Reviewer's report

Title: Road traffic noise and hypertension: results from a cross-sectional public health survey in southern Sweden

Version: 1 Date: 10 June 2009

Reviewer: Gösta leon Bluhm

Reviewer's report:

This questionnaire based study concerns hypertension in relation to road traffic noise. This is an interesting topic with high relevance at presence. Several studies have been published in recent years, which strengthen the association between exposure to transportation noise and prevalence of hypertension, but further studies are needed especially with relation to effect size, sensitive subgroups and gender and age differences.

The present study is well written and the methods are well described and discussion and conclusions are well balanced. I have only some remarks regarding the study design and some minor comments.

Major Compulsory Revisions

A major weakness which the authors´ also refer to is the assessments of traffic noise. A very simplified version of the Nordic prediction model was used. According to recent data it might be a rather great discrepancy between the results comparing the full Nordic prediction model with a simplified one. As validation prevalence of annoyance is used in this study which is a good substitute. In that respect I recommend to refer to a study just published; Validering av miljöhälsoindikatorer för buller [in Swedish] Socialstyrelsen 2009-126-159. Another possible way to improve your noise assessments is to validate against assessments attained by the full Nordic prediction model. If you have participants from e.g. Malmö there these assessments are available you could make a comparison for 30-50 subjects. This could improve your noise assessments very much.

Minor Essential Revisions:

In table 1 I think it is too many subgroups for socioeconomic status. It would be enough to use 3 or 4 subgroups for this categorizing.

Discretionary Revisions

I miss some recently published articles of major interest. It would be of interest to add some information about these studies.


Regarding the statistical analysis I wonder if you can clarify, why you used logistic regression as the prevalence of cases is rather high.

Work noise is considered to be an important risk factor at least for acute increase of blood pressure. You had one question about work noise and I miss information about how it was formulated.

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

**Quality of written English:** Acceptable

**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.