

Center for Public Health, with limitations, a more plant-based diet only develops its protective effects if both consumption of animal-based foods as well as industrially processed and highly sugary foods is reduced.

For the first time, the scientists identified improvements in metabolism and liver and [kidney function](#) as reasons for the positive effects of a healthy plant-based diet, in addition to the associated lower likelihood of obesity. The study results were recently [published](#) in the journal *Diabetes & Metabolism*.

According to analyses by the research team, a healthy plant-based diet with plenty of fresh fruit and vegetables and whole-meal products reduces the risk of diabetes by 24%, even in the presence of a genetic predisposition and other diabetes risk factors such as obesity, advanced age or a lack of physical activity. Unhealthy plant-based diets with a high proportion of sweets, refined grains and sugary drinks, on the other hand, are associated with an increased risk of type 2 diabetes.

Key biomarkers identified

The research was carried out with 113,097 participants in the large-scale British cohort study (UK Biobank) over an observation period of 12 years. According to their findings, the reasons behind the anti-diabetic effect of a healthy plant-based diet go far beyond the well-known lower body fat percentage and waist circumference.

"Our study is the first to identify biomarkers of central metabolic processes and organ functions as mediators of the health effects of a plant-based diet," says Tilman Kühn, Professor of Public Health Nutrition at MedUni Vienna and the University of Vienna, who led the study in close collaboration with researchers from Queen's University Belfast. The investigations confirmed that normal values for [blood lipids](#)

(triglycerides), [blood sugar](#) (HbA1c), inflammatory parameters (CRP) and the insulin-like growth factor (IGF1) are associated with a low risk of diabetes.

Further benefits discovered

It has also been demonstrated how important the full function of the liver and kidneys is in diabetes prevention. Both organs play a major role in people who already have diabetes.

"However, our research has now shown that a healthy plant-based diet can improve liver and kidney function and thus reduce the risk of diabetes," says Kühn, outlining a previously underestimated benefit of a conscious [plant-based diet](#).

More information: Alysha S. Thompson et al, A healthful plant-based diet is associated with lower type 2 diabetes risk via improved metabolic state and organ function: A prospective cohort study, *Diabetes & Metabolism* (2023). [DOI: 10.1016/j.diabet.2023.101499](https://doi.org/10.1016/j.diabet.2023.101499)

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