Reviewer's report

**Title:** Diet, occupational exposure and early asthma incidence among bakers, pastry makers and hairdressers

**Version:** 1  **Date:** 20 January 2012

**Reviewer:** Jacek Mazurek

**Reviewer's report:**

The authors attempted to examine the associations between personal characteristics/exposure at work and the incidence of OA. This is an important topic and would be a valuable contribution to the field. Unfortunately, this manuscript has several English language issues. In many instances it is very difficult to understand the authors' intentions. The text is wordy and unclear. Some statements are very long and difficult to decipher. Therefore, it is difficult to fully and appropriately assess the soundness of methods and provide comments.

**Major Compulsory Revisions**

1. The text should be reviewed and edited to ensure that it is grammatically correct and ready for publication.
2. Please add the information on the years the data were collected and when the analysis was conducted.
3. Please include all criteria (i.e., dates) for case-patient and control group selection.
4. Because the focus is on occupational asthma, please the definition of "occupational asthma" in the manuscript instead of referring to reference #10. The diagnostic criteria should be briefly stated.
5. Please elaborate and clarify how the history of atopy in the family was assessed.
6. Please provide more information on the Phadiatop test (validity) and discuss criteria for categorizing subjects as "atopic".
7. Please discuss validity of other questionnaires used in the study.
8. Present a timeline of events, i.e., asthma onset and data analysis to better understand the associations between diet (assessed in the 12 months prior to data collection) and OA onset.
9. It appears that the statement "...nutritional factors could significantly modify host responses to environmental toxicants [17]. An adequate diet may inhibit, arrest, or even reverse the chain of events in toxicity, while a deficient diet could increase persons' susceptibility to adverse environmental exposures, such as..." should be in quotation marks because it is a verbatim from reference # 17 (Romieu I, Trenga C. Diet and obstructive lung diseases. Epidemiol Rev. 2001;23(2):268-87.)
10. Revise conclusions accordingly.

Minor Essential Revisions

ABSTRACT

11. It is not clear what the authors consider “allergic march of OA”
12. Please define “influence” in epidemiological terms.
13. Please define “activity”.
14. Conclusion is weak and not supported by results.

TEXT

Introduction


16. It would be nice if the authors define “immunological OA”.
17. Please clarify “The allergic march is influenced by multiples determinants”.
18. Please explain “the nature of agents”.
19. Please clarify “…factors related to personal or more general characters”.
20. It is not clear what the authors define as “general asthma”.
21. “The large increase in the prevalence of general asthma observed in most developed countries [6] during the last decades is most likely to be a consequence of changing environmental/lifestyle rather than genetic influences.” — one could argue that many other factors could be associated with increased asthma prevalence in children and adults.
22. Please revise and clarify “…a nested case-control study was set up to assess the combined influence of personal character including nutritional habits, and exposure at work on the incidence of OA during the first years of activity.” Please define “activity”.

Methods

23. Two references are cited for the study protocol. It is not clear why two references. Reference # 10 has not been published.
24. Because the authors focus on occupational asthma, they should provide the definition of “occupational asthma” in the manuscript instead of referring readers to reference #10. The diagnostic criteria should be briefly stated.
25. Please discuss validity of questionnaires used in the study, including the food frequency questionnaire.
26. Please clarify “A score of exposure intensity was constructed in view to scale the risk factors associated with work conditions”.

27. “Exposure duration” has not been assessed; the authors created an index of exposure intensity using the number of tasks done per day. The current description is misleading and should be corrected.

28. Please elaborate – “amount” of what has been estimate in “…to estimate amounts consumed…”

29. Please provide reference for SAS 9.2.

30. Please clarify the meaning of “also” in “Because of differences in the mechanisms involved in the onset of OA between the two occupational sectors, the determinants of OA can vary according to the sector. Analysis was also made separately according to sector.”

31. Please clarify “For nutritional intakes, crude odds ratio and adjusted odds ratio for atopy for potential confounders such as atopy and body mass index were presented”

32. It is not clear how the scores were statistically evaluated.

Results

33. It would be nice if the authors briefly describe their study population.

34. “Crude Odds Ratios (ORs)…” OR already defined.

35. Please correct “Odds Ratios … are exposed… after control for…”

36. No quantitative data on vitamin intake are reported.

Discussion

37. The authors report that “vitamin A and D intake are positively related with an increased risk of OA”. However, no risk assessment has been shown. The authors did not present a timeline of events, i.e., it is impossible to evaluate whether asthma onset proceeded reported diet or not. The food frequency questionnaire collected data on consumption during 12 months prior to medical examination. No information was presented on the asthma onset. Thus, the discussion about cause-effect appears to be inappropriate.

38. Please clarify “…were found to be related by a high intake of antioxidant”.

Table 1

39. Please explain the values for age (mean?).

40. Please explain the meaning of “seniority” and “sector dropout” under “occupation”.

41. Please consistently provide units for values reported in the table.

42. Please explain the interpretation of p-value for smoking.

Table 2

43. Although units are shown, no data for nutrients intake are presented.

44. It would be nice if the authors add a footnote with a general model description (predictor variables).
Thank you for giving me the opportunity to review this manuscript.

**Level of interest:** An article of importance in its field

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

**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.