

## Uterus May Be More Important than Egg Quality for Healthy Babies

By Bonnie Rochman Monday, February 21, 2011

Read more: <http://healthland.time.com/2011/02/21/uterus-may-be-more-important-than-egg-quality-for-healthy-babies/#ixzz1WBuneH1E>

The health of a woman's uterus seems to trump the quality of her eggs when it comes to a baby conceived via fertility treatment being born full-term and at a normal weight.

Previously, research has compared the birth weight babies born via in vitro fertilization (IVF) to that of infants conceived naturally. Babies born as a result of IVF reportedly arrived earlier and weighed less. Researchers figured this was related to the way the babies were conceived.

But recent research in the journal *Fertility and Sterility* found that women who used donor eggs and their own uterus had smaller babies, while an infertile woman's embryo implanted in a surrogate resulted in babies with higher birth weights. (**More on Time.com:** Predicting IVF Success: There's an App for That)

Some of the reasons women are infertile — premature ovarian failure, for example, or endometriosis — appear to be affecting the ability of the uterus to provide the most nurturing environment for a pregnancy.

We don't understand a lot about what's going on in the uterus," says William Gibbons, lead author and a professor of obstetrics and gynecology at Baylor College of Medicine. "But this was further evidence that something is going on with the uterus because if you used someone else's uterus, these babies weighed more."

IVF and other assisted reproductive technologies have become much more common, but they still account for just 1% of one percent of U.S. births. (**More on Time.com:** Want to Freeze Your Biological Clock? One Doc Says, Go for It)

But now that giving conception a helping hand has become more commonplace, specialists are increasingly concerned with obstetrical outcomes — how test-tube babies fare in terms of weight and how long they stay in utero, which are key indicators of newborn health.

It's not that egg quality is irrelevant — far from it. Whether or not a woman can even get pregnant in the first place is very much linked to the quality of her eggs. But once a pregnancy is established, the focus shifts to obstetrical outcomes.

"Once you have a positive pregnancy test, the uterine environment appears to be more important than the quality of the egg in determining birth weights and length of gestation," says Gibbons, director of the Family Fertility Program at Texas Children's Hospital.

Gibbons and colleagues from the Society for Assisted Reproductive Technologies (SART) crunched three years of U.S. data that compared average birth weight and length

of gestation for 70,000 single births born as a result of IVF, IVF using donor eggs and IVF with a surrogate. The births were the product of more than 300,000 IVF cycles. **More on Time.com:** Researchers Question When to Stop Trying With IVF)

Each diagnosis of female infertility was linked to lower birth weight and shorter gestation, but male infertility didn't impact either marker.

When a woman goes through IVF, an embryo is implanted after she has undergone drug-induced ovarian hyperstimulation to retrieve multiple eggs; typically, surplus embryos are frozen for potential future cycles. But in donor egg and surrogate IVF cycles, an embryo is transferred to an unstimulated uterus. The data showed that when a frozen embryo created from a woman's own egg was transferred to her own unstimulated uterus, resulting babies had significantly higher birth weights than those born after standard IVF.

Babies born to women with a history of uterine problems — fibroids, for example — had the lowest birth weights and length of gestation.

Gibbons hopes the study sparks more research into the role of the womb in churning out healthy babies. “We need to begin to ask more questions about what we think is happening in the uterus,” he says.

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