

Diabetes prevented with just two minutes' exercise, academics discover

May 20 2014, by Kirsty Cameron



(Medical Xpress)—Type 2 diabetes can be prevented by doing just two sessions of high-intensity training (HIT) a week, new research published

in the journal *Biology* has shown.

In the paper, the authors from Abertay University state that high-intensity training (HIT) not only reduces the risk of disease, but is also just as effective at doing so as the [exercise](#) guidelines currently recommended by the UK Government.

These state that five, 30-minute sessions of exercise should be carried out each week - something that very few people manage to achieve.

The most common reason cited for this is lack of time, and the research team behind this latest study believe that HIT is the perfect way for people who are time-poor to improve their health.

In the study, overweight adults - a group at high-risk of developing diabetes - took part in a HIT regime for a period of eight weeks.

This involved completing twice-weekly sprints on an [exercise bike](#), with each sprint lasting just six seconds.

10 sprints were completed in total during each session, amounting to just two minutes of exercise per week.

This short, but high-intensity, regime was enough to significantly improve cardiovascular health and insulin sensitivity - the body's ability to clear glucose from the bloodstream - in the participants, and is the first time that so little exercise has been shown to have such significant health benefits.

Previous research by the same team had shown that three HIT sessions a week were required, but this study has eclipsed these results by showing that the same can be achieved with just two.

Dr John Babraj - who heads up the high-intensity training research team at Abertay University - explains:

"With this study, we investigated the benefits of high-intensity training (HIT) in a population group known to be at risk of developing diabetes: overweight, middle-aged adults.

"We found that not only does HIT reduce the risk of them developing the disease, but also that the regime needs to be performed only twice a week in order for them to reap the benefits. And you don't have to be able to go at the speed of Usain Bolt when you're sprinting. As long as you are putting your maximal effort into the sprints, it will improve your health.

"And this is the beauty of high-intensity training: it is quick to do and it is effective. Although it is well-established that exercise is a powerful therapy for the treatment and prevention of [type 2 diabetes](#), only 40 per cent of men and 28 per cent of women in the UK achieve the recommended 30 minutes of moderate [intensity exercise](#) on five days of the week.

"Lack of time to exercise, due to work or family commitments, is cited as the most common barrier to participation, so high-intensity training offers a really effective solution to this problem and has the added benefit of reducing disease risk which activities such as walking – even if done five days a week for 30 minutes - don't offer.

"There is a clear relationship between the intensity of exercise and the magnitude of health improvement, so it is only through these short, high-intensity sprints that health improvements can be seen."

More information: "High Intensity Training Improves Health and Physical Function in Middle Aged Adults." Simon Adamson, et al.

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