



CONSENT AND INFORMATION FORM FOR USE OF ESTROGEN DURING THE PRECONCEPTION, POSTCONCEPTION, AND PERINATAL PERIOD

During the 1940's through the 1960's, diethylstilbestrol (DES), a semi-synthetic estrogen, was given to high-risk women to help prevent miscarriages and was later discovered to be responsible for certain abnormalities of the cervix, a higher incidence of vaginal cancer in the female offspring, and testicular cancer in the male offspring who were exposed to the drug. As a result, the use of supplemental estrogen in pregnancy became a controversial subject. Current review of the literature today, however, supports the safety of this treatment modality.

The estrogen used today closely resembles the estrogen made by the ovary. The most active form of that estrogen is estradiol, typically in the form of 17-beta estradiol. Currently this medication is available in an oral (Estrace), injectable (Estradiol valerate), vaginal (Estrace Cream) and transdermal (Estraderm, Vivelle) preparations. These hormones differ from DES in that they are biologically identical to estrogen made from the ovary.

During the 1970's and 1980's, Russia and Slavic countries used these estrogen preparations as therapy for patients suffering from recurrent miscarriage and achieved moderate success with no reported increase in fetal anomalies. In the western countries, the explosion of assisted reproductive technologies, e.g., IVF, has created a need to re-implant frozen embryos into hormone manipulated uterus. Since corpus luteum is not functioning in the uterus of the woman undergoing this procedure, they require supplemental hormones until they are through the first 8 weeks of the pregnancy. There have been no reported increases over baseline in the rate of fetal anomalies in infants born from this method. In a woman who was born without ovaries and who received donated embryos, there was no increase in fetal anomalies using the hormonal supplementation needed to support the pregnancy.

The largest group of women achieving pregnancy with the use of supplemental estrogen is the group who utilized super-ovulation in association with IVF, GIFT, or ZIFT. During a cycle that is stimulated to produce multiple follicles, natural estrogen (estradiol) levels are 3-10 times higher than a normal cycle. Exposure to such high levels of estrogen has not been associated with an increase in the rate of fetal anomalies. French researchers have also published higher implantation and pregnancy rates with the use of supplemental estrogen before ovulation and in the luteal phase that occurs after ovulation.

At IVF Phoenix we recommend the use of estrogen in the follicular phase (before ovulation) of development with additional estrogen that starts 4-5 days after the LH surge or "trigger shot" of hCG. In a normal spontaneous cycle, estrogen drops following the LH surge and slowly increase during the luteal phase. With ART cycles, we attempt to imitate this process and improve the development of the lining of the uterus through the use of vaginal, transdermal, or injectable estrogen. (The bioavailability--amount the body can use--is greater when the medication is given by one of these routes rather than when taken orally.)

