

Reviewer's report

Title: Decline in blood concentrations of mercury and lead in the Inuit population of Nunavik (Quebec): a cross-sectional study

Version: 1 **Date:** 24 December 2007

Reviewer: Pál Weihe

Reviewer's report:

The objective of this study is well defined and the method seem appropriate. The findings are of interest for the scientific community and should be published. Below some specific suggestions to improvement:

Reg. Population and sampling:

The objectives of this study was to examine the evolution of mercury and lead exposure and its sources among the Inuit of the Nunavik and compare this information with data collected in 1992 in the Santé Québec Survey . Consequently the method of sampling at the two occasions is crucial. In order to ensure comparability I will recommend a table showing the number of samples taken in each of the 14 communities in Nunavik in 1992 and 2004. Furthermore a more detailed explanation about the randomization of the sampling should be given: How were the individual households selected extracted from a public register, by random selection on a map or simply by including all houses in a community? Were all persons in the household invited or only the individuals, who were at home at the time of the visit? Was the randomization procedure the same in 1992 and 2004?

Reg. Discussion

The authors find it likely that the decrease in blood mercury could be attributed by the changes of dietary habits. The reported reduction in daily intake of marine mammal meat of 40 % (reported in an other publication) is a sufficient explanation of the findings. However, since the consumption of marine mammals is so important when describing changes in arctic exposure to mercury, including dietary data from both 1992 and 2004 would increase the value of this paper.

Reg. Table 2:

Geometric mean of blood mercury in 2004 is stated to be 26, 6 nmol/l. This must be a mistake considering the other data in this table.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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