

# Metformin improves blood glucose levels and BMI in very obese children

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Metformin therapy has a beneficial treatment effect over placebo in improving body mass index (BMI) and fasting glucose levels in obese children, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism (JCEM)*. The study showed reduction in BMI was sustained for six months.

Childhood obesity has increased globally over the last two decades and it is linked to an increase in the diagnosis of type 2 diabetes in childhood, previously a condition that was only diagnosed in adults. [Metformin](#) is a first line drug for type 2 diabetes, and has been used for many decades. In adults metformin delays the onset of type 2 diabetes, but there is no evidence that the drug has a similar effect on children.

"Our findings provide evidence that a treatment course of metformin is clinically useful, safe and well-tolerated in [obese children](#) who are at risk for type 2 diabetes," said Deborah Kendall, MD, of Royal Manchester Children's Hospital in the United Kingdom and lead author of the study. "Metformin may also provide stimulus for lifestyle changes and potentially reduce long-term risk for type 2 diabetes and its associated health problems."

This prospective, randomized, double-blind, [placebo](#)-controlled trial was conducted at six pediatric endocrine centers in the United Kingdom and involved 151 obese children and young people with hyperinsulinemia and/or impaired fasting glucose or impaired glucose tolerance. Study

participants received either metformin or placebo daily for six months. This trial is the largest of its kind to focus on metformin in obese non-diabetic children and young people.

"Our results show that metformin can improve BMI and blood glucose levels in obese children, but longer term effects such as reduction in the incidence of type 2 diabetes need further study," noted Kendall.

**More information:** The article, "Metformin in Obese Children and Adolescents: The MOCA Trial," appears in the January 2013 issue of *JCEM*.

Provided by The Endocrine Society

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