

# ADHD risk rises for each week a preemie is born early

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Being underweight or overweight at birth also linked to higher odds, study says.

(HealthDay)—The more premature a child is born, the higher the likelihood of attention deficit hyperactivity disorder (ADHD), according to a recent Finnish study.

Babies born particularly underweight or overweight for their [gestational age](#) also had an increased risk of ADHD, researchers found.

"Although ADHD is more common in babies who are either underweight or overweight, the risks are greatest for those babies with the most severe degree of poor growth in the womb," said Dr. Andrew Adesman, chief of developmental and behavioral pediatrics at Cohen Children's Medical Center of New York.

"The reality is that the additional risk for ADHD is relatively low for babies born close to their due date but is significantly greater for babies

born seven weeks or more prematurely," said Adesman, who was not involved in the study.

These findings imply that the pathways in the fetal brain may develop differently in children who are not adequately nourished, or are overnourished, in the womb, or once a child is delivered prematurely, said Dr. Glen Elliott, chief psychiatrist and medical director of Children's Health Council in Palo Alto, Calif.

However, he added, this type of study cannot show that premature birth or growth rate in the womb actually causes ADHD. Symptoms of the common brain disorder include inattention, impulsive behavior and hyperactivity, which can affect a child's ability to learn and make friends.

The findings were published online Aug. 24 in the journal *Pediatrics*.

Finnish researchers led by Dr. Minna Sucksdorff of the University of Turku compared more than 10,000 children with ADHD against more than 38,000 children without ADHD but similar in terms of gender, birth date and place of birth.

The researchers used birth medical records to see how far along in the pregnancy the mother was when the child was born. They also looked at whether the children were underweight or overweight for what is expected at that gestational age.

The study results showed that the risk of ADHD increased for each week earlier that a child was born. A full-term pregnancy is considered to be 40 weeks.

The children with ADHD had more than 10 times greater odds of being born at 23 or 24 weeks of pregnancy than the children without ADHD.

And kids with ADHD were at least twice as likely to be born between 27 and 33 weeks, compared to those without ADHD.

This finding remained after the researchers took into account other factors that affect gestational age and ADHD risk, such as the mother's age and whether she smoked or used drugs or alcohol.

In terms of birth weight, the researchers also found a higher risk of ADHD for [children](#) among the lowest and the highest weight percentages.

"Poor fetal growth is a result of many factors, ranging from genetic to environmental," Elliott said. "It is not so surprising that a fetus that is growing less vigorously than usual might have effects on brain development. More surprising is the suggestion that growing too vigorously also is associated with an increased risk of later being diagnosed with ADHD."

Heavier-than-normal babies have been associated with gestational diabetes or maternal obesity, according to background notes with the study.

The findings are unlikely to affect when women plan a cesarean birth, however, because early C-sections occur when the fetus or mother or both experience stress, Elliott said. Most other C-sections are planned closer to the due date. But the findings may give doctors something to consider in making another decision.

"Since both gestational weight and gestational age have marked effects, clinicians may face difficult choices if a fetus is not thriving in the womb at an early gestational age," Elliott said. "Does one deliver the child early to enhance nutrition or delay to minimize the effects of premature delivery?"

The risk is still low overall, however, that a child will have ADHD, and these findings are based on a [child](#)'s relative risk of having the condition compared to others, Elliott added.

"For quite premature births, the associated [risk](#) of ADHD rises dramatically," Elliott said. "Obstetricians already work hard to keep the fetus in the womb until week 35, if possible, but it still is only a relative increase, not an immutable fact."

**More information:** For more on ADHD, visit the [U.S. Centers for Disease Control and Prevention](#).

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