

# More years of obesity means higher risk of disease, study finds

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A greater obesity duration is associated with worse values for all cardiometabolic disease factors, according to a new study published this week in *PLOS Medicine* by Tom Norris of Loughborough University,

UK, and colleagues.

People with [obesity](#) do not all share the same risk for the development of cardiometabolic disease risk factors. The duration a person has spent with obesity over their lifetime has been hypothesized to affect this variation. In the new study, researchers used data from three British birth cohort studies that collected information on body mass index from age 10 to 40 as well as cardiometabolic disease risk factors—[blood pressure](#), cholesterol and glycated hemoglobin ([blood sugar](#)) measurements—in 20,746 participants.

More years of obesity was associated with worse values for all measured cardiometabolic risk factors. The association was particularly strong for glycated hemoglobin, or HbA1c; those with less than five years of obesity had a 5% higher HbA1c (95% Confidence Interval 4-6) compared to people with no years of obesity, while those with 20 to 30 years of obesity had a 20% higher HbA1c (95% CI 17-23) compared to people with no obesity. Importantly, this increased risk persisted when adjustment was made for a robust measure of life course obesity severity. Other measures of cardiometabolic disease risk (systolic and [diastolic blood pressure](#), high density-lipoprotein cholesterol) were also associated with obesity duration, though these were largely attenuated when adjusting for obesity severity.

"Our findings suggest that health policy recommendations aimed at preventing early obesity onset, and therefore reducing lifetime exposure, may help reduce risk of diabetes, independently of obesity severity," the authors say.

**More information:** Norris T, Cole TJ, Bann D, Hamer M, Hardy R, Li L, et al. (2020) Duration of obesity exposure between ages 10 and 40 years and its relationship with cardiometabolic disease risk factors: A cohort study. *PLoS Med* 17(12): e1003387.

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