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WHAT TO EXPECT, WHEN YOU'RE EXPECTING IN YOUR 40'S AND 50'S!

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There has been a complete paradigm shift in obstetrical care for women in the 21st century. As more women are seeking advanced reproductive techniques to assist in achieving a pregnancy, the ceiling of reproduction has been lifted such that almost any healthy women in her forties and fifties can successfully mother a child. In a recent study, we reviewed the pregnancies of 77 postmenopausal women with an average age of 53 years who underwent an in-vitro fertilization procedure with the assistance of egg donation (RJP, *Boostanfar et al.*, Journal of the American Medical Association 2002; 288: 2320-2323). This 10-year study is the largest series in the world's scientific literature of reported pregnancy outcomes among women in their sixth decade of life. This database will likely serve as a counseling tool to guide physicians and patients to know what to expect in their fifties. Although outcomes have been extremely favorable, there are serious medical conditions that can evolve or become exacerbated during pregnancy. Therefore, it has become imperative to understand the physiological changes during this time period and to be prepared and watchful of possible complications.

A proportion of women in their early forties are successful in becoming pregnant with their own eggs spontaneously, many others are able to conceive in cooperation with an egg donor. Although the likelihood of becoming pregnant is significantly higher with an egg donor, pregnancy course and birth outcomes are extremely similar whether a woman is able to conceive with her own eggs or with an egg donor. That is, whether or not the pregnancy is a result of a natural conception, a conception with her own eggs and assistance from advanced reproductive techniques like in-vitro fertilization or with the assistance of egg donation, she is likely to have similar risks and outcomes throughout the duration of her pregnancy. The most notable risk factor is not how the pregnancy was conceived but perhaps the age in which a woman achieves a pregnancy.

continued on back page

Pressing the boundaries of reproduction in women of advanced reproductive age can be complicated by underlying medical conditions that are undiagnosed. Such factors, like a decrease in the reserve of the cardiovascular system and the diminished ability to adapt to physical stress both may accompany advancing age and may combine to increase risks to the mother and the baby. Some authors have suggested that advanced maternal age, defined as greater than age 35 by some authors and greater than age 40 by others, is associated with an increased risk of poor pregnancy outcome (*Lehman et al.*, American Journal of Obstetrics and Gynecology 1987; 157: 738-742). These reports may be confounded by inconsistencies in prenatal care, preexisting medical conditions and access to appropriate health care. In contrast, when women of advanced maternal age were followed and delivered in a sophisticated, high risk care medical center, no increase in adverse outcome was noted (*Kirz et al.* American Journal of Obstetrics and Gynecology 1985; 152: 7-12).

All in all, women in their forties and fifties should expect to have some mild increase in pregnancy related issues. However, carefully selected and monitored women should anticipate a successful result. We recommend that all women in this age group see a Reproductive Endocrinologist for a history and physical exam. She should also undergo an EKG, a chest X-Ray, mammogram, PAP smear and blood work as part of her preconceptional evaluation. When the assessment is completed, women can be counseled suitably as to what their potential risks may be. Appropriately screened, healthy women in their fifties, who carry a singleton pregnancy, can expect their gestation to go practically full term and deliver babies that are approximately the same weight as their counterparts half their age (RJP, *Boostanfar et al.*, Journal of the American Medical Association 2002; 288: 2320-2323). Nevertheless, these women are also approximately three times more likely to deliver by cesarean section, three to ten times more likely to experience pregnancy induced hypertension and two to five times more likely to encounter diabetes compared to younger women. Although there does not appear to be any medical reason for excluding these women from attempting to become pregnant on the basis of age alone, it is recommended they seek the attention of a Reproductive Endocrinologist who is aware of these complexities, in order that they may be thoroughly screened and deemed as an appropriate candidate to experience a favorable outcome.

Finally, the careful, deliberate and judicious transfer of embryos should be taken into consideration among patients undergoing an egg donation cycle. Because of the significantly higher implantation rates of donor eggs and embryos, couples attempting to conceive with the assistance of an egg donor are at a particularly high risk of multiple gestations. Moreover, it has become exceedingly evident that multiple gestations may, in turn, further complicate the course of a pregnancy. Those complications include higher rates of morning sickness, preterm labor and preterm birth and increased rates of pregnancy induced hypertension or toxemia. The introduction of modern extended embryo culture, pre-implantation genetic diagnosis and blastocyst transfer have resulted in a conscientious and concerted effort to increase pregnancy and implantation rates, while simultaneously minimizing the number of embryos transferred to one or two per cycle in a realistic attempt to reduce the number of high order multiple pregnancies. It is of critical importance to choose infertility centers, and subsequently obstetricians, with both significant clinical and laboratory expertise in this domain of reproductive medicine.