



INFERTILITY

IVF Linked to More Birth Defects

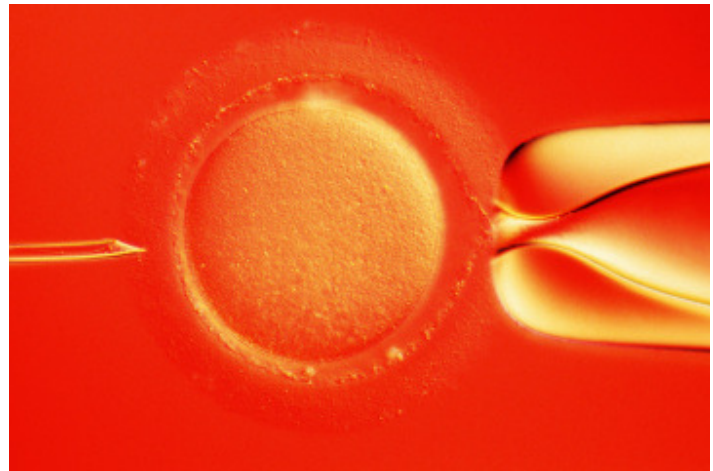
By Alexandra Sifferlin | Oct. 22, 2012 | 0

In vitro fertilization (IVF) is responsible for creating thousands of happy families, but the latest research highlights some of the potential long term risks of the procedure.

The role infertility treatments play in birth defect risk isn't fully understood, and whether it's the in vitro fertilization (IVF) procedures or infertility itself that bears the greatest influence remains up for debate.

Researchers presenting at the American Academy of Pediatrics (AAP) National Conference and Exhibition in New Orleans report that IVF may significantly increase birth defect risk, especially in the heart, eyes, reproductive organs and urinary systems, among children born through the technique.

In their study, scientists at the University of California, Los Angeles (UCLA) looked at birth defects among infants born both via IVF and conceived through natural means in California, which has the country's highest rate of IVF use. They included babies born after IVF and other assisted reproductive treatments such as couples' use of fertility-enhancing drugs and artificial insemination.



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(MORE: [The Link Between Infertility Treatments and Birth Defects](#))

Among 4795 babies born after IVF and 46,025 infants who were conceived naturally, 3,463 babies had congenital birth defects. Even after controlling for factors that can affect such birth defects, such as mother's age, and race, which can influence rates of genetic and environmentally driven developmental disorders, 9% of infants born after IVF had birth defects compared to 6.6% of babies who were conceived naturally. Overall, the babies born after IVF were 1.25 times more likely to be born with abnormalities. The researchers did not find a link between birth defects and other fertility treatments like artificial insemination or ovulation induction.

It's possible that the higher rate of abnormalities with IVF is due in part to whatever was contributing to infertility in the first place, say the researchers. But the fact that an increase was not seen among babies conceived using artificial insemination or ovulation induction suggests that process of IVF itself, in which eggs are removed from a woman, fertilized in a dish with sperm and then allowed to develop into embryos, which are transplanted back into the womb, is the primary culprit.

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"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 lead study author Dr. Lorraine Kelley-Quon, a general surgery resident at at [Ronald Reagan UCLA Medical Center](#), [in a statement](#).

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An [earlier study](#) in the *New England Journal of Medicine* also reported a link between fertility treatments and a higher risk of birth defects, but risk varied greatly by procedure. In that study, IVF was not associated with birth defects, but other procedures such as intracytoplasmic sperm injection (ICSI) and ovulation stimulation medications were. They also reported that frozen embryos created through IVF were less likely to result in babies with birth defects than fresh embryos.

Despite the fact that more than four million babies have been born using IVF, and the first ones are just reaching reproductive age, it's clear that some of the long term effects of IVF and other assisted reproductive techniques still aren't well understood.

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Even so, the American Society for Reproductive Medicine (ASRM) is taking an important step regarding another infertility treatment by announcing that egg

freezing should no longer be considered an “experimental” treatment for couples unable to conceive naturally. The decision is based on a report developed an ASRM committee and the Society for Assisted Reproductive Technology (SART). After reviewing nearly 1,000 cases of egg freezing, the committee members found that the chances of getting pregnant via IVF were comparable using both fresh and frozen eggs. They also found no increases in birth defects, chromosomal abnormalities and developmental disorders among babies born using frozen eggs. In most cases, women take hormones to in order to release several mature eggs at a time, and these are surgically collected and fertilized as soon as possible. But because the number of eggs generated with each such ovulation cycle varies, some women chose to freeze eggs from a particularly successful cycle so they can be fertilized at a later date.

“I think this will really allow so many more women greater options for family building, which is terrific,” says lead study author Dr. Samantha Pfeifer of the University of Pennsylvania. Successful IVF, for example, requires an adequate supply of sperm to be available when a woman’s eggs are retrieved, and sometimes that’s not possible. Freezing eggs means the eggs can be thawed whenever that robust supply of sperm is available. It’s also an option for couples who aren’t comfortable freezing embryos, which some see as the earliest form of life. “Now they have this as an option,” says Pfeifer.

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Lifting the “experimental” classification for egg freezing could also push insurers to cover the expensive procedure, which they currently do not reimburse for infertility treatment (some cover egg freezing costs for women being treated for reproductive cancers). “Insurance companies should have coverage for it and I think more programs are going to be offering this technique. It allows patients to have greater access to the procedure,” says Pfeifer.

However, she warns that it’s too early to tell if the rate of developmental anomalies among babies born from frozen eggs is similar to children born from frozen embryos. Although it appears to be a safe procedure, more long-term research is needed before it’s routinely used. The ASRM is also not advising healthy women without infertility problems to freeze their eggs for future use.

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