



A CUP OF HEALTH WITH CDC

Assisted Reproductive Technology

Assisted Reproductive Technology Surveillance — United States, 2006

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[Announcer] This podcast is presented by the Centers for Disease Control and Prevention. CDC — safer, healthier people.

[Dr. Gaynes] Welcome to *A Cup of Health with CDC*, a weekly feature of the MMWR, the Morbidity and Mortality Weekly Report. I'm your host, Dr. Robert Gaynes.

In 1981, the first U.S. baby was born that was conceived through assisted reproductive technology, or A-R-T. Since then, thousands of children have been born as a result of this procedure.

Dr. Maurizio Macaluso is head of CDC's Women's Health and Fertility Branch. He's joining us today to discuss assisted reproductive technology. Welcome to the show, Maurizio.

[Dr. Macaluso] Thank you for having me, Bob.

[Dr. Gaynes] Maurizio, since the first A-R-T birth, how many children have been born as a result of this procedure?

[Dr. Macaluso] About half a million in the United States, alone; many millions worldwide.

[Dr. Gaynes] So how is pregnancy achieved through A-R-T?

[Dr. Macaluso] The procedure generally starts with ovarian hyperstimulation. Hormones are given to a woman to increase the number of eggs that she produces at any given time. Normally, only one egg matures every month. In this procedure, many eggs mature at the same time, they are harvested by the physician, and they are fertilized in the laboratory with sperm from the male partner. The procedure is called in vitro fertilization, or IVF, as it's commonly known. The embryos that are created in the laboratory through this procedure are put back in the uterus of the woman to establish a pregnancy.

[Dr. Gaynes] So are the numbers of people using this procedure increasing?

[Dr. Macaluso] Since CDC started monitoring the procedure in the United States, the number of programs offering this procedure and the number of procedures have doubled - from about 60,000 in 1986 to over 140,000 in 2006.

[Dr. Gaynes] Are there potential risks associated with this procedure?

[Dr. Macaluso] There is a rare, but potentially very serious consequence of ovarian hyperstimulation. It's in fact called Ovarian Hyperstimulation Syndrome when a woman responds

excessively to the hormones that are given to her and develops serious symptoms that have to be treated; the procedure has to be suspended. In very rare occasions the effect is fatal.

Most commonly, the adverse effects of IVF are related to one of the factors that actually predicts success and it's the number of embryos that are transferred back into the uterus of the woman. Normally, only one embryo would grow in the womb; the pregnancy is typically a singleton pregnancy. Only rarely do we have twins or a high order multiple pregnancy. In this case, because more than one embryo is transferred into the uterus, most commonly two, it is much more likely that the pregnancy that develops is going to be a twin pregnancy or a high order multiple pregnancy. These pregnancies have risks, carry risks, both for the mother and for infants, once they are born. The most common outcome for the infants born to a multiple pregnancy are preterm delivery, that is, delivery that occurs before 36 weeks, and low birth weight, which is related, of course, to the early delivery.

[Dr. Gaynes] Maurizio, are chances of miscarriage greater with A-R-T than with natural conception?

[Dr. Macaluso] The average rate of miscarriage [with ART] is between 15 and 20 percent which is just about the rate of miscarriage that we observe in naturally conceived pregnancies. The rate increases, however, with the age of the mother because women who use this technology tend to be older, it is more likely to see a miscarriage following A-R-T.

[Dr. Gaynes] What steps should a person take if they're considering using A-R-T?

[Dr. Macaluso] Well, the first thing to do is to go through a thorough clinical work-up of the infertility. The recommendation is that a couple where the woman is under 35 should try to conceive naturally for about 12 months and only after failing for 12 months should they seek treatment or assessment by a reproductive endocrinologist or infertility specialist. For older couples, the recommendation is to try for six months and then start seeking treatment. Insurance plans are not uniform in the way they actually will provide coverage for the assessment. The standard recommendation used to be 12 months. Both partners need to be thoroughly checked. If there is a male infertility factor, the man should consult with a urologist or an endrologist and see whether other forms of treatment can be used to restore natural fertility, before proceeding to assisted reproduction.

[Dr. Gaynes] Where can listeners get more information about assisted reproductive technology?

[Dr. Macaluso] They can start with our website: www.cdc.gov/art.

[Dr. Gaynes] Thanks, Maurizio.

Today I've been talking with CDC's Dr. Maurizio Macaluso about assisted reproductive technology.

If you're having fertility problems, consult with a qualified fertility specialist to determine your best options.

Until next time, be well. This is Dr. Robert Gaynes for *A Cup of Health with CDC*.

[Announcer] For the most accurate health information, visit www.cdc.gov or call 1-800-CDC-INFO, 24/7.