Reviewer’s report

Title: The prevalence of Metabolic Syndrome and Metabolically Healthy Obesity in Europe: a collaborative analysis of ten large cohort studies

Version: 1 Date: 12 September 2013

Reviewer: Edith Feskens

Reviewer’s report:

This paper describes the characteristics of metabolically health obese subjects in 10 different cohorts from 7 different European countries, comprising 163,517 individuals. Prevalence of MOH seems to vary across cohorts, although in general women have higher rates and they decline with age. No standardizations or adjustment of data (for age and sex) have been carried out.

Comments:

Results:
1. Page 13, Fig 4AB description should start as new paragraph.
2. My main concern is that the cohorts are being described, while the obese subjects are aged 44 (NCDS) to 60 (KORA). It would be very useful (compulsory to my opinion) to standardize (or adjust) the results for age (and sex).

Discussion:
1. For good interpretation of the prevalence data it is important to discuss the sampling of the different cohorts, were they population-based, can they be seen as representative for their part of the country? This is discussed more on page 17, but would be more appropriate in the first part of the discussion.
2. MHO lower in women, is this because of their generally lower waist, do the authors have data on this? Or is it because they differ in age perhaps?
3. Is there any explanation for the extraordinary low MOH in Finnish cohorts?
4. The discussion contains some repetitions; probably the part on strengths and weaknesses can be integrated in the first part (see 1st remark).

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