

Reviewer's report

Title: A cross-sectional study of the association between persistent organochlorine pollutants and diabetes

Version: 1 **Date:** 19 September 2005

Reviewer: Kirsten Ohm Kyvik

Reviewer's report:

General

This is a study of the putative association between type 2 diabetes (T2D) and persistent organochlorine pollutants (POP's).

1.
One cannot help but feeling that the authors are not very experienced in working with diabetes, e.g genes are not mentioned as important aetiological factors, despite the fact that a number of genes are being identified since the completion of the human genome project.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

2.
It is a problem with this study that no attempts of classifying type of diabetes has been done, since it is an attempt to study T2D and POP's. T2D typically takes it beginning in the adult life, but type 1 diabetes (t1D) can be diagnosed at all ages. The authors mentions that two persons are on insulin as single therapy, and consider this as evidence that almost all patients had T2D. These 2 persons constitute 10% of the diabetic population, though. Some sort of classification ought to have been tried, if only based on age, weight and treatment of diagnosis. There are ways to do this as used by epidemiologists. If this is not possible the authors could exclude the two possible t1D patients from analysis.

2.
Why do the authors choose to dichotomize the exposure variables when doing logistic regression? And why do the do analysis for men and women separately. It is quite possible to do bivariate logistic regression with diabetes as the outcome and with both dichotomised (sex) and continuous exposure variables (age and CB153 or p,p'DDE). If this is what the authors do, I apologize and suggest it is explained a little clearer. The rest of the statistical analysis is appropriate.

3.
The participants were asked about weight at 25 years of age, and together with current weight the BMI at 15 years was calculated. It has to be kept in mind, though, that the participants have an age where some of them might not have the same height as when they were 25. This could be very shortly commented on.

4.
In the methods section para 3, there is something wrong with the numbers. An example: 1500 men were asked to participate, 813 of whom did. Of these 510 men were willing to take part in clinical studies. This leaves 687 male non-participants for the questionnaire study and 990 non-participants for the clinical group. How do the authors reach the number 617 male non-participants?

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

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 importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.