



# AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE

*Formerly The American Fertility Society*

1209 MONTGOMERY HIGHWAY • BIRMINGHAM, ALABAMA 35216-2809 • TEL (205)978-5000 • FAX (205)978-5005 • E-MAIL [asm@asrm.org](mailto:asm@asrm.org)

## PATIENT'S FACT SHEET

### PREDICTION OF FERTILITY POTENTIAL IN OLDER FEMALE PATIENTS

A woman's reproductive potential declines with age. This is reflected in the decreased ability to conceive (become pregnant) and an increase in the rate of spontaneous abortions (miscarriages). Although fecundity (the ability to achieve a pregnancy which results in a live birth) decreases in all women as they age, the precise age when a woman can no longer conceive varies between individuals. Approximately one-third of couples in which the female partner is age 35 or older will have problems with fertility. It is estimated that two-thirds of women will not be able to get pregnant spontaneously by the age of 40. Several tests may be useful in assessing fertility potential in older patients. For those patients with poor fertility potential predictions, the use of donor eggs or embryos can be considered.

**1) Day 3 Levels of FSH, LH, and Estradiol.** The determination of blood concentrations of follicle stimulating hormone (FSH) and estradiol levels on menstrual cycle day 3 has been used to estimate fertility potential. Women with elevated levels of FSH and/or estradiol measurements on cycle day 3 have very poor pregnancy rates with both ovulation induction and assisted reproductive technologies (ART) such as in vitro fertilization (IVF). More recently, it has been shown that women with elevated blood levels of luteinizing hormone (LH) on cycle day 3 also have poor pregnancy outcomes with fertility therapy.

**2) Clomiphene Citrate Challenge Test.** This test entails the oral (by mouth) administration of 100 milligrams of clomiphene citrate on menstrual cycle days 5-9. Blood levels of FSH are measured on cycle day 3 and again on cycle day 10. Elevated blood levels of FSH on cycle day 3 or cycle day 10 are associated with very low pregnancy rates with both ovulation induction therapy and ART.

**3) Response to Gonadotropins.** Gonadotropins (Pergonal®, Humegon™, and Metrodin®) are concentrated mixtures of FSH and LH (or FSH alone) which are given as injections to stimulate the ovary to produce multiple eggs in preparation for various fertility therapies. The amount of gonadotropins required to induce egg development increases with increasing chronological age. Patients requiring large amounts of gonadotropins to induce egg development generally have lower pregnancy rates with both ovulation induction therapy and ART.

Several laboratory methods are currently used to measure blood levels of FSH, LH, and estradiol. Measurement of these hormone levels may vary considerably depending upon the particular laboratory method used. Therefore, it may be difficult to compare blood levels of these hormones that are measured at different laboratories or by different laboratory techniques. It is important that normal and abnormal test values be based on the pregnancy rates achieved by women studied at a particular center using the same laboratory methods.