

The following article was featured in the Winter 2006 edition of *Fertility Nurses First*, a newsletter dedicated to all nurses working in the field of reproductive medicine.

Acupuncture and Fertility

In 2003, *Fertility and Sterility* published a study that found that adding acupuncture treatment to the IVF protocol increased the success rate of implantationⁱ. This brought acupuncture and Traditional Chinese Medicine (TCM) into the consciousness of the fertility community. Since then, there has been much speculation and investigation into how acupuncture can increase fertility. The study in 2003 had 160 women divided into two groups. Both groups underwent IVF protocol with day three embryo transfer. One group also received two acupuncture treatments; one before and one after embryo transfer. The success rate of implantation in those who received acupuncture was 42.3% compared to 26.5% for the control group (an increase of 15.8%). In the May, 2006 issue of *Fertility and Sterility*, two similar studies were reported with the acupuncture group experiencing 13ⁱⁱ and 18%ⁱⁱⁱ greater success rates of achieving pregnancy.

Other reported studies have shown that electro-acupuncture (application of electro stimulation with acupuncture) treatments significantly decreased the pulsatility index of uterine artery, increasing uterine receptivity^{iv}. Electro-acupuncture to the ear has been shown to relieve pain after oocyte retrieval^v. Several studies have shown improvement in sperm quality, quantity, and morphology with acupuncture^{vi vii}. It has also been shown to increase beta-endorphins^{viii}, leaving patients with a sense of calm and well-being^{ix}. Chronic stress can increase cortisol; which then in turn impairs the reproductive system^{xxi}. Increasing endorphins can relieve stress, should therefore enhance fertility. Considering the high monetary, emotional, and physical cost of these procedures, anything we can do to increase a patient's comfort and chances of success should be welcomed.

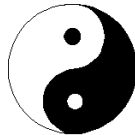
More research is showing acupuncture's efficacy, but there is a fundamental problem with using Western techniques to evaluate Eastern therapies. The gold standard of the Western scientific method is the randomized, double-blind, controlled study. In this model, everyone in each group is treated exactly the same. TCM's forte is its ability to treat everyone individually. When we have to treat everyone the same, we are not practicing TCM. Many clinical trials of acupuncture yield disappointing results due to this incompatibility. Anecdotally, we have seen acupuncture: normalize hormone levels, regulate menstrual cycles, increase the number of follicles produced in a stimulated cycle, decrease side effects of fertility medications, relieve pain, reduce stress, and decrease miscarriage rates. These comparisons are based on couples who have tried ART without acupuncture and then underwent a subsequent procedure with the addition of acupuncture.

So how does it work? Western science has tried to understand acupuncture in Western terms. It has been postulated that it works on the nervous system, endocrine system, lymphatic system, etc; but all of these explanations have been insufficient. While

acupuncture can cause a change in these systems, that is considered more of a side effect than the main effect. TCM is medical system that incorporates acupuncture, herbs, diet, and exercise. It is based on a different understanding of the body and its relationship with its environment. Since it largely a foreign paradigm, we should first explain some of its basic tenets.

Chinese Medical Theory

TCM centers on the concept of Balance. Achieving and maintaining balance is the goal of life; and restoring it is the goal of medical intervention. Balance can be synonymous with health. When one is in balance, everything should function normally, the organs and glands should work properly, appetites and attitudes should be moderate and appropriate, and the reproductive capacity should be optimal.



(Yin-Yang or Tai-Chi symbol)

The concept of balance is expressed with Yin-Yang theory; which understands all phenomena as lying somewhere between two extremes. Yin represents dark, quiet, soft, inward, feminine, etc. Yang is bright, loud, hard, masculine, etc. Just as day turns to night and back into day, so to should our yin and yang be in a dynamic balance.

In order to achieve this balance, the body must maintain proper circulation. We all know how the blood flows and circulates since it can be seen. The more esoteric concept with which we are concerned is Qi (pronounced chee). Qi loosely translates as “vital energy”. It flows within us, it flows around us, it gives all things life, animation, warmth, containment, etc. Over many generations, Chinese physicians have mapped the way that the Qi flows in the body. They have found that it flows in 14 main channels, like arteries, in a closed circuit. Smaller capillary vessels carry the Qi to every cell in the body. When the Qi is flowing in harmony, the body is in balance and good health results. For a variety of reasons, however, we get out of balance and our qi-flow becomes disrupted. Acupuncture is the practice of inserting hair-thin, sterile needles, into the channels to affect and re-balance the flow of Qi. Electro-acupuncture is the same with the addition of a mild electric current to the needles.

While one may not expect it, acupuncture, and even electro-acupuncture, are very relaxing procedures. Many patients fall asleep during treatment. Needles are left in place for about 20-40 minutes while the patient lies in a quiet room. After the needles are removed, the patient is fine to return to his or her daily activities.

In TCM, each patient is treated individually according to his or her particular imbalance. While it is helpful to know the Western diagnosis, the TCM practitioner must acquire more information. By examining each patient’s unique presentation: body shape,

complexion, voice, appearance of the tongue, the quality and the rate of the pulse; a TCM practitioner may diagnose the patient's internal state according to the Chinese paradigm. Along with observations, the TCM evaluation involves a very detailed inquiry of the patient's history and current functioning. The diagnosis will determine the type and frequency of treatments used.

Chinese physicians have been treating infertility in men and women using acupuncture and herbs for centuries. In China and many Asian countries, the ability to have a child (particularly a son) was of utmost importance. This was especially true in the case of an emperor needing an heir. Therefore, reproductive medicine and Ob/Gyn were highly developed areas of specialty in Chinese Medicine.

Treatment Recommendations

Whether trying to conceive naturally or with ART, it is recommended that couples receive at least three months of weekly treatments to prepare for conception. This is considered "cultivating the soil before planting seeds". Herbal therapies may be utilized during this time. It is recommended that both males and females be treated. Even if a male's sperm parameters are within normal limits, acupuncture can still increase the percentage of sperm that are normal, increasing the chances that a healthy sperm will fertilize the egg.

Herbal therapies may be recommended during the preparatory phase, but they are usually discontinued at the onset of hormone therapy. This is not due to any known complications; but rather due to what is not known about the possible interactions with new medications. Herbs can be powerful medicines and, if improperly prescribed, could have a negative effect to the hormone therapy.

Once a patient begins the stimulation phase, treatment frequency is dependant on the ovarian response. Sometimes once a week is sufficient, but patients who do not respond well may need several treatments a week to maximize follicular development. Hyper-stimulated patients can benefit from reduction of side effects and pain. One treatment is recommended after the egg retrieval to minimize discomfort, improve circulation, and prepare the body to receive the embryo. Then there are the two treatments before and after embryo transfer, and once more a week after transfer to support implantation and prevent miscarriage. Once a woman is pregnant, it is recommended she receive treatments weekly through her first trimester. Acupuncture can be safely used during second and third trimester to address many common conditions associated with pregnancy. Males should be treated once or twice weekly until the day of sperm donation.

TCM can be used to help get patients back into balance; but our greater challenge is to teach our patients to live in balance. Sometimes a patient's environment and habits can impair their fertility as much as their age does. The three greatest factors that contribute to our getting out of balance are: our diet, lifestyle, and attitudes. All of these should be

balanced and moderate. If we are not in balance, our bodies do not want us to become pregnant.

Once thought of as “alternative” medicine, TCM should be regarded and utilized as “complimentary”. In China, they refer to the use of Eastern and Western techniques as “walking on two legs”. The analogy being that, while one can get somewhere hopping on one leg, one can get there much faster and easier by walking on two. The best of both worlds involves using both the latest technology of the West and the time-tested therapies of the East.

Questions and comments may be directed to Jeanie@tiffanikinstitute.com

About the Authors

Jeanie Lee Bussell and Jason Bussell graduated with honors from the Midwest College of Oriental Medicine in Chicago, IL. and completed an advanced course of study and clinical internship at the Guangzhou University of TCM, in China. Jeanie is one of the top acupuncturists in the Midwest specializing in treatment of fertility/infertility and in Women’s Health issues. She is the Director of Acupuncture and Oriental Medicine at Tiffani Kim Institute in Chicago and is a co-author of [Fully Fertile: 12-Week Holistic Plan for Optimal Fertility](#). Jason Bussell is the President of the Illinois Association of Acupuncture and Oriental Medicine and practices at a Center for Oriental Medicine in Wilmette, IL.

Endnotes

ⁱPaulus WE, Zhang M, Strehler E, El-Danasouri I, Sterzik K. *Influence of acupuncture on the pregnancy rate in patients who undergo assisted reproduction therapy.* [Fertility and Sterility](#), Vol 77, Issue 4, Pgs. 721-724 (April 2002)

ⁱⁱ Westergaard LG, Mao Q, Kroglund M, Sandrini S, Lenz S, Grinstead J. *Acupuncture on the day of embryo transfer significantly improves the reproductive outcome in infertile women: a prospective, randomized trial.* [Fertility and Sterility](#), 2006 May;85(5):1341-6

ⁱⁱⁱ Dieterle S, Ying G, Hatzmann W, Neuer A. *Effect of acupuncture on the outcome of in vitro fertilization and intracytoplasmic sperm injection: a randomized, prospective, controlled clinical study.* [Fertility and Sterility](#). 2006 May;85(5):1347-51

^{iv} Elisabet Stener-Victorin, Urban Waldenstrom, Sven A. Andersson and Matts Wikland Institute of Chinese Medicine, Tel Aviv, Israel. *Reduction of blood flow impedance in the uterine arteries of infertile women with electro-acupuncture.* [Human Reproduction](#), Vol. 11, No. 6, pp. 1314-1317, 1996

^v Peter Humaidan and Elisabet Stener-Victorin. *Pain relief during oocyte retrieval with a new short duration electro-acupuncture technique- an alternative to conventional analgesic methods.* [Human Reproduction](#), Vol. 19, No. 6, 1367-1372, June 2004

^{vi} Siterman S, Eltes F, Wolfson V, Zabludovsky N, Bartoov B. Institute of Chinese Medicine, Tel Aviv, Israel. *Effect of acupuncture on sperm parameters of males suffering from subfertility related to low sperm quality.* [Archives of Andrology](#) 1997 Sep-Oct;39(2):155-61.

^{vii} Siterman S, Eltes F, Wolfson V, Lederman H, Bartoov B., Institute of Chinese Medicine, Tel Aviv, Israel. *Does acupuncture treatment affect sperm density in males with very low sperm count? A pilot study.* [Andrologia](#). 2000 Jan; 32(1): 31-9.

^{viii} Clement-Jones V, McLoughlin L, Tomlin S, Besser GM, Rees LH, Wen HL. *Increased beta-endorphin but not met-enkephalin levels in human cerebrospinal fluid after acupuncture for recurrent pain.* [Lancet](#). 1980 Nov 1;2(8201):946-9

-
- ^{ix} Bianchi M, Jotti E, Sacerdote P, Panerai AE. Dept. Pharmacology, University of Milano, Niguarda Ca Granda Hospital, Italy *Traditional acupuncture increases the content of beta-endorphin in immune cells and influences mitogen induced proliferation..* American Journal of Chinese Medicine. 1991;19(2):101-4
- ^x Michele D. Baum, Lissa Rossi. The University of Pittsburgh Medical Center, *Chronic Stress affects more than fertility, Magee-Womens Research Institute study finds.* Results presented at 'Endo 2002, the 84th Annual Meeting of the Endocrine Society