

# Challenges for extreme preemies can last into teens

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But majority of very preterm or very small newborns do well, experts say.

(HealthDay)—The complications and medical treatments that extremely preterm or extremely small newborns experience in their first weeks of life can have an impact years later, a new study reveals.

Preemies who had bleeding in their brain or who received corticosteroids were at particular risk for more difficulty with school or thinking skills, the researchers found, regardless of their environment growing up.

"The most surprising finding was that the effects of events occurring in the nursery had such long-lasting and persistent effects on thinking ability and academic performance, even into late adolescence," said study author Dr. Lex Doyle. He is a professor of neonatal pediatrics at the Royal Women's Hospital in Parkville, Victoria, in Australia.

"These events were as important or even more important than the effects of the environment, such as the mother's education level and social class," Doyle said. "These findings are contrary to conventional wisdom that the early effects from the newborn nursery would wane, and the environmental effects would dominate as [children](#) grow older."

However, Doyle added that the majority of the infants in the study did well as they grew up. And another pediatric expert pointed out that the study looked at babies who were born almost two decades ago, and great strides have been made in the care of extreme premies since the 1990s.

The findings were published online Nov. 9 in the journal *Pediatrics*.

The researchers followed nearly 300 Australian children born at less than 28 weeks of their mother's pregnancy or weighing less than 2.2 pounds at birth in 1991 and 1992. Typical pregnancies usually last about 40 weeks.

The researchers compared these children to more than 260 others with a [birth weight](#) of at least 5.5 pounds.

All underwent assessments of intelligence and [thinking skills](#) at ages 2, 5, 8 and 18. The researchers also compared their academic achievement when the children were 8 and 18 years old.

Those born very early or with a very [low birth weight](#) scored worse in academics and on the so-called cognitive assessments at all ages compared to the children born with an average birth weight. The longer the mother's pregnancy had lasted for the premies, the better their scores on mental abilities.

"The events in the uterus that lead to being born too early or too small, and all the complications that occur after birth to these fragile babies, set

back their brain growth and development," Doyle said. But individuals vary, and some grow and develop normally, too.

"Despite the fact that we identify more problems in children born too early or too small than in children born on time and of normal size, the majority do remarkably well," Doyle said.

A pediatric specialist agreed.

Most of the preemies in this study did not have the worst outcomes, and most tested in the average range, said Dr. Andrew Adesman, chief of developmental and behavioral pediatrics at Cohen Children's Medical Center of New York.

"Parents of children born extremely prematurely should not be overly concerned by the findings of this study," Adesman said. "Poor developmental outcomes are relatively uncommon."

The two factors linked to children's poorer outcomes were brain bleeding or receiving corticosteroids. Some [preemies](#) receive synthetic steroids to help their lungs grow faster and to reduce their risk of respiratory problems, according to background information in the study.

"It is not completely possible to avoid treatment with corticosteroids because some babies will die without them," Doyle said. "The decision to treat with corticosteroids is never taken lightly."

He noted that fewer children receive corticosteroids today than in the early 1990s, and the doses tend to be smaller. In addition, giving mothers magnesium sulfate just before a preterm birth can improve children's long-term outcomes, Doyle said.

Other improvements in care have come a long way as well, Adesman

said.

"It is important to remember as well that these babies were born 20 years ago, and that the quality of perinatal care and neonatal care have likely both improved," Adesman said. That suggests "that some of the outcomes in this study may be overall less likely for similarly premature babies born today."

Regardless of how early children are born, parents play a significant role in supporting their growth and development, Doyle said.

"Parents should nurture their children, talk to them, read to them, play with them, love them and involve them in everyday family activities," Doyle said. "Individual children may be identified with particular difficulties that need specific treatment, including at school, and ensuring their children receive such treatments is important."

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

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