

Type 1 diabetes linked to higher risk of mental health problems in patients and family

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Both children with type 1 diabetes and their closest family members are at increased risk of mental health problems compared with those without

the disease, according to a large study by researchers at Karolinska Institutet published in the journal *Diabetes Care*. The findings underscore the need for psychological consulting for both children and their families in diabetes care.

Research shows that children and adolescents with type 1 [diabetes](#) are at increased risk of [mental health problems](#) such as depression, anxiety and stress-related disorders and that these co-morbidities can get in the way of optimal care.

Current guidelines from the International Society for Pediatric and Adolescent Diabetes (ISPAD) recommend screening for [mental health](#) problems in children with type 1 diabetes but do not adequately address the needs of [family members](#), who are also at increased risk of mental health problems. Moreover, the reasons behind the association of familial mental health problems and type 1 diabetes are not fully understood.

"Many clinicians assume intuitively that diabetes in a child negatively affects the mental health of both the patient and the family members," says Agnieszka Butwicka, assistant professor at the Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, and the study's last senior author. "But we think the answer is not that simple. Our study indicates that there could also be a [genetic component](#) behind this association."

Nearly doubled risk of depression

The study linked some 3.5 million people born in Sweden between 1973 and 2007 to their [biological parents](#), full- and half-siblings and cousins. More than 20,000 people were diagnosed with childhood-onset type 1 diabetes and found to have a nearly doubled risk of depression and around 1.6 times higher risk of anxiety and stress-related disorders than

those without the disease.

Their parents and full-siblings also had somewhat elevated risks of anxiety and stress-related disorders, albeit to a lesser degree, while their half-siblings and cousins had no or only marginally higher risks for some conditions.

"These results are of high clinical relevance because they mean that therapeutic intervention should also involve close family members, not just patients," Agnieszka Butwicka says.

Since parents-children and full-siblings share more [genetic material](#) (around 50%) than half-siblings (around 25%) and cousins (less than 12.5%), the researchers say the outcome supports the idea that genes may be a contributing factor to mental health problems in type 1 diabetes.

However, since this is only an observational study, they cannot conclusively say what causes the associations.

"More studies are needed to fully understand the underlying genetic and environmental contributions driving [psychiatric disorders](#) in type 1 diabetes," says Shengxin Liu, Ph.D. student at Karolinska Institutet and the study's corresponding author.

More information: Shengxin Liu et al, Association and Familial Coaggregation of Childhood-Onset Type 1 Diabetes With Depression, Anxiety, and Stress-Related Disorders: A Population-Based Cohort Study, *Diabetes Care* (2022). [DOI: 10.2337/dc21-1347](https://doi.org/10.2337/dc21-1347)

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