

## IVF, often cited for high twin birth rate, could reduce it

## March 4 2016

The twin birth rate in the U.S. has surged over the last 30 years, mostly because of reproductive technologies including in vitro fertilization. Though it's partly the cause, IVF could also be the most promising solution to reducing unintended twin births, argues Dr. Eli Adashi in a new editorial in the *American Journal of Obstetrics & Gynecology*.

Twins typically live healthy lives, Adsashi said, but many of the serious medical complications of pregnancy and fetal development - such as preterm birth or low birth weight - are more common and difficult in twin pregnancies compared to in singleton ones. For that reason, many physicians and public health officials consider technology's artificial contribution to the soaring twin birth rate to be problematic. Meanwhile, many people who employ reproductive technologies aren't necessarily trying to have twins - the technologies simply carry a greater risk of producing them.

"Sometimes nature makes it happen and there is not a whole lot you can, or want to, do about it," said Adashi, former dean of medicine and biological sciences at Brown University and a professor of obstetrics and gynecology. "But in cases of IVF or other technologies, if you can avoid it, you often want to."

The U.S. Centers for Disease Control and Prevention revealed Dec. 23, 2015, that the nation reached a record high twin birth rate of 33.9 per 1,000 live births in 2014. In the 17 year-span before the ovulation-stimulating drug clomiphene citrate, or Clomid, was introduced in 1967,



the twin birth rate had hovered around 20. A small reason for the increase is that more women are waiting until they are older to become pregnant, which increases the likelihood of twins. But most of the climb to the 2014 record is because Clomid and later IVF have become more common.

Clomid contributes to more twins because it increases ovulation, meaning multiple eggs can sometimes become available for fertilization. In IVF, doctors often intentionally fertilize more than one egg in the lab and then implant those multiple embryos in a woman's womb, in hopes that at least one will develop successfully. In recent years, doctors have cut the number of implantations down to two in most cases, reducing the incidence of triplets and quadruplets, but increasing the rate of twin births.

For women or couples seeking fertility assistance, Clomid (with intrauterine insemination) is routinely tried before IVF, because IVF is more expensive and invasive. The high cost of IVF is part of the reason people often implant multiple embryos, Adashi said. If a single parent or couple can only afford to do the procedure once or twice, they want the best chance of success each time. For those who want children, it's preferable to have twins than no kids.

## IVF with one embryo

If cost weren't a problem for would-be parents, the ideal case would be to implant just one embryo, Adashi said. In some states, including Rhode Island and Massachusetts, insurers not only cover much of the cost of IVF, but also often recommend skipping the Clomid/ IUI step in favor of IVF with a single embryo transfer. In those cases, the likelihood of twins from Clomid is eliminated and successful IVF produces only a single birth. There are cases where Clomid-assisted remains medically necessary, Adashi acknowledged, and in those cases it continues to



occur.

But to reduce unintended twin births, states across the country should consider requiring insurance coverage of single embryo transfer IVF, he said.

"Combining a direct path to IVF with the judicious use of superovulation/IUI should go a long way toward curtailing the national twin <u>birth rate</u>," Adashi wrote.

## Provided by Brown University

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