Reviewer's report

Title: Are lifestyle-factors in adolescence valid predictors for adult low back pain? A prospective study of a young population

Version: 1 Date: 10 August 2005

Reviewer: Jens Ivar Brox

Reviewer's report:

General

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

It is a popular belief that obesity, smoking and alcohol consumption are associated with back pain. Should we recommend people or patients to reduce weight and avoid smoking and alcohol in order to reduce back pain or risk future back pain? The authors should be given credit for the design of a large twin study to address this question or belief. The authors objective was to evaluate both associations with current LBP and the risk for future LBP. In my opinion the longitudinal study is most important. LBP-year was defined as LBP for at least one day during the previous year and LBP-long as LBP for more than 30 days. As LBP is very common, I would recommend to use only LBP-long as a relevant indicator of back pain. This would shorten the manuscript and the tables without excluding important results. However, LBP-year should be reported in table 1 (2) and results summarized in one or two sentences in the results.

The introduction and the results sections of the abstract should be shortened, highlighting the main findings in the longitudinal study. The objectives of the study are well defined. The material is well described, but the number included in the study should be given as well as the number followed-up. The study is based on subjective recordings of risk factors and LBP, which should be clearly stated in the methods and later discussed as a possible weakness of the study. Zygosity was probably not obtained by blood tests. The identification method for monozygotic twins is not described.

The predictors were obtained as continuous variables. The authors did not explain why these variables were used as binary and categorical variables.

In the discussion the risk factors seems to be considered as pure biological risk factors for LBP, but smoking, alcohol consumption and obesity are associated with several psychosocial factors not assessed in the present study. Alcohol consumption was associated with back pain in the 12-15 year old suggesting that factors associated with drinking in youngsters may be more important? Moderate alcohol consumption was inversely associated with future back pain. The inverse relationship is in keeping with a previous Danish study (Rasmussen et al.).

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

How many answered the questionnaires (p. 10)? Interactions were not found, but still reported in the
stratifications for BMI and smoking and age and alcohol. Different methods are available for assessing interaction. The Mantel-Haenszel test may be used for stratified data.

The authors state that there is insufficient power (p. 12) to demonstrate significance in the monozygotic twin study, but did not report any apriori power calculations and the sample of twin pairs was relatively large.

Printing error (p. 11), neither alcohol nor BMI are not... found to be significant

Rewrite the sentence: "It had been our hope ... by example.. " We believed that a possible...

Table 1 - give LBP > 30 days and mean number of days with LBP. Define alcohol consumption, smokers and overweight in the table.

Discretionary Revisions (which the author can choose to ignore)

I would suggest to exclude the two last sentences in the conclusion.

Table 2 - 4: give categories for smoking and alcohol

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

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

Statistical review: Yes

Declaration of competing interests:

I declare that I have no competing interests.