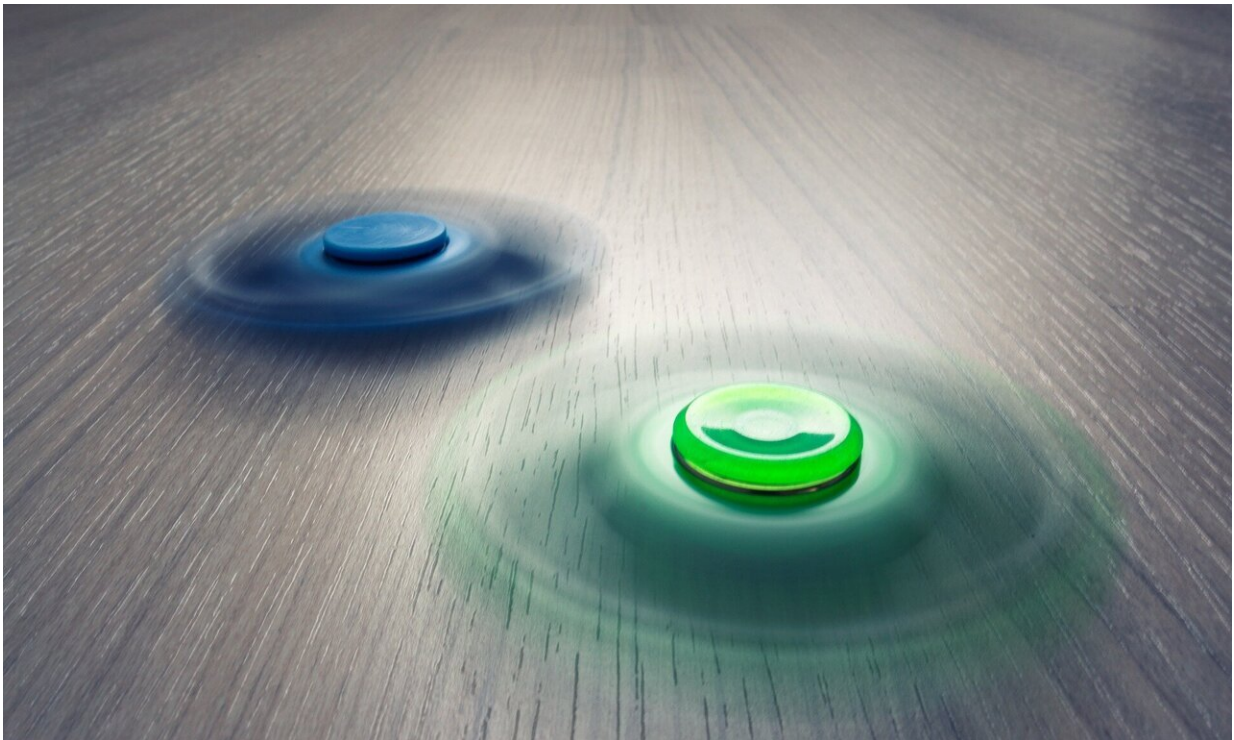


Early-term births associated with higher rate of ADHD as reported by teachers

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41 weeks), those born before 39 weeks are more likely to experience symptoms associated with attention-deficit/hyperactivity disorder (ADHD), according to a study by Rutgers Robert Wood Johnson Medical School.

ADHD, which affects [more than 10 percent](#) of U.S. school-age children, according to the Centers for Disease Control and Prevention, manifests early in childhood with symptoms of hyperactivity, impulsivity or inattention, and has known links to [preterm birth](#) (less than 37 weeks gestation). The study, published in the *Journal of Pediatrics*, is one of only a few to investigate the associations between [gestational age](#) at term (37–41 weeks) and a diagnosis or symptoms of ADHD. It is the first to include reports from [teachers](#).

"Teachers' reports, in conjunction with maternal reports and physician evaluations, provide valuable input for the diagnosis of ADHD," said Nancy Reichman, author of the study and a professor of pediatrics at Rutgers Robert Wood Johnson Medical School. "Mother-reported symptoms generally reflect behaviors in the home or in small family or [social groups](#), while teacher-reported symptoms reflect behaviors in a structured educational setting by professionals who work with a large number of children and observe the range of behaviors that students exhibit in classrooms."

Reichman and her team, which included Rutgers Robert Wood Johnson Medical School neonatology fellow Geethanjali Linguasubramanian, sought to estimate the associations between gestational age at term and 9-year-old children's symptoms of ADHD reported by their teachers.

They analyzed data on about 1,400 children in the Fragile Families and Child Wellbeing study, a U.S. birth cohort study that randomly sampled births in 75 hospitals in 20 large U.S. cities from 1998 to 2000 and re-interviewed mothers over nine years. During the nine-year follow-up, consent was obtained to contact the children's teachers, who were asked to evaluate their students using the Conners' Teacher Rating Scale–Revised Short Form, which includes symptoms of hyperactivity, ADHD, oppositional behavior and [cognitive problems](#) or inattention.

Overall, the Rutgers researchers found that children born early-term (37–38 weeks) had significantly higher scores on the teacher rating scales than children who were full-term (39–41 weeks) for hyperactivity, ADHD and cognitive problems or inattention, but that gestational age wasn't significantly associated with oppositional behavior.

Specifically, the researchers found that each week of gestational age at term was associated with 6 percent lower hyperactivity scores and 5 percent lower ADHD and cognitive problems or inattention scores, and that birth at 37 to 38 weeks was associated with 23 percent higher hyperactivity scores and 17 percent higher ADHD scores when compared with birth at 39 to 41 weeks.

"The findings add to growing evidence supporting current recommendations for delaying elective deliveries to at least 39 weeks and suggest that regular screenings for ADHD [symptoms](#) are important for children born at 37 to 38 weeks," Reichman said.

Preterm infants are at increased risk for ADHD because of immature brain development, she said. "Significant growth and development in various kinds of brain cells are observed between 34 and 40 weeks of gestation," said Reichman. "Infants born at full-term likely benefit from the additional one to two weeks of brain growth in utero compared with those born early-term."

More information: Geethanjali Lingasubramanian et al, Gestational Age at Term and Teacher-Reported ADHD Symptom Patterns, *The Journal of Pediatrics* (2022). [DOI: 10.1016/j.jpeds.2022.07.042](https://doi.org/10.1016/j.jpeds.2022.07.042)

Provided by Rutgers University

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