

# A Review on the Role of Surya Namaskara in Female Reproductive Health

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## ABSTRACT

Female reproductive and menstrual disorders are increasingly observed among women of reproductive age due to stress, hormonal imbalance, obesity, and sedentary lifestyle. Conditions such as irregular menstruation, dysmenorrhea, polycystic ovarian syndrome, and infertility affect both physical and psychological well-being. Yoga is a holistic health science that addresses the body and mind together. Surya Namaskara is a dynamic yogic practice that combines physical postures, breathing techniques, and mental awareness. This review summarizes existing literature on the effects of Surya Namaskara on female reproductive health. Available studies suggest that regular practice improves hormonal regulation, reduces stress, enhances metabolic activity, and supports menstrual regularity.

**Keywords:** Surya Namaskara, Female reproductive health, Menstrual disorders, Yoga therapy, Hormonal balance

## INTRODUCTION

Female reproductive health plays a vital role in the overall well-being of women. Menstrual and reproductive disorders are common health issues that can arise due to lifestyle changes, psychological stress, nutritional imbalance, and metabolic disturbances. Modern medical treatments are effective but often associated with side effects and long-term dependence. Yoga offers a complementary approach by promoting balance between physical, mental, and endocrine systems. Surya Namaskara, also known as Sun Salutation, is a sequence of twelve postures performed in coordination with breathing. It is considered a complete yogic practice that benefits multiple physiological systems. WHO stated that, Polycystic Ovary Syndrome (PCOS) affects approximately 10–13% of women in their reproductive years. Around 70% of women with PCOS across the world remain undiagnosed and are unaware of their condition. PCOS is the leading cause of anovulation worldwide and is one of the major contributors to female infertility.[8]

## AIM AND OBJECTIVES

### Aim

To review the role of Surya Namaskara in improving female reproductive and menstrual health.

### Objective

- To analyze the effects of Surya Namaskara on hormonal balance
- To assess its role in stress reduction and metabolic regulation
- To evaluate its benefits in menstrual and reproductive disorders

## MATERIALS AND METHODS

This review is based on published literature including review articles, clinical studies, and observational research related to Surya Namaskara and female reproductive health. Electronic databases such as Google Scholar and PubMed were referred. Studies focusing on menstrual irregularities, PCOS, stress, obesity, and endocrine function were included. Articles not related to female health outcomes or yogic interventions were excluded.

## Concept Of Surya Namaskaram

Surya Namaskaram is a dynamic sequence of twelve postures performed rhythmically with synchronized breathing. It acts as a complete body exercise that stimulates the musculoskeletal, cardiovascular, endocrine, and nervous systems. Traditional yogic texts describe Surya Namaskaram as a practice that enhances pranic flow, balances energy channels (Nadis), and improves endocrine harmony, which is essential for reproductive health.[2]



## Female Infertility And Hormonal Regulation

Ovulatory disorders are among the most common causes of female infertility. Hormonal imbalance involving the hypothalamic–pituitary–ovarian (HPO) axis disrupts follicular development, ovulation, and menstrual regularity. Literature indicates that chronic stress and sedentary lifestyle negatively influence gonadotropin secretion and ovarian hormone production [6]. Yogic practices, including Surya Namaskaram, are reported to regulate neuroendocrine function by reducing stress hormones such as cortisol and improving hypothalamic–pituitary responsiveness.[5]

## Effect Of Surya Namaskaram On Menstrual Regularity And Ovulation

Several studies have documented the beneficial role of Surya Namaskaram in regulating menstrual cycles [4]. Regular practice improves pelvic blood circulation, enhances uterine and ovarian function, and supports follicular maturation. The alternate forward and backward bending postures gently massage abdominal and pelvic organs, thereby improving ovarian responsiveness and endometrial receptivity. Improved menstrual regularity is considered an indirect marker of restored ovulatory cycles, which is crucial for fertility. [1]

## Role In Polycystic Ovarian Syndrome (PCOS)

PCOS is a leading cause of anovulatory infertility. It is associated with hyperandrogenism, insulin resistance, obesity, and psychological stress [6]. Literature suggests that Surya Namaskaram contributes to weight management, improves insulin sensitivity, and reduces androgen excess by enhancing metabolic activity. Studies have shown that women with PCOS practicing Surya Namaskaram regularly exhibit improvements in menstrual regularity, hormonal balance, and body mass index, all of which favor fertility outcomes [3].

## Impact On Stress And Psychological Well Being

Psychological stress is a recognized contributor to infertility through its inhibitory effects on the HPO axis. Surya Namaskaram, when practiced with awareness and controlled breathing, has been shown to reduce anxiety, depression, and perceived stress. Reduction in stress improves neuroendocrine balance, thereby supporting ovulation and implantation. Literature highlights that mind–body practices enhance emotional stability, which is particularly beneficial for women undergoing infertility treatment [8].

## Metabolic And Endocrine Benefits

Obesity and metabolic syndrome negatively affect fertility by altering estrogen metabolism and insulin action [6]. Surya Namaskaram functions as an aerobic-cum-anaerobic exercise, improving basal metabolic rate and glucose utilization. Regular practice supports endocrine gland function, including the thyroid, adrenal, and pituitary glands, which indirectly regulate reproductive hormones. Improved metabolic health contributes to better ovulatory function and fertility potential [3].

## Surya Namaskaram As An Adjunct Therapy In Infertility

Existing literature emphasizes that Surya Namaskaram should not be viewed as a standalone cure for infertility but as an effective complementary therapy. When integrated with conventional medical management, lifestyle modification, and dietary regulation, it enhances overall reproductive health. Its cost-effectiveness, safety, and holistic benefits make it suitable for long-term practice in women with infertility.[7]

## RESULTS AND DISCUSSION

The reviewed literature indicates that Surya Namaskara has a positive influence on female reproductive health through multiple mechanisms. Regular practice helps regulate the hypothalamic–pituitary–ovarian axis, which plays a key role in menstrual cyclicality. Several studies report reduced stress levels and improved emotional stability among women practicing Surya Namaskara, suggesting its indirect role in hormonal balance.

Surya Namaskara also functions as a moderate-intensity physical exercise, aiding in weight management and improving insulin sensitivity. These effects are particularly beneficial in conditions such as polycystic ovarian syndrome, where obesity and insulin resistance are common contributing factors. Additionally, the alternating forward and backward bending postures stimulate abdominal and pelvic organs, improving blood circulation and supporting endocrine gland function.

The integration of controlled breathing with movement enhances parasympathetic activity, reducing cortisol levels and promoting relaxation. Improved metabolic and endocrine function contributes to better menstrual regularity and reduction in premenstrual symptoms. Overall, the findings support Surya Namaskara as an effective supportive therapy for maintaining female reproductive health.

## CONCLUSION

The reviewed literature suggests that Surya Namaskaram plays a supportive role in managing female infertility by improving hormonal balance, menstrual regularity, metabolic health, and psychological well-being. Its influence on the HPO axis, stress reduction, and pelvic circulation provides a strong theoretical basis for its use as an adjunct therapy in infertility management. Further clinical research is warranted to establish standardized protocols and quantify its direct impact on fertility outcomes.

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