

In vitro fertilization linked to increase risk for birth defects

20 October 2012

In vitro fertilization (IVF) may significantly increase the risk of birth defects, particularly those of the eye, heart, reproductive organs and urinary systems, according to new research presented Saturday, Oct. 20, at the American Academy of Pediatrics (AAP) National Conference and Exhibition in New Orleans.

According to the study, despite increasing use of IVF in the United States, associations between birth defects and IVF are poorly understood. Management of birth defects comprises a large part of pediatric surgical care and demands significant [health care resources](#).

According to the Centers for Disease Control, California has the highest rate of IVF usage in the United States. In the abstract, "[Congenital Malformations](#) Associated with Assisted Reproductive Technology: A California Statewide Analysis," researchers examined infants born in California from 2006-2007 after IVF and other treatments such as fertility-enhancing drugs or artificial insemination. Researchers examined maternal age, race, the number of times the mother had given birth, infant gender, year of birth and presence of major birth defects.

"Our findings included a significant association between the use of assisted reproductive technology, such as certain types of in vitro fertilization, and an increased risk of birth defects," said study author Lorraine Kelley-Quon, MD, a general surgery resident at [Ronald Reagan](#) UCLA Medical Center, who conducted the research at Mattel Children's Hospital UCLA.

Overall, 3,463 infants with major birth defects were identified among 4,795 infants born after IVF and 46,025 naturally conceived infants with similar maternal demographics. Birth defects were significantly increased for infants born after IVF – 9 percent versus 6.6 percent for naturally conceived infants, even after controlling for [maternal factors](#).

Specifically, malformations of the eye (0.3 percent versus 0.2 percent), heart (5 percent versus 3 percent), and genitourinary system (1.5 percent versus 1 percent) were greater in IVF infants. Overall, an IVF infant's odds of birth defects were 1.25 times greater than that of a naturally conceived infant with similar maternal characteristics. Risk of birth defects after other fertility treatments such as [artificial insemination](#) or ovulation induction alone were not significant.

"For parents considering in vitro fertilization or other forms of [assisted reproductive technology](#), it is important that they understand and discuss with their doctor the potential risks of the procedure before making a decision," said Kelley-Quon.

Provided by American Academy of Pediatrics

APA citation: In vitro fertilization linked to increase risk for birth defects (2012, October 20) retrieved 22 September 2019 from <https://medicalxpress.com/news/2012-10-vitro-fertilization-linked-birth-defects.html>

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