NEWS

Autism may share risk factors with diabetes

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Teenagers and young adults with autism are about three times more likely than those without the condition to develop type 2 diabetes, according to one of the largest studies of autism and diabetes to date[1].

The findings, published in March in *Diabetes Care*, add to mounting evidence that people with autism face a **long list of chronic health problems**. Type 2 diabetes, which often goes hand-in-hand with obesity — associated with a subset of autism cases — can lead to heart disease and stroke, as well as nerve and kidney damage.

“We really need effective interventions for these adolescents and young adults to turn the tide and hopefully prevent the development of type 2 diabetes,” says **Meredith Dreyer Gillette**, associate professor of pediatrics at the University of Missouri-Kansas City, who was not involved in the study.

About 32 percent of young children with autism are overweight and 16 percent are obese, compared with 23 percent and 10 percent of typically developing children, respectively[2]. Certain genetic risk factors for autism, such as deletions on chromosome 16, are also **tied to weight problems**.

Women who are obese or have diabetes while pregnant are more likely to have children with autism.

The prevalence of diabetes among individuals with autism, however, has been less clear. A study last year found an increased risk of diabetes — as well as many other chronic health problems — among adults with autism, possibly stemming from a lack of access to preventive care[3].

Diabetes data:

To probe this link more deeply, a team of researchers in Taiwan identified 6,122 adolescents and young adults with autism and more than 24,000 controls with no history of diabetes in the country's National Health Insurance Research Database. The researchers could not be reached for comment.

Within nine years, 1.6 percent of people in the autism group developed diabetes, compared with 0.4 percent of controls. People with autism were also more likely to be obese, and any individuals who were obese were about 3.5 times more likely to develop type 2 diabetes than those at a healthy weight.

"Now we've shown across a number of studies and number of different locations elevated rates of obesity among these kids, so I think it's really important to follow up with them," says **Alison Hill**, assistant professor of pediatrics at Oregon Health and Science University, who was not involved in the new work.

People with autism were also more likely than controls to be taking atypical antipsychotics, a class of drugs that includes **risperidone** and aripiprazole, which are used to treat behavioral problems in children with autism. The drugs have been **linked to weight gain**, and the new study suggests that individuals who take them as much as double their risk of type 2 diabetes.

Multiple risks:

Still, a threefold risk of diabetes for people with autism held up even after the researchers controlled for medication use, obesity and a range of other variables, suggesting that the two conditions share genetic or environmental risk factors.

Women with diabetes are known to be at an increased risk of having children with autism. These children may also be predisposed to type 2 diabetes, the researchers say. They also note that the gene **GLO1**, which encodes an enzyme that detoxifies certain byproducts of metabolism, is linked to both autism and type 2 diabetes.

Other scientists say environmental and lifestyle factors, such as **picky eating**, may explain the increased diabetes risk among individuals with autism. "They have less access to competent healthcare services and support for healthy lifestyles," says **Clarissa Kripke**, clinical professor of family and community medicine at the University of California, San Francisco, who worked on a 2015 analysis of chronic health problems among adults with autism.

People with autism also tend to have poor access to employment, housing, transportation and social support, Kripke says. "All of these factors are known to impact health."

REFERENCES:

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