

# Children with type 1 diabetes may have a less desirable gut bacteria composition

July 21 2020

---



Credit: CC0 Public Domain

Children with type 1 diabetes have a less desirable gut microbiome composition which may play a role in the development of the disease, according to new research published in the Endocrine Society's *Journal*

*of Clinical Endocrinology & Metabolism.*

Type 1 diabetes most often occurs in children and adolescents and is a disease in which a person's pancreas produces little or no insulin. The prevalence of type 1 diabetes in children is related not only to [genetic predisposition](#), but also to [environmental factors](#) such as gut health and gut-microbiota composition. The [gut microbiome](#) is a community of bacteria within the [gastrointestinal tract](#) that have a major influence on metabolism, body weight, the development of disease and the immune system.

"We found a particular gut microbiota composition that is associated with poorer blood sugar measures in a group of children and adolescents with newly-diagnosed type 1 diabetes," said the study's corresponding author, Giuseppe d'Annunzio, M.D., of the Istituto Giannina Gaslini in Genoa, Italy. "We used a form of artificial intelligence called machine learning to do a more thorough and robust genetic analysis."

The researchers studied the microbiomes of 31 children with type 1 diabetes and 25 children who did not have diabetes. They used machine learning analysis and [genetic analysis](#) and found patients with type 1 diabetes had a significantly higher amount of gut bacteria linked to the onset of diabetes.

"Gut microbiota composition deserves attention as a new topic of research in the development of several diseases," d'Annunzio said.

**More information:** Roberto Biassoni et al. Gut Microbiota in T1DM-Onset Pediatric Patients: Machine Learning Algorithms to Classify Microorganisms Disease-Linked, *The Journal of Clinical Endocrinology & Metabolism* (2020). [DOI: 10.1210/clinem/dgaa407](https://doi.org/10.1210/clinem/dgaa407)

Provided by The Endocrine Society

Citation: Children with type 1 diabetes may have a less desirable gut bacteria composition (2020, July 21) retrieved 15 July 2023 from <https://medicalxpress.com/news/2020-07-children-diabetes-desirable-gut-bacteria.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.