



# EFFECT OF YOGA INTERVENTION ON OLIGOMENORRHEA

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## Abstract:

The present study entitled “effect of yoga Intervention on subjects with Oligomenorrhea” was conducted at Department of Human Consciousness and Yogic Sciences, Mangalore University. 20 subjects with Oligomenorrhea were included in the study with 10 subjects in experimental and 10 in control group. Subjects were of the age 18- 22 years. A detailed case history was taken. Estradiol test and haemoglobin test was done for both the groups before and after yoga intervention. The practices were introduced gradually to the experimental group only, for 40 days. Control group was allowed to follow their normal lifestyle. For statistical analysis paired t test was used and significant result was found in experimental group with p value **0.00154** for estradiol and **0.001** for haemoglobin which is less than 0.05. By considering the result and positive feedback from the experimental group subjects, it is proved that, the menstruation was regularised when compared to the control group.

**Key words:** Yoga intervention, Estradiol test, Haemoglobin.

## INTRODUCTION:

Menstruation is the process occurs in the uterus and the ovary as a part of making sexual reproduction possible. Most of the time due to several factors menstrual bleeding is absent, irregular, excessive along with pain which may be considered as problem regarding menstruation. Oligomenorrhea is a condition in which one has infrequent menstrual periods. Hormone plays an important role in regulating this process. Hormonal imbalances occur when there is too much or too little of a hormone in the blood stream leading to unexplained weight gain, depression, menstrual disorders etc<sup>8</sup>. Estrogen is the hormone responsible for the sexual development of girl to reach puberty<sup>9</sup>. It controls the growth of the uterine lining during menstrual cycle. Low estrogen levels cause irregular periods or absent periods, mood swings, depression, fatigue, trouble concentrating etc. Low haemoglobin levels can also cause irregularities in the menstrual cycle..

Increasing incidence of menstrual disorder has provoked studies of how yoga can help in handling this by normalising the hormonal level and in reducing the associated symptoms. It is proved in various studies that regular practice of yoga can help to regularise the menstrual cycle. Preventive, promotive and curative aspect of yoga helps in the stability of mind and body. Yogic practices like kriyas, asanas, pranayamas, and relaxation techniques help to relieve the physical and mental stress and helps in maintaining the normal level

of hormones in the body. This study was an effort to know the effect of yoga intervention on subjects with oligomenorrhea.

### Review of literature:

*Maharshi Patañjali* defines yoga as '*yogah cittavrtti nirodhah*'.<sup>1</sup> He explained various therepeutical aspects in his yoga sūtras. He describes that the mental distraction is the root cause for disease.

Dr. K. Krishna Sharma and et al in their study on the effect of yoga therapy on menstrual disorder with reference to hormonal discrepancy, after the yoga therapy for one month estradiol test result of experimental group was significant with p value 0.0216 when compared to control group. This study depicts that yogic practices are helpful in managing menstrual disorders.<sup>4</sup>

Tejwani N et al in their study entitled "Effect of yoga in menstrual disorder" explain that by the practice of yoga endocrine glands can be brought under control and the blood supply regulated through the required part of the body. They concluded that yoga programme containing asana, pranayama, and relaxation techniques is formulated for treatment and prevention of gynaec issues.<sup>5</sup>

Monika Rani and et al studied impact of yoga nidra on menstrual abnormalities in females of reproductive age which demonstrated the efficacy of yoga nidra on hormone profile in patients with menstrual irregularities. They concluded that yoga nidra was helpful in patients with hormone imbalances, such as dysmenorrhea, oligomenorrhea, menorrhoea, hypomenorrhoea.<sup>6</sup>

Dr. K. Krishna Sharma and et al in their study effect of selected yogic practice on menstrual disorder in high school girls in which all the subjects got beneficial result and yoga helped them in controlling menstrual disorder.<sup>7</sup>

### HYPOTHESES:

It was hypothesized that, as a result of Yoga therapy-

- There will be significant difference between pre and post estradiol test.
- There will be reduction in the symptoms of menstrual uneasiness.

**OBJECTIVE:** To assess the effect of Yoga Intervention on subjects with Oligomenorrhea.

### VARIABLES:

Independent variables: Yoga Intervention.

Dependent variables: Estrogen hormone

### MATERIALS AND METHODS:

The present study was conducted to assess the effect of yoga therapy on estrogen hormone level in hostel ladies with problem regarding menstruation with age group of 20- 24 years. 20 Volunteer subjects having menstrual disorder were randomly selected. Subjects were classified into two group i.e experimental and control with 10 subjects each. A detailed case history of all the subjects was taken. B.P, Weight and hormonal test i.e Estrogen hormone were done before and after the study for both the groups. The experimental group was given selected yogic practices six days per week, one month duration. Yogic practices were given in a sequence and individual care was taken. But control group continued with normal lifestyle. To analyse the significance of the result statistically, paired "t" test was selected.

**Parameter of the study:**

1. Estrogen (Estradiol) test: It is a blood test that measures the amount of Estrogen (Estradiol) hormone in the blood. This test is done when the women is having irregular menstrual cycle or abnormal menstrual bleeding.

**The following yogic practices taught to experimental group for a period of 35 days.** Swastikasana, Vajrasana, Supta Vajrasana, Tadasana 1, Kati parivartana, Trikonasana, Parsvakonasana, Prasartitapadottanasana, Purvottanasana, Pavanamuktasana, Bhujangasana, Dhanurasana, Janushirshasana, Baddhakonasana, Upavistakonasana, Uttanapadasana, Ujjayee, Anuloma Viloma, Bhastrika, Shavasana.

**RESULTS:**

All the subjects under the study were tested before and after 35 days of yoga training. An overall improvement in experimental group is seen. Table 1 shows improvement in the parameters for every individual of experimental group. But no such improvement in control group i.e table 2. This shows how yoga has helped in normalising the estrogen hormone level. In the subjects of experimental group the complaint of abdominal pain, fatigue etc was reduced during the next menses. They experienced freshness, calmness, reduced tension, improved working ability, positive thinking etc after few days of yoga practice. But no such changes in control group were found.

A Paired “t” test was applied for the parameter and found out the value for both experimental and control groups. The results of “t” tests are as follows.

**Table 1: The values of Estrogen hormone and haemoglobin of experimental group**

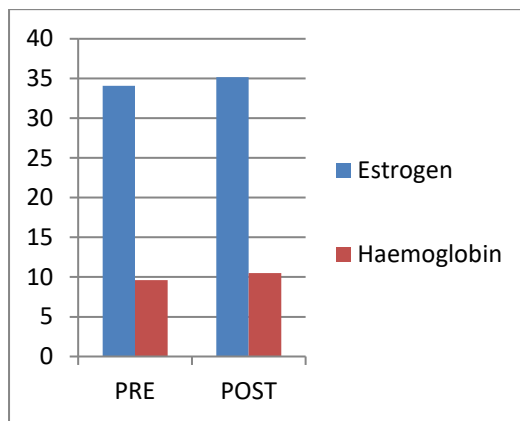
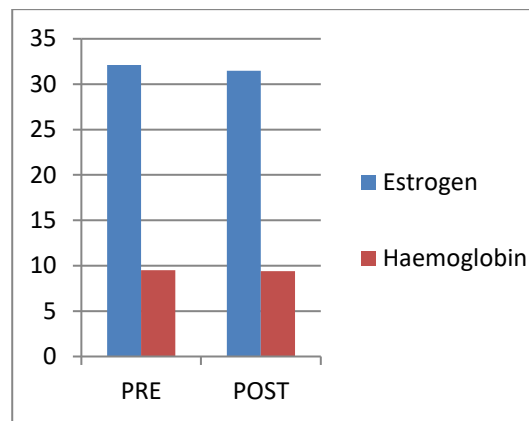
Parameter	Mean		S.D		t value	p value	Result
	Before	After	Before	After			
Estrogen hormone	34.08	35.18	19.40	19.29	-4.47419	<b>0.001545</b>	<b>S</b>
Haemoglobin	9.6	10.5	1.173	1.251	-3.85714	<b>0.00193</b>	<b>S</b>

S- Significant

**Table 2: The values of Estrogen hormone and haemoglobin of Control group**

Parameter	Mean		S.D		t value	p value	Result
	Before	After	Before	After			
Estrogen hormone	32.12	31.49	8.76	8.69	0.0258	2.24285	NS
Haemoglobin	9.5	9.4	1.4337	1.1633	0.83852	0.2117	NS

NS-Non Significant

**GRAPHICAL REPRESENTATIONS:****Experimental group****Control group****DISCUSSION:**

The results of experimental group in this study were statistically significant. At the end of the study the results concluded that there is significant improvement of estrogen hormone at the level of significance  $p < 0.05$  with a significant  $p$  value **0.00154** and haemoglobin **0.00193** in experimental group. In control group no significance was found i.e  $p$  value 2.2428 in estrogen and 0.2117 in haemoglobin. Positive feedback from the subjects of experimental group of experiencing improved working ability, reduction in the pain and reduced stress is evidence that yoga therapy helped in improving their quality of life. Only a few studies regarding the above topic have been done and in those studies we can see the efficiency of yoga therapy. This is a small effort to assess the effect of yoga Intervention on subjects with Oligomenorrhea and reducing symptoms associated with it. The result is a proof that all the subjects of the experiment group responded to the therapy positively. Hence it is proved that yogic practices have a significant impact in improving the Estrogen hormone and haemoglobin level. Considering the changes in the levels of the hormone in the blood stream the efficacy of yogic practices on menstruation were sufficiently proved. But the variation of rate of success could be dependent on the regularity of practice, lifestyle, dietary change etc. Further study can be conducted by including other parameters, increasing the subjects and also by extending the duration of study.

**CONCLUSION:**

1. Yoga intervention helps efficiently in regularising the Esrogen hormone.
2. Yoga intervention helps in improving haemoglobin level.
3. Selected yogic practices assist to reduce the stress and physical strain.
4. In a more controlled set up, may lead better results.

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