

A few kilograms weight loss nearly halves the risk of diabetes, large scale research study finds

November 11 2020



Credit: Unsplash/CC0 Public Domain

Providing support to help people with prediabetes make small changes to their lifestyle, diet and physical activity can almost halve the risk of

developing type 2 diabetes, according the results of the Norfolk Diabetes Prevention Study (NDPS) the largest diabetes prevention research study in the world in the last 30 years.

The findings of the NDPS clinical trial, which ran over eight years and involved more than 1,000 people with prediabetes at high risk of developing type 2 diabetes, have just been published in the international journal *JAMA Internal Medicine*.

The study—the largest diabetes prevention study in the world in the last 30 years—found that support to make modest lifestyle changes, including losing two to three kilograms of weight and increased physical activity over two years, reduced the risk of type 2 diabetes by 40 to 47 percent for those categorized as having prediabetes.

There are about eight million people with prediabetes in the UK and 4.5 million have already developed type 2 diabetes. The NDPS, funded by £2.5m from the National Institute for Health Research (NIHR), and NIHR CRN Eastern, was led by the Norfolk and Norwich University Hospital (NNUH) and University of East Anglia (UEA), together with colleagues from Ipswich Hospital, and the Universities of Birmingham and Exeter.

The research trial tested a simple lifestyle intervention, which helped people make small achievable lifestyle changes that led to a modest weight loss, and increases in physical activity. Importantly these changes were sustained for at least two years and the weight lost was not put back on. These findings are important as they show that a "real-world" lifestyle program really can make a difference in helping people reduce their risk of type 2 (adult onset) diabetes.

Professor Mike Sampson, NDPS Chief Investigator and Consultant in Diabetes at NNUH, said: "We are delighted with the results of this trial,

as until now no one was very sure if a real-world lifestyle program prevented type 2 diabetes in the prediabetes population we studied, as there have been no [clinical trials](#) that had shown this. We have now shown a significant effect in type 2 diabetes prevention, and we can be very optimistic that even a modest weight loss, and an increase in physical activity, in real world programs like this have a big effect on the risk of getting type 2 diabetes. This is really great news for the eight million people in the UK with a prediabetes diagnosis. The results of this trial, show that diabetes prevention is possible in the same prediabetes populations being treated in the NHS national diabetes prevention program. This is important to know, as the clinical methods for diagnosing diabetes and prediabetes have changed a lot in recent years."

The Norfolk Diabetes Prevention Study ran between 2011 and 2018 and worked with 135 GP practices in the East of England, and found 144,000 people who were at risk of developing type 2 diabetes. In screening sites across the East of England, 13,000 of these people then took a fasting glucose and glycosylated hemoglobin (HbA1c) blood test to detect prediabetes. More than 1,000 people with prediabetes were then entered into a randomized controlled trial, testing a pragmatic real-world lifestyle intervention, compared to a [control group](#), with average follow-up of just over two years. Earlier studies have used quite intense and expensive research interventions in different groups of prediabetes participants, but this is the first time a real world group delivered intervention has been shown to reduce the risk of type 2 diabetes.

NDPS also asked lay members of the public who had type 2 diabetes themselves, to help support participants with prediabetes in the trial, but for this particular population this did not further reduce the risk of getting type 2 diabetes.

Max Bachmann, NDPS co-investigator and Professor of Health Services Research at University of East Anglia, said: "The NDPS intervention

was delivered in groups which was far less expensive than individual-focused interventions which have previously shown to be effective under optimal conditions. For every 11 people who received the NDPS intervention, one person was prevented from getting type 2 diabetes, which is a real breakthrough"

Colin Greaves, Professor of Psychology Applied to Health at University of Birmingham, who jointly led the development of the NDPS intervention, said: "If you have been diagnosed with prediabetes, this approach offers a way to take a different direction in your life—to get off the path to type 2 diabetes and onto the road to a healthier future."

Dr. Jane Smith, NDPS collaborator from the University of Exeter, added: "Type 2 diabetes is a huge health challenge globally. NDPS is an incredibly positive story for individuals and healthcare systems, and underlines the importance of providing national diabetes prevention programs, which can use our research findings."

Professor Jonathan Valabhji, national clinical director for Diabetes and Obesity, said: "This study with similar referral criteria and a similar intensive lifestyle intervention to the NHS Diabetes Prevention Program has surpassed expectations in preventing type 2 diabetes. This is hugely encouraging for the NHS Diabetes Prevention Program, and what participants might expect to achieve in the longer term."

Dr. Elizabeth Robertson, director of research at Diabetes UK, said: "We welcome this new research showing that a group-based support program can help people at high risk of developing type 2 diabetes reduce their risk. This trial again highlights how achieving modest weight loss through diet and physical activity changes can lead to huge benefits for people at high risk of developing type 2. Type 2 [diabetes](#) is a serious condition, but with the right help many cases can be prevented or delayed. Diabetes UK's [Know Your Risk](#) tool helps people to determine

their risk and take steps to reduce it, including by self-referring on to NHS England's Diabetes Prevention Program in their local area."

More information: Michael Sampson et al. Lifestyle Intervention With or Without Lay Volunteers to Prevent Type 2 Diabetes in People With Impaired Fasting Glucose and/or Nondiabetic Hyperglycemia, *JAMA Internal Medicine* (2020). [DOI: 10.1001/jamainternmed.2020.5938](https://doi.org/10.1001/jamainternmed.2020.5938)

Provided by University of Exeter

Citation: A few kilograms weight loss nearly halves the risk of diabetes, large scale research study finds (2020, November 11) retrieved 22 December 2022 from <https://medicalxpress.com/news/2020-11-kilograms-weight-loss-halves-diabetes.html>

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.