

Study Links Diabetes, Obesity in Moms-to-Be to Higher Autism Risk in Kids

Combination may nearly quadruple risk, researchers say, but their review did not prove cause-and-effect

Friday, January 29, 2016



FRIDAY, Jan. 29, 2016 (Health Day News) -- Mothers-to-be who are both obese and diabetic have a higher risk of giving birth to a child with autism than healthy women, a new study suggests.

The two conditions in combination nearly quadrupled the risk that a child would receive an autism diagnosis, said researchers who looked at more than 2,700 mother-child pairs.

Individually, maternal obesity or diabetes was linked to twice the odds of giving birth to a child with autism compared to mothers of normal weight without diabetes, the study found.

"The finding is not a total surprise," said study author Dr. Xiaobin Wang, director of the Center on Early Life Origins of Disease at Johns Hopkins University in Baltimore. "Many studies have shown that maternal obesity and diabetes have an adverse impact on developing fetuses and their long-term metabolic health."

"Now we have further evidence that maternal obesity and diabetes also impact the long-term neural development of their children," added Wang.

The study doesn't prove that obesity and diabetes in tandem actually cause the autism, however. It only found an association.

The study, which tracked more than 2,700 births, adds to evidence that autism risk may start before birth, the researchers said.

In the United States, more than one-third of women of reproductive age are obese, while almost 10 percent struggle with diabetes, the study authors said in background notes.

Prevalence of autism -- now affecting 1 in 68 U.S. kids -- has skyrocketed since the 1960s, alongside the incidence of obesity and diabetes in women of reproductive age, the authors point out.

Their study, published online Jan. 29 in the journal *Pediatrics*, involved children born at Boston Medical Center between 1998 and 2014.

All the babies' mothers were interviewed one to three days following delivery, with their obesity and diabetes status noted. In turn, their babies were tracked for an average of six years.

Almost 4 percent of the babies were diagnosed on the autism spectrum. About 5 percent had some form of intellectual disability, and nearly one-third were diagnosed with another developmental disability. Some were diagnosed with more than one condition.

Besides quadrupling autism risk, the combination of maternal obesity and diabetes was also linked to a similarly higher risk for giving birth to a child with an intellectual disability, the investigators said. However, most of the increased risk for intellectual disability was seen among babies who were simultaneously diagnosed with autism.

Along with pre-pregnancy diabetes, gestational diabetes -- a form that develops during pregnancy -- was also linked to a higher risk of an autism diagnosis.

Wang said more study will be needed before saying definitively that the combination of maternal obesity and diabetes actually causes autism.

But Andrea Roberts, a research associate at Harvard School of Public Health in Boston, suggested otherwise.

"I think in this case it probably is causal," she said. "And therefore if women are able to change their weight status and avoid diabetes they might actually prevent the increase in autism risk in their children."

Roberts isn't blaming individual mothers, however. "In terms of casting blame, I would say that when you see a massive increase of obesity over the past 30 years it's hard to say it's an individual's fault or problem. This is a societal issue."

She likened the ready access to junk food to the availability of cigarettes years ago. "When I was a kid there used to be vending machines with cigarettes in them that were in the lobbies of restaurants. And vending machines with junk food is pretty comparable," she said.

"So even though the problem arises from an individual's behavior, it does not necessarily mean that the solution to the problem is at an individual level," Roberts said.

Wang doesn't want to cast blame on mothers either. "Rather, we hope that our research findings can translate into positive public health messages that will increase the awareness of the importance of healthy weight among future parents, pregnant women and health care providers," he said.

SOURCES: Xiaobin Wang, M.D., MPH, ScD, director, Center on Early Life Origins of Disease, department of population, family, and reproductive health, Johns Hopkins University Bloomberg School of Public Health, Baltimore; Andrea Roberts, Ph.D., research associate, department of social and behavioral sciences, Harvard School of Public Health, Boston; February 2016 *Pediatrics*
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