

# Holidays disrupt drug routines of children with diabetes

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Credit: AI-generated image ([disclaimer](#))

Children with type 1 diabetes find it difficult to adhere to their drug routines during school holidays and weekends. Holiday distractions cause a 20 percent reduction in adherence to taking medications that assist managing their condition and other associated conditions, which may have serious consequences for their health.

"The research, published in the journal *Archives of Disease in Childhood*, shows that children with type 1 diabetes (T1D) find it especially difficult to take their metformin tablets in addition to insulin during school holidays," says Dr. Alexia Peña, Senior Lecturer from The University of Adelaide's Robinson Research Institute and Paediatric Endocrinologist at the Women's and Children's Hospital.

"Chronic non-communicable diseases, including T1D, are increasingly prevalent in childhood and treatment is becoming more complex with combination therapies being common to manage the disease and associated conditions.

The 12-month study involving 90 children from Adelaide aged 8-18 years, used data gathered from electronic dose monitoring devices which provided a reliable continuous dosing history by recording the date and time a child accesses their medications. This data was supported with tablet counting.

"There was approximately a 20 percent reduction in treatment adherence during school holidays, weekends and public holidays in children with T1D," says Dr. Peña.

"As school holidays and weekends account for 25 percent and 30 percent, respectively, of a calendar year in Australia, the impact of non-adherence to medical treatment in childhood has serious consequences for an individual's health and substantially increases demand and expenditure on health systems.

"A 25 percent reduction in adherence has been associated with significant increases in hospitalisation and mortality in adults with T1D.

"Clinicians should be aware of adherence issues during holidays and weekends. Targeted reminders and additional strategies are necessary to

improve adherence during these less structured periods for school children and their families. These will ensure benefit from their treatment especially in children with [chronic conditions](#).

"There is a need to develop targeted strategies to enhance [adherence](#) during vulnerable periods in these children, improving overall quality of healthcare.

"This is the first study of children with T1D. Similar challenges of adhering to drug therapies were found in a study of [children](#) with cystic fibrosis which suggests that these problems may extend to other chronic diseases," says Dr. Peña.

**More information:** Catherine Leggett et al. Adherence to metformin is reduced during school holidays and weekends in children with type 1 diabetes participating in a randomised controlled trial, *Archives of Disease in Childhood* (2019). [DOI: 10.1136/archdischild-2018-316303](https://doi.org/10.1136/archdischild-2018-316303)

Provided by The University of Adelaide

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