

Children who take steroids at increased risk for diabetes, high blood pressure, blood clots

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Children who take oral steroids to treat asthma or autoimmune diseases have an increased risk of diabetes, high blood pressure, and blood clots, according to Rutgers researchers.

The study, which was published in the *American Journal of Epidemiology*, examined the records of more than 933,000 US [children](#) from ages 1 to 18 with or without autoimmune diseases, such as [inflammatory bowel disease](#), juvenile arthritis or psoriasis. Among those without an autoimmune disease, about two in three children who received prescriptions for steroids had evidence of asthma.

"The rates of diabetes, high blood pressure and blood clots from oral steroids have been studied in large populations of adults. However, there are reasons to think these findings might be different in children, who not only tend to take steroids differently than adults but also have much lower baseline risks of developing these same cardiovascular and metabolic conditions. This

study allowed us to put numbers on the association between [oral steroids](#) and rare, but potentially serious, complications in children," said study author Daniel Horton, an assistant professor of pediatrics and epidemiology at Rutgers Robert Wood Johnson Medical School.

The researchers found that children who were receiving high steroid doses experienced these complications at much higher rates than children taking low doses or who had taken steroids previously. Among the complications studied, high blood pressure occurred most commonly with steroid treatment. All of these complications were more common among children with [autoimmune diseases](#), independent of the steroid effect.

"While children receiving high-dose steroids were at substantially higher risk for developing diabetes, [high blood pressure](#) or [blood clots](#) relative to children not taking these medicines, the absolute risks of these complications were still small. The vast majority of children taking brief courses of steroids for conditions such as asthma, for instance, will not experience these complications," Horton said.

More information: Daniel B Horton et al, Oral Glucocorticoids and Incident Treatment of Diabetes Mellitus, Hypertension, and Venous Thromboembolism in Children, *American Journal of Epidemiology* (2020). [DOI: 10.1093/aje/kwaa197](https://doi.org/10.1093/aje/kwaa197)

Provided by Rutgers University

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