

Your Questions Answered

Exciting news! We have designated a corner of our Fertility Nurses First newsletter to answer questions from clinicians by clinicians across the nation. This section is titled, "Your Questions Answered". Each quarter this column will feature your clinical questions and answers that the ivpcare Clinical Education Specialist (CES) team has collected from your colleagues across the country. Our goal is to provide you a variety of answers to clinical questions you may have.

This quarter's question is,

Do many practices have nurse practitioners? If so how are they utilized and what does their job description entail?

What are some suggestions utilized in your practice to foster a positive work environment (i.e team building, incentives)?

Please email your answer to
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or
judy.campisi@ivpcare.com
Judy can also be reached at
1-800-424-9002 ext 1710.

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The content of this newsletter is for informational purposes only and may contain medical information. This information is not intended to be a substitute for medical advice, diagnosis or treatment. The main article is written by a clinician and is the opinion of the author. If you would like to submit an article for consideration please contact Judy Campisi at 800-424-9002 ext. 1710.

What Our Pharmacists' Are Saying

Judy Campisi LPN and Beth Gambrell, RPh

Many of our REI clinicians have inquired regarding the questions that our on call specialty pharmacists receive so that they may modify their injection training instructions or be mindful of the information patients have the most difficulty understanding/retaining.

The following information comes from our contact hour course titled, "Infertility Medications: Mechanism of Action Uses and Commonly Asked Questions" authored by Beth Gambrell RPh.

Frequently Asked Question from Patients:

Q: How much diluent should be used with human chorionic gonadotropin?

A: 1ml

Q: How exact should the timing of my medication be?

A: As close to the same time each day as possible.

Q: What if I am not able to take it at the same time?

A: Ask your center/physician for their guidelines but do not exceed a 2 hour window.

Q: Can I drink alcohol?

A: It will not interact with the medication but definitely use moderation or abstain if possible.

Q: Can I mix my gonadotropins ahead of time?

A: Give your injection within 20 minutes of reconstitution.

Q: Can I mix my HCG ahead of time?

A: Yes, it is good for 60 days under refrigeration.

Q: How long can my pen medication be out of the refrigerator?

A: Follistim AQ for 3 months unless it has been punctured, then it is good for 28 days; Gonal F pen for one month unless it has been punctured, then it is good for 28 days.

Q: This leuprolide doesn't look like it will last 14 days. It is only half full.

A: It will probably last longer than 14 days depending on your dose. Keep it in the refrigerator once you start using it because it is a multi-dose vial.

Q: I am running low on syringes. Can I reuse a syringe?

A: We do not recommend reusing a syringe. We can transfer syringes to a local pharmacy if you need them right away or we can send you additional syringes overnight.

Q: I accidentally put my medications in my freezer overnight. Are they still good?

A: Freezing medication can inactivate the medication and we recommend getting new medication.

Q: Are there any over-the-counter medications I can take for a cold or headache?

A: There are not any drug interactions but depending on your procedure, you may want to talk to your doctor first.

Q: Can I still have sex while I am taking Crinone or progesterone suppositories?

A: Unless you have been told not to, it is fine to have intercourse. If your husband is scheduled for his sperm sample, you will want to check with your clinic for their guidelines on timing.

Q: My medication arrived today and it feels warm. Is it okay?

A: Depending on the medication, some are okay at room temperature and some need to stay cold. Progesterone products are very stable and most others have a window of time to be at room temperature.

ivpcare offers a 24/7 pharmline to all patients for their mixing and administration questions. Please note that our pharmacists or clinicians only answer questions regarding their medications. If a patient has questions regarding their specific treatment protocols they are encouraged to call their clinic/physician to discuss their questions or concerns.

Fertility Nurses First

Welcome to our twenty-fourth publication of Fertility Nurses First, dedicated to all nurses working in the field of Reproductive Medicine.

Acupuncture and Fertility

Jeanie Lee Bussell, MSOM, L.Ac
Director of Acupuncture - Tiffani Kim Institute
Jason Bussell MSOM, L.Ac

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 13%ⁱⁱ 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 the 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^x. Increasing endorphins can relieve stress and 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 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 and lymphatic system, but all of these explanations have been insufficient. While acupuncture can cause a change in these systems, it is considered more of a side effect than the main effect. TCM is a 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 is 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. Restoring balance 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.



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 and feminine. Yang is bright, loud, hard and masculine. Just as day turns to night and back into day, so 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 and containment. 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 and 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 may 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 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 "complementary". 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@acfom.com

About the Authors

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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 Traditional Chinese Medicine in China. Jeanie is the Director of Acupuncture and Oriental Medicine for the *Tiffani Kim Institute* in Chicago, where she specializes in Women's Health and Fertility. Jason Bussell is the President of the Illinois Association of Acupuncture and Oriental Medicine. He and Jeanie founded and practice at *A Center for Oriental Medicine* in Wilmette, IL.

Endnotes

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