

Version: 1 Date: 7 November 2005

Reviewer: Hans Kromhout

Reviewer's report:

General

The paper addresses the relation between occupation, smoking and chronic obstructive respiratory disorders in the general population in an industrial area of Catalonia. The design of especially the occupational exposure assessment part of the study seems to be rather weak and given the lack of information provided very hard to judge. More detail is needed for this reviewer and the readership to be able to judge the results.

It is also remarkable that the authors do not address the issue of self-reported exposure. An issue they recently discussed at length in a paper published earlier this year: “Comparison of self-reported occupational exposure with a job exposure matrix in an international community-based study on asthma. Am J Ind Med. 2005 May;47(5):434-42”.

Detailed comments

Introduction, end of first paragraph
The authors should make a reference to a paper that appeared in this very journal a year ago "Meer G, Kerkhof M, Kromhout H, Schouten JP, Heederik D
Environmental Health: A Global Access Science Source 2004, 3:6 (2 June 2004) in which the interaction of smoking and occupational exposure in relation to respiratory effects was addressed! In this study smoking doubled the risk of exposure to mineral dusts.

Methods
In the referenced paper a number of 642 men and women is mentioned. So, where do the additional 80 individuals come from?
Please add the year of interview. It seems that the interviews were done in the early nineties.
No details at all are provided on the questions posed on job history and exposures. Please add details. At the bottom of page two all of a sudden the individuals seem to be classified according to current job! Was a complete job history recorded?

Results
Third paragraph, table 2. Why were analyses not done stratified by smoking status?

Fourth paragraph: it sounds like that these individuals were asked to provide information on lifetime exposure to dust, fumes or gases (one or more than one question) and consequently were asked to provide information on the industry in which it occurred. This way of asking has a very large potential for misclassification of jobs. Individuals that claimed not to be exposed would not be considered to have been active in particular industries. The problem with self-reported exposure "symptomatic individuals over-reporting occupational exposure”(see the paper by de Vocht et al.), could have consequently resulted in a spurious result for a particular industry (e.g. textile industry in this case). An analysis by industry without having a complete job history of all individuals is in my opinion wrong
and should be taken from the results (unless a complete job history exists for all participants).

Discussion
The presented results should be discussed in relation to results published previously by de Meer et al. 2004, who did find an interaction between smoking and occupational exposure for chronic bronchitis.

Third paragraph, the impact of the way job history was assessed (via a subjective estimate of occupational exposure) should be addressed.

Third paragraph, the authors indicate that this study was not aimed specifically on respiratory disease, but fail to reveal where it was aimed at.

Third paragraph, population specific JEM: why wasn’t a similar approach chosen as by Post et al. (ref 19) to create a less-biased PSJEM? Probably because no complete job history was taken?

Page 7, the discussion here does not address an interaction between occupational exposure and smoking and omits the results of the study by de Meer et al. Given the large difference in smoking habits between men and women a further stratification is by sex is preferred above an adjustment for sex. This would allow more insight in the unexpected results. The sentence "not clearly demonstrated interaction between smoking and occupational exposures in the relationship with COPD" should be revised given the results described by de Meer et al.

Why do the authors think that differential misclassification of occupational exposure among non-smokers is unlikely? Do they have proof of this?

Final paragraph: please add "with better and more up-to-date assessment of occupational exposure" to the sentence starting with "Longitudinal...."

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

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