

Lower BMI means lower diabetes risk, even among non-overweight people

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Lower body mass index (BMI) is consistently associated with reduced type II diabetes risk, among people with varied family history, genetic risk factors and weight, according to a new study published this week in

PLOS Medicine by Manuel Rivas of Stanford University, and colleagues.

Weight-loss interventions have shown demonstrable benefit for reducing the risk of type II [diabetes](#) in high-risk and pre-diabetic individuals but have not been well-studied in people at lower risk of diabetes. In the new study, researchers studied the association between BMI, diabetes family history and genetic risk factors affecting type II diabetes or BMI. They used data on 287,394 unrelated individuals of British ancestry recruited to participate in the UK Biobank from 2006 to 2010 when between the ages of 40 and 69.

Nearly 5% of the participants had a diagnosis of type II diabetes and diabetes prevalence was confirmed to be associated with higher BMI, a family history of type II disease and [genetic risk factors](#). Moreover, a 1 kg/m² BMI reduction was associated with a 1.37 fold reduction (95% CI 1.12-1.68) in type II diabetes among non-overweight individuals with a BMI of less than 25 and no family history of diabetes, similar to the effect of BMI reduction in obese individuals with a [family history](#) (1.21, 95% CI 1.13-1.29)

"These findings suggest that all individuals can substantially reduce their type II [diabetes risk](#) through weight loss," the authors say. However they also caution that the results must be taken with a grain of salt since they didn't study actual weight loss interventions. Although the new analysis "can determine that lower lifetime BMI is protective against diabetes, that does not necessarily imply [weight loss](#) later in life, after carrying excess weight for decades, would have the same result," they say.

More information: Wainberg M, Mahajan A, Kundaje A, McCarthy MI, Ingelsson E, Sinnott-Armstrong N, et al. (2019) Homogeneity in the association of body mass index with type 2 diabetes across the UK Biobank: A Mendelian randomization study. *PLoS Med* 16(12): e1002982. doi.org/10.1371/journal.pmed.1002982

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