Reviewer's report

Title: A prospective study of sleep quality and quantity, quality of life, and risk of developing diabetes in a prospective cohort of healthy workers in Japan: the High-risk and Population Strategy for Occupational Health Promotion (HIPOP-OHP) Study

Version: 1 Date: 13 December 2006

Reviewer: Christa Meisinger

Reviewer's report:

General

The paper by Hayasnino and colleagues investigating the impact of self-reported sleep duration and sleep quality on risk of developing diabetes may be regarded as confirmatory study. The paper adds evidence that sleep disturbances are associated with an increased risk of type 2 diabetes. However, I have some concerns

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

The data used came from an intervention study that is a worksite trial for the purpose of preventing cardiovascular disease. The intervention areas included diet, physical activity, and cessation of smoking. These factors are also risk factors for type 2 diabetes and probably also associated with sleep disturbances. Thus, these data are not optimal, to examine the association between sleep disturbances and risk of type 2 diabetes. The authors should therefore critical discuss, what influence the baseline study design could have on the incidence of type 2 diabetes, on other risk factors, on the risk estimates found in the study etc.

It is not clear, how was dealt with missing values on any of the considered characteristics. Were they excluded from analyses?

Recent studies reported gender differences in sleep disorders, with better sleep quality as well as longer sleep times in women compared to men. Furthermore, other studies have found that the risk of type 2 diabetes in persons with sleep disturbances differ between men and women. Thus, it is recommended to conduct gender-specific analysis in the present study. The gender-specific results should be shown and discussed.

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

Abstract: the authors should include the years, when the baseline examination was carried out, the follow-up (from .... until), and the age-range of the included participants. Are the included cases exclusively type 2 diabetes cases? In the Conclusions, it should be added that also medium frequencies of difficulty initiating sleep were associated with an elevated risk. Furthermore, the included number of men and women should be given.

Page 4, line 7: “normal quality of sleep” should be corrected into “abnormal quality of sleep”

Page 4, lines 9 to 10: please give References (studies from the U.S. and Europe)

Page 5, line 13: I think, prevalent cases of diabetes were excluded

Page 6, line 4: Were the blood samples collected in a fasting state?

Results: the results section is very long and should be shortened. Some of the sentences can be omitted without loss of information

Discussion: several sentences and statements are circumstantial and repeated within the discussion, thus
this section also can be shortened and written more concise.

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: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests