Hormonal Medication Seen Through the Eyes of Chinese Medicine

All medicines can be categorized into their inherent energetic effects. This information sheet will cover some of the most commonly used drugs in reproductive medicine, and provide its energetic function according to the principles of Traditional Chinese Medicine. We can then apply the techniques of TCM to enhance their intended effect, while reducing their unwanted side effects. Balancing these effects through TCM greatly enhances the efficacy of the drugs and adds to a successful outcome.

**Clomid** One common drug given by Western medicine for infertility is the drug, Clomid. Clomiphene citrate is an orally administered nonsteroidal, ovulatory stimulant designated chemically as 2-p-2-chloro-1,2-diphenylvinyl phenoxy triethylamine citrate. Its potent action is indicated for the anovulatory patient desiring pregnancy. Its mechanism of action is that it is capable of interacting with estrogen receptor containing tissues, including the hypothalamus, pituitary, ovary, endometrium, vagina, and cervix. It may compete with estrogen for estrogen receptor binding sites and may delay replenishment of intracellular estrogen receptors. Clomid initiates a series of endocrine events culminating in a preovulatory gonadotropin surge and subsequent rupture. First, after a course of Clomid therapy, the pituitary gonadotropins increase. This initiates steroidogenesis and folliculogenesis, resulting in growth of the ovarian follicle and an increase in the circulating level of estradiol. Following ovulation, plasma progesterone and estradiol rise and fall as they would presumably in a normal ovulatory cycle. Clomid has both estrogenic and anti-estrogenic properties because the two clomiphene isomers have been found to have mixed estrogenic and antiestrogenic effects. It has no progestational effects, and is not supposed to interfere with pituitary-adrenal or pituitary-thyroid function. During clinical trials with Clomid, approximately 30% of 7578 patients achieved pregnancies. According to Hoechst Marion Roussel,
the manufacturer of the drug, Clomid is indicated for the treatment of ovulatory dysfunction in patients with PCOS, amenorrhea-galactorrhea syndrome, psychogenic amenorrhea, post-oral contraceptive amenorrhea, and certain cases of secondary amenorrhea of undetermined etiology. In traditional Chinese Medicine, the ovulatory stimulation provided by Clomid is viewed as having yang invigorating effects. It raises the yang, lifts the qi, upbears and outthrusts the qi (rectifies the qi and blood). Side effects are: night sweats, hot flashes, nausea, vomiting, breast distention, ovarian enlargement, pelvic pain and discomfort, visual changes like blurred vision, lights, floaters, photophobia, headache, and abnormal uterine bleeding. Clomid can also thin the endometrium and thicken cervical fluid, both barriers to conception. These same symptoms can be associated with kidney and liver yin deficiency, deficiency heat, and qi disturbances. If used in the wrong person, in too large amounts or for too long a time, Clomid can damage the yin (night sweats, visual changes, thin uterine lining, and thick cervical mucus). If a person already has damaged yin, they are presumably more at risk for experiencing the side effects listed above associated with kidney and liver yin deficiency. Those with liver qi stagnation or heat symptoms will also be more susceptible to experiencing the side effects (headaches, stomach upset, abnormal bleeding), but not the therapeutic benefits, of this drug. Further, if the person with damaged yin (already hot and dry) with a constitutional blood or yin vacuity, takes a yang invigorating drug, there is much greater chance of failure during the Clomid stimulated cycle. If a woman on Clomid experiences symptoms of severe hot flashes, night sweats, headaches, irritability and the like, she will most likely be in the category of the 70% of patients who do not become pregnant on Clomid. Their body cannot properly adapt to the yang invigorating effects in such a manner as to support a pregnancy. All they will get is the side effects. It will work against fertility. Who then, should receive Clomid? According to Chinese Medicine, the only patients who would respond favorably to Clomid are those patients desiring pregnancy who have a kidney yang vacuity, spleen qi vacuity, cold and dampness in the uterus.

**Pergonal**
Pergonal (menotropins for injection, USP), by Serono Laboratories is a purified preparation of gonadotropins extracted from the urine of postmenopausal women. Each ampule of Pergonal contains 75 IU or 150 IU of follicle stimulating hormone (FSH) activity and 75 IU or 150 IU of luteinizing hormone (LH) activity, respectively, plus 10 mg. lactose in a sterile, lypophilized form. Human Chorionic Gonadotropins (hCG), a naturally occurring hormone in post-menopausal urine, is detected in
Pergonal. Pergonal administered for seven to twelve days produces ovarian follicular growth in women who do not have primary ovarian failure. Treatment with Pergonal in most instances results in follicular growth and maturation. In order to effect ovulation, hCG must be given following the administration of Pergonal when clinical assessment of the patient indicates that sufficient follicular maturation has occurred. Pergonal and hCG given in a sequential manner are indicated for the induction of ovulation and pregnancy in the anovulatory infertile patient, in whom the cause of anovulation is functional and is not due to primary ovarian failure. Overstimulation of the ovary may occur during pergonal therapy, resulting in ovarian enlargement, abdominal distension and/or abdominal pain. Adverse reactions during Pergonal therapy include pulmonary and vascular complications, hemoperitoneum, adnexal torsion, ovarian cysts, flu-like symptoms, nausea, vomiting, diarrhea, abdominal cramps, bloating, body rashes, dizziness, tachycardia, dyspnea, and tachypnea. Pergonal is also a yang invigorating, warming medicinal. It has the same effects as Clomid. It will receive greater therapeutic benefit from those that are not deficient in yin, and from those whose qi is not obstructed. If you are deficient in yin or fit the diagnostic pattern for qi stagnation, follow the dietary guidelines for your specific pattern treatment. Do the exercises listed above.

**Follistim** Follistim (follitropin beta) for injection, either subcutaneously or intramuscularly, is manufactured by Organon. It contains human follicle-stimulating hormone (hFSH), a glycoprotein hormone which is manufactured by recombinant DNA technology. Follitropin beta is synthesized in a Chinese hamster ovary cell line that has been transfected with a plasmid containing the two subunit DNA sequences encoding for hFSH. Follistim stimulates ovarian follicular growth in women who do not have primary ovarian failure. FSH, the active component of Follistim, is required for normal follicular growth, maturation, and gonadal steroid production. In the female, the level of FSH is critical for the onset and duration of follicular development and consequently for the timing and number of follicles reaching maturity. In order to effect the final phase of follicle maturation, resumption of meiosis and rupture of the follicle in the absence of an endogenous LH surge, human chorionic gonadotropin (hCG) must be given following the administration of Follistim when patient monitoring indicates that appropriate follicular development parameters have been reached. Overstimulation of the ovary may occur with the use of Follistim as well. Like Pergonal, adverse reactions include miscarriage, ovarian hyperstimulation syndrome, ectopic pregnancy, abdominal pain,
injection site pain, and vaginal hemorrhage. Also included were dizziness, tachycardia, dyspnea, tachpnea, febrile reactions, flu-like symptoms including fever, chills, musculoskeletal aches, joint pains, nausea, headache and malaise, breast tenderness and dermatological symptoms such as dry skin, body rash, hair loss and hives. These symptoms, as well, mimic the symptoms of qi rectifying, yang invigorating medicinals. We, therefore, include Follistim in the category of drugs which stimulate the yang and raise the yang qi. This drug will provide greater therapeutic benefit to those that are not deficient in yin, and from those whose qi is not obstructed. If you are deficient in yin or fit the diagnostic pattern for qi stagnation, follow the dietary guidelines for your specific pattern treatment. Do the exercises listed above.

**Humegon** Humegon (menotropins for injection, USP,) is also manufactured by Organon, Inc. It is a purified preparation of gonadotropins, extracted from the urine of postmenopausal females and possess follicle stimulating hormone and luteinizing hormone activity. The ratio of FSH bioactivity and LH bioactivity in menotropins is adjusted to approximate unity by the addition of human chorionic gonadotropin purified from the urine of pregnant women. Humegon and hCG are given in a sequential manner for use in inducting ovulation and pregnancy in the anovulatory infertile woman. Humegon is categorized according to Chinese Medicine, as Clomid, Pergonal, and Follistim are, as a yang invigorating medicinal. This drug will provide greater therapeutic benefit to those that are not deficient in yin, and from those whose qi is not obstructed. If you are deficient in yin or fit the diagnostic pattern for qi stagnation, follow the dietary guidelines for your specific pattern treatment. Do the exercises listed above.

**Gonal F** Gonal F, follitropin alpha for injection, by Serono Laboratories, is a human follicle stimulating hormone preparation of recombinant DBA origin, which stimulates ovarian follicular growth in women who do not have primary ovarian failure. FSH, the active component of Gonal F is the primary hormone responsible for follicular recruitment and development. In order to effect final maturation of the follicle and ovulation in the absence of an endogenous LH surge, hCG must be given following the administration of Gonal-F when monitoring of the patient indicates that sufficient follicular development has occurred. There is interpatient variability in response to FSH administration. The physicochemical, immunological, and biological activities of recombinant FSH are
comparable to those of pituitary and human menopausal urine-derived FSH. Over-stimulation of the ovary may occur, as well as multiple births, and the same yang invigorating effects of the above classified medicinals. This drug will provide greater therapeutic benefit to those that are not deficient in yin, and from those whose qi is not obstructed. If you are categorized as yin deficient, or fit the diagnostic pattern for qi stagnation, follow the dietary guidelines for your specific pattern treatment. Do the exercises listed above.

**Pregnyl** Pregnyl, by Organon, Inc., is chorionic gonadotropin for injection. HCG is a polypeptide hormone produced by the human placenta, composed of an alpha and a beta subunit. The alpha sub-unit is essentially identical to the alpha sub-units of the human pituitary gonadotropins, LH and FSH, as well as to the alpha sub-unit of human thyroid stimulating hormone. The beta subunits of these hormones differ in amino acid sequence. Pregnyl is a highly purified pyrogen free preparation obtained from the urine of pregnant females. The action of hCG is virtually identical to that of pituitary LH although hCG appears to have a small degree of LH activity as well. It stimulates the production of gonadal steroid hormones by stimulating the corpus luteum of the ovary to produce progesterone. Pregnyl is used to induce ovulation and pregnancy in the anovulatory, infertile woman in whom the cause of anovulation is secondary and not due to primary ovarian failure and who has been appropriately pretreated with menotropins (above.) HCG should be used in conjunction with human menopausal gonadotropins only by physicians experienced with infertility problems who are familiar with the criteria for patient selection, contraindications, warnings, precautions, and adverse reactions which include: ovarian hyperstimulation, rupture of ovarian cysts, multiple births, and arterial thromboembolism. Its indications, uses, and energetic category is the same as other yang invigorating medicinals. Those with vacuous yin or qi stagnation should develop a yin supplementing of qi rectifying program to improve this drug's therapeutic effect.

**Lupron** Lupron (leuprolide acetate) injection is a synthetic nonapeptide analog of naturally occurring gonadotropin releasing hormone (GnRH or LHRH.) The analog possesses greater potency than the natural hormone. Lupron acts as a potent inhibitor of gonadotropin secretion when given continuously and in therapeutic doses. Following an initial stimulation, chronic administration of Lupron results in suppression of ovarian steroid production. This effect is reversible upon discontinuation of drug therapy.
In humans, subcutaneous administration of single daily doses of Lupron results in an initial increase in circulation levels of LH and FSH, leading to a transient increase in levels of the gonadal steroids estrone and estradiol. However, continuous daily administration of Lupron results in decreased levels of LH and FSH. In premenopausal females, estrogens are reduced to post-menopausal levels. These decreases occur within two to four weeks after initiation of treatment. Lupron produces numerous side effects including cardiovascular symptoms like congestive heart failure, ECG changes, ischemia, high blood pressure, murmur, peripheral edema, phlebitis, and thrombosis. GI symptoms include anorexia, constipation, nausea, and vomiting. Endocrine effects include gynecomastia/breast tenderness or pain, hot flashes, and impotence. Lupron can also cause anemia, bone pain, myalgia, dizziness, lightheadedness, headache, insomnia, sleep disorders, dyspnea, sinus congestion, dermatitis, urinary frequency and urgency, hematuria, urinary tract infection, and asthenia.

Lupron is also used therapeutically for prostatic cancers, precocious puberty, endometriosis, and leiomyomas. When treating infertility, it is often used to suppress the normal production of FSH, LH, and estrogens, so that control of the above hormones may be maintained without the patient's own hormones interfering with the medically controlled hormonal stimulation. Since Lupron inhibits estrogen or yin, it often has signs and symptoms of yin vacuity and vacuity heat like hot flashes, night sweats, and headaches. Headaches are typically located behind the eye or eyes, and in the back of the head and neck, which corresponds to heat rising along the urinary bladder meridian in Chinese medicine. When Lupron fails to down regulate a patient who is undergoing an assisted reproductive cycle, their estrogen levels remain elevated and their endometrium typically remains too thick. Since these women are not responding to the hormonal down-regulation of Lupron, they typically are not allowed to finish the assisted reproductive protocol and thereby receive the hormonally stimulating medication. Women who fail to down regulate during Lupron therapy are effectively not clearing estrogen. Estrogen clearing in Traditional Chinese Medicine can be accomplished through clearing the liver channel with acupuncture and herbs. Vigorous stimulation to certain acupuncture points, every other day, employing such points as Lv 2 (moving between), Lv 3 (great rushing), Lv14(cycle gate), and LI 4 (joining valley), can bring a woman's estrogen levels down to the desired range within just a few treatments. Herbal treatment aimed at clearing the liver channel can also assist in accomplishing this effect. To bring on the woman's period, the same points can be used, assisted by points such as Sp6 (three yin intersection),
GB21 (shoulder well), and Sp10 (sea of blood). Blood invigorating medicinals are added to this regimen as well to help bring on the period. Of utmost importance are the long-term effects of hormonal stimulation. The hormonal stimulating drugs which compel the ovaries to produce more eggs have the long-term energetic effect of depleting the essence of the kidney. This becomes more important as a woman is nearing forty years or older, and her reproductive energies are beginning to decline. It is therefore wise to give your body a break between hormonal cycles to recover the kidney essence. It is very important to keep your reproductive endocrinologist abreast of the complementary measures you are employing concurrently with his procedures. Communication between you and your physician will allow you to trust that everything that you are doing for yourself will only enhance the reproductive medical protocol. Nothing in this book should be practiced if you have any misgivings about your doctor's position on these techniques. NOTE: Unless you have your doctor's blessing, you should not take over-the-counter herbal preparations during hormonal stimulation. There is great potential for interaction with herbal medicine and hormonal stimulation.