



JON GILBERT FOX

Dartmouth ob-gyn Richard Reindollar led a large, randomized trial testing two infertility-treatment protocols.

## Oh, baby! Just look at the results of this study

Couples being treated for infertility can spend less time and money getting pregnant by following an accelerated protocol instead of a three-step approach used for many years. That was the major finding of a large, randomized controlled trial led by Richard Reindollar, M.D., chair of obstetrics and gynecology at Dartmouth.

The conventional protocol, he says, has been to start with fertility pills and artificial insemination for three cycles; then to do three cycles of hormone injections and artificial insemination; and finally to try *in vitro* fertilization (IVF). That approach “seemed logical in the past,” says Reindollar.

**Rate:** But while the success rate of IVF has improved over the last two decades, the success rate for step two—injections combined with artificial insemination—remained the same. And since the injection-insemination step has the undesirable outcome of producing a high proportion of twins, triplets, and even higher-order multiples, infertility experts began to question its value.

Now, thanks to this study, the answer is clear. Couples should move directly from fertility pills and artificial insemination to IVF;

they’ll have a better chance of getting pregnant, at a lower cost and theoretically with less risk of a multiple birth. The injection-insemination step “doesn’t have any place in current therapy,” says Reindollar.

Funded by the National Institutes of Health, the study, known as FAST-T (Fast-Track and Standard Treatment Trial), randomized 503 couples to get either conventional or accelerated treatment. In the accelerated group, the hormone injection-artificial insemination step was omitted. Couples on the accelerated track got pregnant 40% faster than those on the conventional track, and their infertility-related charges were an average of \$9,800 less. (One cycle of IVF averages \$10,000 and one cycle of injection-insemination \$2,500, but the higher success rate of IVF makes the accelerated protocol more economical.)

**Twins:** Each track had about the same number of twins and triplets, but that is more a reflection of the study protocols than of a treatment difference, says Reindollar. For example, FAST-T was conducted almost entirely

at one infertility center, Boston IVE, to allow for consistent cycle management. And the FAST-T guidelines called for canceling insemination in women whose ovaries became hyperstimulated as a result of the hormone injections. Injections are associated with higher rates of multiple births because they directly stimulate the ovaries to release more than the usual one egg per cycle. Fertility pills, by contrast, stimulate the pituitary gland to release more of a hormone that, in turn, stimulates the ovaries. Since the pills work through a natural circuit, the body’s normal checks and balances are still engaged, says Reindollar. Starting with fertility pills, he adds, gets “the most-fertile couples pregnant by a treatment that doesn’t have a high rate of multiple births, before moving on to any other treatment.”

**Prize:** Reindollar and his collaborators first presented their results at the 2007 annual meeting of the American Society of Reproductive Medicine (where they won the prize for best abstract). So by the time the study was published in June 2009 in *Fertility and Sterility*, the standard course of treatment had already begun to change. Insurance companies in Massachusetts, for example—which are mandated by law to cover infertility treatments—previously required three cycles of injection-insemination before IVF. “They’ve already changed it,” says Reindollar, “based on the outcomes of our study.”

Another study led by Reindollar is scheduled to end in 2010 and will likely further influence infertility treatments. Called FORT-T (Forty and Older Infertility Treatment Trial), it aims to determine the best course of treatment for women aged 38 to 43. This trial is randomizing about 450 couples to receive one of three treatments: two cycles of fertility pills with artificial insemination, followed by IVF; two cycles of hormone injections with artificial insemination, followed by IVF; or just IVF. “If you have one last chance to get pregnant, do you go right to IVF?” asks Reindollar. “That’s something we hope we can address.” JENNIFER DURGIN

**Couples on the accelerated track got pregnant 40% faster.**