Reviewers report

Title: An evaluation of the DEXLIFE "self-selected" lifestyle intervention aimed at improving insulin sensitivity in people at risk of developing diabetes type 2: study protocol for a randomised controlled trial

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Reviewer: Peter Schwarz

Reviewer's report:

Thank you very much for having the chance to review the trial protocol about the DEXLIFE project. This trial addresses an important topic - whether the success of diabetes prevention in practice improves if the individual can choose the preventive intervention. Going through the protocol is state of the art and is an interesting approach for the intervention. I see that there is no chance to modify the study protocol and with today's knowledge the intervention could be improved in terms of recommendations and applications to foster physical activity (smart health, mobile health). Beside this and the fact that the study already started in 2012, I am very curious and interested to see the study results. I would expect about a 30% reduction of insulin sensitivity in those who participate in the physical activity sessions and none, or actually a regression in those who are non-responders. One hypothesis can be that the liver fat is driving response and non-response, but this cannot be case of the studies.

The study protocol is very well done, is transparently described, is describing the state of the art of when the studies started and I think that the results of the study will directly add value to the current discussion of what kind of intervention is the most appropriate for diabetes prevention.

The authors reference some literature from the American Diabetes Prevention program and a few European works. I recommend that the European guideline for the prevention of type 2 diabetes (toolkit and evidence based guideline) are also referenced in this work, because this is the state of the art of how to perform diabetes prevention in Europe as the study was planned. Especially because the results of the study may have influence to be included in the prevention toolkit and therefore, a reference to the literature would be important [1, 2].


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