Reviewer's report

**Title:** Effects of physical activity on the development and progression of microvascular complications in type 1 diabetes: Retrospective analysis of the DCCT study

**Version:** 1  **Date:** 14 July 2013

**Reviewer:** Claudia R Cardoso

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Major points

The study of Makura et cols describes the effects of physical activity at baseline, evaluated by self-reported leisure-time physical activity (LPTA), and the risk of microvascular complications in DCCT study. Data for this study were obtained from 1983 to 1989. In June 1993, after an average follow-up of 6.5 years (range 3 to 9) the trial was terminated.

The authors said that the exposure of interest was at DCCT baseline and, therefore, the time interval between exposure and outcome would be too long to make meaningful interpretations if they have used the EDIC data set (unblinded patients that remained in follow-up to determine the effect of DCCT intervention on complications in the long term). Considerations which I agree. In fact, it would be more important if they had serial informations on the exposure of interest (LPTA) and longer follow-up. Another limitation is the lack of validation of physical activity, as pointed by the authors. Moreover, bias of self-reporting is clearly possible, as we know that individuals, particularly the obese ones, tend to over-report their physical activity.

However, the main limitation is that I do not think it would be of interest to know about results of a study which occurred from 1983 to 1993, twenty years ago. Standards of diabetes care have changed a lot since 1993, regarding pharmacological treatments, targets for treatment, and diabetes self-management and education. Hence, these results probably do not apply to current modern diabetes management.

Minor points

The dates of inclusion in the study and period of follow up should be included.

**Level of interest:** An article of insufficient interest to warrant publication in a scientific/medical journal

**Quality of written English:** Acceptable

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

No conflict of interests