

# Diabetes-linked autoantibodies may alter children's gut microbes

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Image courtesy of Blausen Medical

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(HealthDay)—Children with diabetes-associated autoantibodies have alterations in the gut microbiome, according to a study published in the April issue of *Diabetes*.

Marcus C. de Goffau, from the University Medical Center Groningen in the Netherlands, and colleagues compared the intestinal microbiota composition of 18 children with at least two diabetes-linked autoantibodies with 18 autoantibody-negative children matched for age, sex, early feeding history, and [human leukocyte antigen](#) risk genotype.

The researchers found that  $\beta$ -cell autoimmunity correlated with a low abundance of lactate-producing and butyrate-producing species. Children with  $\beta$ -cell autoimmunity also exhibited a reduction in *Bifidobacterium adolescentis* and *Bifidobacterium pseudocatenulatum*, the two most dominant *Bifidobacterium* species; and an increase in *Bacteroides* genus. Children with  $\beta$ -cell autoimmunity did not exhibit increased fecal calprotectin or immunoglobulin A as a marker of inflammation.

"Functional studies related to the observed alterations in the gut microbiome are warranted because the low abundance of [bifidobacteria](#) and [butyrate](#)-producing species could adversely affect the intestinal epithelial barrier function and inflammation, whereas the apparent importance of the *Bacteroides* genus in development of [type 1 diabetes](#) is insufficiently understood," the authors write.

**More information:** [Abstract](#)  
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