

Education on personalized diabetes risk doesn't motivate behavior change

November 29 2016

People who receive personalized genetic and phenotypic information on their risk of developing diabetes don't significantly increase their physical activity compared to those who get broader, generic information on diabetes, according to a randomized controlled trial of more than 500 healthy adults published in *PLOS Medicine* by Job Godino from the University of Cambridge School of Clinical Medicine, UK, and colleagues.

Information about someone's risk of developing type 2 diabetes can now be calculated both from a genetic standpoint—by detecting the presence of certain risk genes in their DNA—and from a phenotypic standpoint, using formulas that take into consideration age, body mass index, and other data. But whether informing patients of their risk motivates them to change their behavior has never been clear. In the new study, researchers recruited 569 men and women born between 1950 and 1975 who were already enrolled in the ongoing Fenland Study in England and who had no previous diabetes diagnosis or other chronic diseases. They collected blood samples from the participants to screen for genetic variants and then randomly assigned each person to either a control group who received only standard lifestyle advice on preventing diabetes, or groups that also received either their genetic risk estimate or phenotypic risk estimate of developing diabetes. 8 weeks later, participants were fitted with a device to monitor physical activity for six days.

Compared to the control group, receipt of a genetic or phenotypic risk



estimate was not associated with more physical activity; the difference in adjusted mean change from baseline in the genetic risk group versus control group was 0.85 kJ/kg/d (95% Confidence interval (CI) ?2.07 to 3.77, p = 0.57), and in the phenotypic risk group versus control group was 1.32 kJ/kg/d (95% CI -1.61 to 4.25, p = 0.38). Nor did the researchers find differences in self-reported behavior, diet, or weight changes. However, the patients who were given their personalized risk of developing diabetes did have a better perception of risk at the conclusion of the study. More research is needed to shed light on whether these results hold true for personalized risk information as it relates to other diseases and whether someone's perception of their <u>risk</u> before the study had any impact on the outcome.

"The results of the current study provide further evidence for a shift in focus for promoting healthy changes in habitual, environmentally patterned behaviors, such as <u>physical activity</u> and diet, away from interventions solely based on provision of information and advice to individuals towards interventions that target the wider collective determinants of disease," the authors say.

More information: Godino JG, van Sluijs EMF, Marteau TM, Sutton S, Sharp SJ, Griffin SJ (2016) Lifestyle Advice Combined with Personalized Estimates of Genetic or Phenotypic Risk of Type 2 Diabetes, and Objectively Measured Physical Activity: A Randomized Controlled Trial. *PLoS Med* 13(11): e1002185. DOI: 10.1371/journal.pmed.1002185

Provided by Public Library of Science

Citation: Education on personalized diabetes risk doesn't motivate behavior change (2016, November 29) retrieved 20 May 2024 from



https://medicalxpress.com/news/2016-11-personalized-diabetes-doesnt-behavior.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.