

## Moms' pre-pregnancy obesity tied to ADHD, other issues in kids

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Nature of connection between the conditions isn't clear, however, experts say.

(HealthDay)—Children whose mothers were very obese going into pregnancy may face an increased risk of emotional and behavioral problems, a new study suggests.

Researchers at the U.S. Centers for Disease Control and Prevention found that when moms were <u>severely obese</u> before <u>pregnancy</u>, their kids were more likely to have issues like <u>attention-deficit hyperactivity</u> <u>disorder</u> (ADHD) and developmental delays at the age of 6.

But the findings do not prove that moms' obesity is to blame, noted study researcher Laura Schieve, an epidemiologist at the CDC.



But, she said, there was a "strong and consistent association" between mothers' pre-pregnancy weight and kids' development—even with other factors, like education and family income, taken into account.

"This underscores the importance of existing recommendations that women try to maintain a healthy lifestyle and weight before pregnancy," Schieve said.

The study was published online April 27 and in the May print issue of *Pediatrics*.

The results are based on over 1,300 mother-child pairs taking part in a long-term health study. When their children were 6, moms answered questionnaires about their children's behavioral and emotional development.

Twelve percent of mothers has a body-mass index (BMI) of greater than 35 going into pregnancy. BMI is a rough estimate of a person's body fat based on height and weight measurements. A BMI of 25 to 29.9 is considered overweight. Over 30 is obese, and over 35 marks an even higher risk of obesity-related diseases, according to the National Heart, Lung, and Blood Institute.

The women with BMIs above 35 were more prone to reporting problems. Compared with normal-weight moms, they were twice as likely to say their children had difficulty regulating emotions, problems with their peers, or had received therapy for psychological issues or speech and language impairments.

Mothers who were severely obese before pregnancy were also three times as likely to say their child had been diagnosed with autism or a developmental delay, and four times as likely to report an ADHD diagnosis.



Schieve said her team looked at a number of factors that could explain the link—including whether mothers smoked during pregnancy, had pregnancy-related diabetes, breast-fed, suffered post-partum depression or regularly read to their child.

"But there was still a clear association between maternal obesity and children's developmental outcomes," Schieve said.

She acknowledged, though, that child development is complex, and it's "challenging" to zero in on a single factor like moms' obesity.

Brandon Korman, chief of neuropsychology at Nicklaus Children's Hospital in Miami, agreed. "It's tough to sift through the complexity of it," he said.

According to Korman, the study could not account for some key factors, like genetics. For example, he said, genes related to the brain chemical dopamine could potentially contribute to both moms' obesity and some of the developmental issues in their children.

Still, Korman said, "the bottom line is we already know there are reasons to achieve a healthy weight before pregnancy, even if we're not sure it causes these [developmental problems]."

Obesity carries risks for moms-to-be and babies, according to the U.S. National Institutes of Health. Obesity raises a woman's risk of developing pregnancy-related diabetes and <u>high blood pressure</u>, and boosts the odds of needing a C-section. It's also linked to heightened risks of birth defects and having an abnormally large newborn.

If mothers' obesity does affect kids' later development, it's not clear how, according to Schieve.



But, she said, <u>obesity</u> can create widespread inflammation in the body—which, in a pregnant woman, could theoretically affect fetal brain development.

Korman stressed, however, that mothers who were obese going into pregnancy should not fear their child is destined to have developmental problems.

"They had a relatively higher risk in this study, but most kids were unaffected," he said.

Of children born to severely obese mothers, 7 percent had ADHD, for example—higher than the 2 percent born to normal-weight moms, but still a minority of kids. Similarly, 4 percent had autism or a <u>developmental delay</u>, and between 15 percent and 20 percent had emotional symptoms, conduct problems or difficulty getting along with peers.

"Try your best to be in good shape before pregnancy," Korman said. "But if you do go into pregnancy overweight, that doesn't mean your child is doomed."

**More information:** The U.S. National Institutes of Health has more on <u>healthy weight and pregnancy</u>.

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