Reviewer's report

Title: A cluster-randomised, controlled trial to assess the impact of a workplace osteoporosis prevention intervention on the dietary and physical activity behaviours of working women: study protocol

Version: 3 Date: 1 February 2013

Reviewer: Alex Burdorf

Reviewer's report:

Major Compulsory Revisions

1. Abstract: please provide information on the critical parameter of interest in the power calculation (average, sd, change) and the ICC used, otherwise the sentence is not informative at all.
2. Abstract: what is the content of the intervention?
3. Abstract: what is measured when, follow-up period etc ?
4. Introduction: There is a huge body of scientific literature on workplace interventions on PA. It is of paramount importance to first briefly summarize the essential guidance from these studies, and then subsequently address the issue whether the interventions conducted in this target population present different results because (a) these interventions did not incorporate the effective elements, or (b) the target population is really different and, thus, required a different approach.
5. The rationale should be strengthened: how much change in PA and calcium intake is needed to prevent how much osteoporosis ? In other words, when PA is a low population attributable fraction and intervention will introduce a modest change, then the intervention will not contribute to prevention much.
6. Aims: why is aim 2 only addressing self-efficacy, which is only one element in behavioural models
7. Power calculations: this is confusing:
   - what is effect size (not the often used Cohen's d value)
   - what is average in the normal population?
   - when using a change of 0.4 SD for PA, and ICC 0.05, the number of required participants is over 1000 in my calculations
8. The description of the intervention does not reflect on available evidence from literature what change is expected based on previous RCTs
9. the analysis should be intention-to-treat. Also, a simple t-test is not enough, as a repeated measuremetn design is required.

Minor Essential Revisions

1. the workplaces invited have active policies in place, it seems. How about
co-interventions other than the one mentioned taking place in these companies? Will it reduce the contrast between intervention and control arm?

Discretionary Revisions

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Not suitable for publication unless extensively edited

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

**Declaration of competing interests:**

'I declare that I have no competing interests'