

**Acupuncture treatment in regulation of high level of follicle-stimulating hormone (FSH)**

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**Abstract**

Follicle-stimulating hormone (FSH) is a hormone that is made and released in the pituitary gland and affects the function of ovaries and testicles. FSH plays a critical role in sexual development and reproduction. In women, it is essential for regulating the menstrual cycle, while in men, FSH signals the testes to produce sperm. Traditional Chinese Medicine (TCM) can improve blood flow to the reproductive organs and restore hormonal balance. Effective treatment for high FSH involves nourishing the kidney yin to support estrogen, strengthening the spleen qi, and tonifying the blood to enhance the blood supply to the uterus and ovaries. In this article is presented a case of 43 years old women with high FSH. The patient was preparing for in vitro but her FSH was 41.94 which is high to start the procedure. In 2022 she had 2 unsuccessful in vitro where the follicle did not develop, and in 2023 she had two follicles but they burst. She also had 4 abortions. Her menstrual cycle also was not regular she was under medicaments for that. She started with acupuncture treatment on 06/02/2024, she did 4 therapies, got a menstrual cycle and on the 3rd day of the cycle on 03/01/2024 the FSH result was 8.7. Totally 10 treatments were made. Chinese medicine is highly effective in correcting hormonal imbalances and has a long history of assisting women with high FSH levels.

**Key words:** FSH, hormonal disbalance, acupuncture, treatment, TCM

**Introduction**

FSH levels are controlled by a complex system of hormones made in different parts of human body. FSH plays a crucial role in sexual development in children and fertility in adults. In women FSH helps to control the menstrual cycle, it stimulates the growth of eggs in the ovaries and gets the eggs ready for ovulation. In men's, FSH signals the testes to make sperm also affects how healthy the sperm are. [1]

Elevated levels of FSH rarely cause specific symptoms. However, in females, elevated levels may indicate menopause, which can cause symptoms such as: irregular menstruation, sleep disturbances, hot flashes, emotional changes, vaginal dryness, weight gain and etc. [2]

The most common reason for high FSH levels is either a low ovarian reserve (egg count) or poorly functioning ovaries. Because estrogen controls how much FSH we produce, when we have less estrogen, our FSH levels may go up. In some cases, lifestyle factors and dietary can quite raise FSH levels. [3]

There are two types of tests that doctor can suggest to check the FSH level. First one is blood test and the most common used and the other one is urine test. The results will measure FSH in "milli-international units per milliliter" (mIU/mL). This test also maybe will include other hormones like luteinizing hormone (LH), estrogen, testosterone. [4]

The treatment for patients with abnormal levels of follicle-stimulating hormone (FSH) varies based on the underlying cause. In women with primary (ovarian) or secondary (pituitary) hypogonadism, hormone replacement therapy with estrogen and progesterone may be given. However, the Women's Health Initiative study revealed health risks associated with using estrogens and progesterone together. In both men and women, treatment aimed at the underlying cause may be sufficient. For patients struggling with prolactinomas, medical treatments with dopamine agonist may lower the prolactin levels and normalize LH, FSH, testosterone and estradiol levels. [5]

### **Case report**

In this article is presented a case of 43 years old woman with high FSH. The patient was preparing for in vitro but her FSH was 41.94 which is high to start the procedure. In 2022 she had 2 unsuccessful in vitro where the follicle did not develop, and in 2023 she had two follicles but they burst. She also had 4 abortions. Her menstrual cycle also was not regular, therefore she was under medicaments for regulation. She started with acupuncture treatment on 06/02/2024, she did 4 therapies, got a menstrual cycle and on the 3rd day of the cycle on 03/01/2024 the FSH result was 8.7. Then we continued up to 10 treatments. During treatment with acupuncture the patient got menstruation twice without any hormonal therapy.

The acupuncture treatments were made in an acupuncture clinic for acupuncture and TCM in Skopje, North Macedonia by a doctor specialist in acupuncture. Acupuncture treatments were with a duration of 30 to 45 minutes. Treatments were done indoors, on a room temperature, with normal (dry) acupuncture with fine sterile disposable needles sized 0.25x25mm. Acupuncture meridians used in the treatments are: DU, LI, RN, LV, ST, SP, KI.

According to Traditional Chinese Medicine (TCM) philosophy, high FSH levels can be attributed to several factors: Kidney Yin deficiency with concurrent heat, Liver Qi stagnation, and Spleen Qi and blood deficiency. Factors such as extreme stress, worry, overthinking, long working hours, and excessive drinking and smoking can introduce toxins into the blood, potentially harming the liver. This liver damage can lead to Liver Qi stagnation, impairing its ability to regulate and store blood. Additionally, Spleen Qi may

be compromised, affecting the spleen's ability to assist the stomach in transforming food into Qi and blood, resulting in blood deficiency. Blood stagnation in the uterus can also occur due to conditions such as pelvic operations, abortions, miscarriages, or pelvic inflammatory disease (PID), leading to an uneven endometrium.

A high FSH diagnosis can be frustrating, and Western medicine often offers limited solutions. Typically, treatments involve contraceptive pills or estrogen replacement therapy, such as HRT (Hormone Replacement Therapy). This approach may artificially suppress FSH, allowing menstruation to resume and alleviating some symptoms. Traditional Chinese Medicine (TCM) is one of the most effective methods for treating high FSH. The key to treatment involves nourishing the kidney yin to support estrogen, strengthening the spleen qi, and tonifying the blood to enhance blood supply to the uterus and ovaries.

To harmonize Liver Qi and blood, it's essential to nourish the Heart blood to calm the spirit, improve blood circulation, regulate the menstrual cycle, balance Yin and Yang to stabilize FSH levels, enhance egg quality, and promote ovulation. Acupuncture, in particular, is highly effective for patients with fertility issues. Benefits of acupuncture treatment include reduced stress and anxiety, improved sleep quality, increased energy levels, and regulated menstrual cycles. [6]

## **Conclusion**

Acupuncture, as part of Traditional Chinese Medicine (TCM), has shown positive results in treating high levels of FSH in women. It can increase blood flow to the uterus, which improves fertility both naturally and during an IVF cycle.

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