

IVF does not negatively affect academic achievement

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Children conceived by in vitro fertilization (IVF) perform at least as well as their peers on academic tests at all ages from grade 3 to 12, according to a new University of Iowa study.

In fact, the study, published in the October issue of the journal [Human Reproduction](#), found that children who were conceived by IVF actually scored better than age- and gender-matched peers on the Iowa Test of Basic Skills and the Iowa Test for Educational Development (ITBS/ED).

"Our findings are reassuring for clinicians and patients as they suggest that being conceived through IVF does not have any detrimental effects on a child's intelligence or cognitive development," said lead study author Bradley Van Voorhis, M.D., UI professor of obstetrics and gynecology and director of the Center for Advanced Reproductive Care at UI Hospitals and Clinics.

To investigate whether being conceived by IVF had long-term negative effects on children's cognitive development, Van Voorhis and colleagues compared the [academic performance](#) of 423 Iowa children, ages 8 to 17, who were conceived by IVF at UI Hospitals and Clinics with the performance of 372 age- and gender-matched peers from the same Iowa schools. The researchers also analyzed whether different characteristics of the children, parents or IVF methods affected children's test scores.

The study found that children born by IVF performed above average on standardized tests compared to their peers, and that a number of factors

were linked to higher test scores, including older age of the mother, higher education levels of both parents and lower levels of divorce.

Importantly, the study also showed that different IVF procedures -- using fresh versus frozen embryos -- and different methods of insemination had no effect on children's test scores.

Although the study was not able to fully explain why children conceived by IVF performed better than their peers, Van Voorhis speculated that parents of children conceive by IVF might be older and have higher levels of education than average.

"By using age- and gender-matched children from the same classrooms as a control group to compare to our study participants, we attempted to control for any socioeconomic or environmental differences between the children born by IVF and their peers," Van Voorhis said. "But there still may have been some differences between the IVF children and the controls that we could not see from our data."

Among children born by IVF, the researchers did find a potentially concerning trend toward worse test scores for multiple births -- single babies performed better than twins, who performed better than triplets. However, this trend was not statistically significant and the triplets still did better than the average score of non-IVF children.

"This trend fits with our thinking that singleton births are healthier than multiple births, but we would need further study to find out if this trend is a real effect," Van Voorhis said.

IVF is generally considered safe but the technology has only been used for about 30 years, so there is a lack of data on long-term health outcomes for children conceived this way.

The UI study is the largest to date and followed [children](#) to an older age than previous studies. Additional strengths of the study included having a suitable control group and using the ITBS/ED, which is a widely accepted, objective measure of educational outcomes.

Provided by University of Iowa

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