

## Is Complementary and Alternative Medicine a Legitimate Treatment for Infertility Today?

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Complementary and alternative medicine (CAM) has become more common for the treatment of infertility in recent years. Common alternative methods for treating infertility include the use of acupuncture and herbal supplements.<sup>1</sup> Acupuncture involves the insertion of thin needles into the body, whereas herbal medicine uses medicinal plants as the basis for treatment.<sup>1</sup> It has become common to see references to unconventional reproductive health practices in popular culture. There has also been a rise in the use of websites such as goop.com, which recommend novel methods to boost reproductive health to thousands of people. Goop corporation has been repeatedly criticized for giving advice that is not rooted in science. This leads people to accuse Goop of exploiting vulnerable women by promoting products that claim to improve their reproductive health but may not actually work. The ultimate question is, are these alternative practices evidence-based, or are they simply being used because they are a cheaper alternative to the expensive fertility treatments modern medicine has to offer?

There have been very few studies on the efficacy of CAM and the limited data available is inconclusive. A study by Boivin et al. (2009) investigated the link between CAM and pregnancy outcomes and found that CAM does not mitigate infertility in patients.<sup>1</sup> In this study, the pregnancy rates, as well as various lifestyle factors of CAM users and non-users were recorded during a 12-month period.<sup>1</sup> The use of herbal medicines, acupuncture, and reflexology, or application of pressure to the feet and hands, was associated with a 30% lower pregnancy rate that could not be explained by external factors such as lifestyle or lower probabili-

### ABSTRACT

With a rise in the use of alternative medicine, such as acupuncture, reflexology, and herbal remedies to treat infertility, it is important to consider if such treatment regimens are rooted in evidence. This piece provides a brief overview of the literature on the efficacy of common forms of alternative methods to treat infertility and concludes by suggesting potential reasons for its increased use.

**Keywords:** Alternative medicine, infertility, acupuncture, herbal medicine

ties of conceiving a child due to reproductive health issues.<sup>1</sup> Conversely, the findings of a study by Shahin et al. (2009) lend support to CAM's effectiveness in treating infertility.<sup>2</sup> The researchers investigated the impact of herbal supplements on the menstrual cycle and found better outcomes in individuals using herbs. Healthy menstrual cycle characteristics tend to improve the probability of conceiving a child, therefore, investigation of the link between the use of CAM and the menstrual cycle is of high relevance to the potential of conception. The herbs used in this study were derived from phytoestrogens, which are compounds found in various plants and fungi.<sup>2</sup> In this study, 134 women were randomly assigned to either the herb supplement group or the control group and their menstrual characteristics, such as regularity of cycle, health and thickness of uterine tissues, were measured and analyzed.<sup>2</sup> The results indicated that women in the herbal supplement group experienced significantly improved menstrual cycle characteristics, while those in the control group did not. However, pregnancy rates among these groups were not significantly different.<sup>2</sup> Another study by Rubin et al. (2015) aimed to assess the effect of CAM on outcomes of *in vitro* fertilization (IVF)— a method of assisted reproduction that involves the combining of eggs and sperm in a laboratory to form embryos, which are later implanted into the uterus.<sup>3</sup> In this study, patients were assigned to one of three conditions: a control of IVF with no additional treatment, IVF and acupuncture, or IVF and herbal treatment.<sup>4</sup> Patient records were reviewed to compare the effects of these three conditions on IVF outcomes. It was found that patients who received acupuncture or herbal medicine in conjunction with IVF had significantly greater chances of giving birth to a healthy, liv-

ing baby compared to the control group.<sup>4</sup>

Based on these studies alone, one cannot definitively conclude the impact of complementary and alternative medicine on fertility. Therefore, alternative medicine cannot be considered a legitimate treatment for infertility at this stage. While Shahin et al. and Rubin et al. provide support for the benefits of such therapies, they also conclude that more research is needed in this field. When these methods are promoted in everyday settings, they are typically discussed in the context of anecdotes, rather than rigorous empirical data. Not only is the research in this field severely limited, but a large majority of the studies on alternative medicine are in the form of individual case studies or do not employ the use of standard research practices, such as the use of a control group and randomized assignment of participants. The lack of conclusive research in this field would suggest that couples are not turning to alternative methods because of their scientific legitimacy. Therefore, the question of why these types of treatments are being used more frequently is still unanswered. This presents the need to consider other factors that are driving people towards these methods. One significant factor may be the high cost of modern medical treatments which makes them inaccessible to the working class. For instance, the cost of IVF can range from \$15,000 USD to \$40,000 USD per cycle, and this does not include the cost of vital medications that must be taken in conjunction with this treatment.<sup>5</sup> People who cannot afford these treatments could be turning to alternative methods, such as herbal remedies or acupuncture, as a cheaper alternative. Ultimately, it is more likely that women are using alternative medicine to treat their infertility because of the financial benefit, and not due to the underlying, but limited, scientific evidence.

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