

# Autism risk linked to obesity, diabetes combination in moms

Children born to women with obesity and diabetes may have an increased risk of autism, a new study suggests.

The children in the study who were born to women who were obese before becoming pregnant were nearly twice as likely to be [diagnosed with autism](#) by age 6, compared with those children born to mothers whose weight was normal before they got pregnant, the researchers found.

And the babies born to women who had [developed diabetes](#) at some point before they got pregnant were more than twice as likely to be diagnosed with autism by age 6, compared with those children born to women without diabetes.

However, the children born to women with both obesity and diabetes showed the greatest risk. These kids were nearly four times more likely to be diagnosed with autism by age 6, compared with those children born to women who had neither obesity nor diabetes.

The new study "highlights the potential that [autism starts before birth](#), in utero," said study author M. Daniele Fallin, chair of the department of mental health at the Johns Hopkins Bloomberg School of Public Health in Baltimore.

In the study, the researchers looked at the [rates of autism](#) and intellectual disabilities in about 2,700 children. The researchers also looked at the pre-pregnancy weights of the children's mothers and examined whether the women had developed diabetes before or during their pregnancies. The researchers gathered their data from medical records and interviews with the mothers.

Of all the children in the study, 102 were diagnosed with autism and 137 were diagnosed with intellectual disabilities during the six-year follow-up period.

The researchers also found that the children born to women who had both obesity and diabetes also had an increased [risk of intellectual disabilities](#), compared with the babies born to women who had neither obesity nor diabetes.

The mechanisms linking a mother's obesity and diabetes and a child's risk of autism are not clear, the researchers said. However, some research has suggested that obesity and diabetes may disrupt the functioning of a mother's

immune system, and this in turn may contribute to the development of autism in the child, the researchers said.

Both obesity and diabetes may also promote inflammation in a pregnant woman's body, and intrauterine and [fetal brain inflammation](#) have been implicated in the development of autism in children, the study said.

Another possible mechanism relates to folate, as "there is emerging evidence that folate supplementation is a protective factor for autism," Fallin told Live Science. Research has shown that obesity may disrupt the uptake of folate, she said. Therefore, if a woman is obese, it may be much harder for her body to properly use the chemical, which could contribute to an increased risk of autism in the fetus. (Folate or folic acid is a type of vitamin B that the body needs to function and stay healthy.)