

Children with diabetes perform well in school

February 6 2019, by Michael Schrøder

On average, Danish children suffering from type 1 diabetes perform just as well in school as their classmates. This is the result of the largest study so far exploring how children with diabetes perform in school. The study was conducted at Aarhus BSS in collaboration with Danish and international researchers.

In the study, the researchers reviewed the results of nationally standardised tests in math and reading completed by more than 630,000 Danish schoolchildren in grades 2, 3, 4, 6 and 8. Approximately 2,000 of these children had been diagnosed with type 1 diabetes, and the comparison shows that they perform just as well as their classmates with or without adjusting for socioeconomic status. The results of the study have been published in the recognised medical journal *JAMA (Journal of the American Medical Association)*.

A positive result

"This is a positive—and perhaps also a somewhat surprising—result. The assumption so far has probably been that the high and low blood sugar levels in diabetes also affect children's cognitive skills and learning," says Associate Professor Niels Skipper. He is a health economist at the Department of Economics and Business Economics at Aarhus BSS, Aarhus University, and headed the study.

"In addition, the results of previous studies in this field have varied. However, these studies were often based on smaller, non-random samples of children, and characterised by a substantial statistical

uncertainty."

The new study was conducted in collaboration with researchers from the University of Copenhagen, VIVE, Herlev Hospital and Kansas State University, US.

More and more children are affected

For unknown reasons, more and more children and adolescents are diagnosed with type 1 diabetes. In Denmark, the number of 0-19 year-olds with type 1 diabetes has almost doubled between 2000 and 2017 to 3,200 children and adolescents. The disease is chronic and has no prevention or cure.

When Niels Skipper's four-year old daughter was diagnosed with type 1 diabetes, it was thus an obvious choice for the [health economist](#) to apply his [academic skills](#) to uncover more aspects of the disease.

In 2018, he received a grant of almost DKK 4 million from the Independent Research Fund Denmark towards a research project exploring how type 1 [diabetes](#) affects [children](#) and adolescents with different socioeconomic backgrounds as well as their families. This study represents the first result of the [research project](#).

More information: Niels Skipper et al, Association of Type 1 Diabetes With Standardized Test Scores of Danish Schoolchildren, *JAMA* (2019). [DOI: 10.1001/jama.2018.21819](https://doi.org/10.1001/jama.2018.21819)

Provided by Aarhus University

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