

Study: A healthy diet is associated with a lower risk of type 2 diabetes, regardless of genetic risk

June 19 2024



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A healthy diet that adheres to nutrition recommendations is associated with better blood glucose levels and a lower risk of prediabetes and type 2 diabetes, a new study from the University of Eastern Finland shows. This association was also observed in individuals with a high genetic predisposition to type 2 diabetes. The findings were [published](#) in *European Journal of Nutrition*.

Type 2 diabetes is a strongly genetic disease that can be prevented and delayed with a healthy lifestyle, such as diet and exercise.

"However, we haven't really known whether a healthy diet is equally beneficial to all, i.e., to those with a low genetic risk and to those with a high genetic risk," Doctoral Researcher Ulla Tolonen of the University of Eastern Finland says.

The cross-sectional study examined food consumption and blood glucose levels in more than 1,500 middle-aged and elderly men participating in the broader Metabolic Syndrome in Men Study, METSIM.

Food consumption was measured using a food frequency questionnaire, and blood glucose levels were measured using a two-hour glucose tolerance test. In addition, study participants' genetic risk of type 2 diabetes was scored based on 76 genetic variants associated with type 2 diabetes risk.

The researchers identified two [dietary patterns](#) based on food consumption. A dietary pattern termed as "healthy" included, among other things, vegetables, berries, fruits, [vegetable oils](#), fish, poultry, potatoes, unsweetened and low-fat yogurt, low-fat cheese and whole grain products, such as porridge, pasta and rice. This diet was associated with, e.g., lower [blood glucose levels](#) and a lower risk of prediabetes and

type 2 diabetes.

The study also explored the effect of the genetic risk of type 2 diabetes on the associations with diet and [glucose metabolism](#). The associations of a healthy diet with better glucose metabolism seemed to hold true for individuals with both a low and a high genetic risk of [diabetes](#).

"Our findings suggest that a [healthy diet](#) seems to benefit everyone, regardless of their genetic risk," Tolonen concludes.

More information: Ulla Tolonen et al, Healthy dietary pattern is associated with lower glycemia independently of the genetic risk of type 2 diabetes: a cross-sectional study in Finnish men, *European Journal of Nutrition* (2024). [DOI: 10.1007/s00394-024-03444-5](https://doi.org/10.1007/s00394-024-03444-5)

Provided by University of Eastern Finland

Citation: Study: A healthy diet is associated with a lower risk of type 2 diabetes, regardless of genetic risk (2024, June 19) retrieved 21 June 2024 from <https://medicalxpress.com/news/2024-06-healthy-diet-diabetes-genetic.html>

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