

Exercise is good for everyone—but some struggle more than others

October 2 2015

The cause of type 2 diabetes is linked to both genetics and lifestyle. If you have an immediate relative (mother, father, sibling) with type 2 diabetes, the risk of contracting the diabetes is about three times higher. Preventive treatments involve eating healthier and exercising more.

Researchers at Lund University have studied the effects of exercise in people with increased risk of type 2 [diabetes](#) caused by being immediately related to someone with the disease.

The [participants](#) consisted of a total of 50 unfit, slightly overweight but completely healthy men in their 40s who, for seven months, exercised regularly at a fitness centre. Half of them belonged to the [risk group](#) and the other half served as a control group who did not have relatives with type 2 diabetes.

The participants were offered three training sessions per week, including a spinning class and two aerobics classes, during which their exercise intensity and energy consumption was measured. Before and after the exercise period, they individually underwent a medical examination and a glucose tolerance test (sugar load) to study the cells' ability to absorb sugar (glucose) into the blood. The researchers also performed muscle biopsies on the participants that were analysed to study the activity of various genes.

The [exercise routine](#) for both groups was equally hard, but the risk group attended more sessions and as a group expended more energy than the

control group. After making adjustments to account for the differences, the results showed that both groups benefited from exercising; they all lost weight, reduced their waist size and increased their fitness. The genetic analyses also showed similar improvements in the gene expressions in both groups.

"The difference was that participants from the risk group had to exercise more to achieve the same results as the participants from the [control group](#)", says Ola Hansson, who led the study.

However, more research is required to answer the question why this is the case, and in the future be able to advice on what type of exercise will be most effective in terms of disease prevention for this group.

"Nevertheless, it is interesting to see that there is a difference despite the fact that all of them are actually healthy and otherwise very similar. We now hope to continue with further studies, including examining whether [exercise intensity](#) rather than volume is a crucial factor in determining how the risk group responds to [exercise](#)", concludes Ola Hansson.

Provided by Lund University

Citation: Exercise is good for everyone—but some struggle more than others (2015, October 2) retrieved 7 May 2024 from <https://medicalxpress.com/news/2015-10-good-everyonebut-struggle.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--