

Children with prediabetes and obesity may be more likely to progress to diabetes

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A new *Journal of the Endocrine Society* study highlights how to identify children at high risk of developing type 2 diabetes and strategies for prevention, such as anti-obesity or anti-diabetes medication and lifestyle

changes.

Prediabetes is a [health condition](#) in which blood sugar levels are higher than normal, but not yet high enough to be diagnosed as type 2 diabetes. Prediabetes increases the risk of developing [chronic kidney disease](#), heart disease and stroke. Around 5%–10% of adults with prediabetes develop diabetes each year.

Over the past three decades, there has been a sharp increase in the incidence and prevalence of childhood obesity, prediabetes and type 2 diabetes. At least [one in five adolescents](#) are estimated to have prediabetes. It is not clear whether the adult definition of prediabetes is appropriate for children as fewer progress to diabetes during childhood.

"We found that higher levels on certain diabetes screening tests (non-fasting glucose and hemoglobin A1c) and worsening obesity may better predict diabetes risk in children," said study author Ashley H. Shoemaker, M.D., M.S.C.I., of Vanderbilt University Medical Center in Nashville, Tenn.

"This is a real-world study that highlights ways to identify the children at highest risk for diabetes and possible strategies for diabetes prevention in children such as treatment with anti-diabetes or anti-obesity medications. Our study found patients who were on metformin had lower [blood sugar levels](#) and were slower to progress to diabetes."

The researchers found 6.5% of 552 [pediatric patients](#) with prediabetes developed type 2 diabetes over the seven-year period of their study. They identified a few [risk factors](#), including higher HbA1C and non-fasting glucose levels, and worsening obesity. The study found boys progressed more commonly and more quickly to type 2 diabetes than girls.

"Weight stabilization and metformin therapy could be important interventions for [diabetes](#) prevention in children," Shoemaker said.

The other authors of this study are Natasha Belsky of Vanderbilt University School of Medicine in Nashville, Tenn.; and Jaclyn Tamaroff of Vanderbilt University Medical Center.

The manuscript, "Risk Factors for Progression to Type 2 Diabetes in a Pediatric Prediabetes Clinic Population," was published online.

More information: Ashley Hall Shoemaker, Risk Factors for Progression to Type 2 Diabetes in a Pediatric Prediabetes Clinic Population, *Journal of the Endocrine Society* (2023). [DOI: 10.1210/jendso/bvad118](#)

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