

Recurrence risk for autism spectrum disorders examined for full, half siblings

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A Danish study of siblings suggests the recurrence risks for autism spectrum disorders (ASDs) varied from 4.5 percent to 10.5 percent depending on the birth years, which is higher than the ASD risk of 1.18 percent in the overall Danish population, according to a study published by *JAMA Pediatrics*.

ASDs are [neurodevelopmental disorders](#) that are characterized by difficulties in [social interaction](#) and communication and also include [repetitive behavior](#) and narrow interests. Childhood autism (CA) accounts for about 30 percent of all ASD cases and the prevalence of ASDs has increased during the last two decades, according to the study background.

Therese K. Grønberg, M.Sc., of Aarhus University, Denmark, and colleagues conducted a population-based study in Denmark of all children (about 1.5 million) born between 1980 and 2004. They identified a maternal sibling group derived from mothers with at least two children and a paternal sibling group derived from fathers with at least two children.

"To date, this is the first population-based study to examine the recurrence risk for [autism spectrum disorders](#) (ASDs), including time trends, and the first study to consider the ASDs recurrence risk for full- and half-siblings," the authors note in the study.

The study results suggest an almost seven-fold increase in ASDs risk if an older sibling had an ASD diagnosis compared with no ASD diagnoses in older siblings. In children with the same mother, the adjusted relative recurrence risk of 7.5 in full siblings was significantly higher than the risk of 2.4 in half siblings. In children with the same father, the adjusted relative recurrence risk was 7.4 in full siblings and significant, but no statistically significant increased risk was observed among paternal half siblings, the results also indicate.

"The difference in the recurrence risk between full and half siblings supports the role of genetics in ASDs, while the significant [recurrence risk](#) in maternal half-[siblings](#) may support the role of factors associated with pregnancy and the maternal intrauterine environment in ASDs," the study concludes.

More information: *JAMA Pediatr.* Published online August 19, 2013. [DOI: 10.1001/jamapediatrics.2013.2259](#)

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