

Effects of Yoga in Menstrual Disorders

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Abstracts: Background: Every woman at some stage or other experience menstrual disturbances, and these can and often affect their routine. Being a woman I experienced them and found relief when I took up yoga. This prompted me to carry out this study. **Material and Methods:** 50 women were included in the study and provided regular yoga classes for 6 months. A questionnaire was filled before starting and after completion, to assess the effects of Yoga. **Result:** 38 women who continued with regular Yoga exercises, reported positive effects and significant symptomatic relief. 12 women who were irregular. or discontinued with yoga exercises did not show significant relief of their systems. **Conclusion:** A Yoga programme containing Asana, Pranayama, Relaxation and Concentration techniques, is formulated for treatment and prevention of Gynaec issues. [Tejwani N NJIRM 2015; 6(1):45-48]

Key Words: Yoga in menstrual disorders

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Introduction: The hormones liberated from the hypothalamus, pituitary and ovary are interdependent. A well-coordinated axis is formed called hypothalamo pituitary ovarian axis. The secretion of hormones is modified through feedback mechanism operating through this axis. The axis is modified by many factors like stress, hormones liberated from thyroid and adrenal glands¹. Stress is relieved by meditation and relaxing exercises viz. Nishpandhan bhav, and Yonimudra. Breathing yoga exercises viz. Anulomvilom not only calms the mind but also improves the blood supply to vital and endocrine organs of the body¹².

Yoga corrects the imbalance of autonomic nervous system and controls the over activity of sympathetic nervous system⁴. It corrects the uterine hyperactivity and dysrhythmic uterine contractions which otherwise are responsible for dysmenorrhea¹⁷.

Review of Literature: Uterus is under both nervous and hormonal control. Hypothalamus controls the uterine activity through reticular formation which balances the effect of two autonomic divisions. It is controversial whether uterus receives both parasympathetic and sympathetic nerves or whether it has only sympathetic component. regarding motor innervations of uterus opinion seems to favour the view that sympathetic nerves rather than parasympathetic nerves have influence

over uterus¹. Yoga creates parasympathetic dominance so balances uterine activity¹⁷.

During recent years neural connection between higher cortical centres and hypothalamus has been well established and termed limbic system. Through this system ovarian and consequently menstrual cycles are affected by emotional and environmental factors¹³. Yoga calms the mind so takes care of emotional status and that is why have effect on menstrual cycle.

Endorphins are endogenous peptides which may modulate GnRH secretion through suppression by dopamine secretion and stimulation through Noradrenaline and chatecholamine secretions¹³.

Ovarian function is also markedly related to thyroid activity, thyroid function is nicely controlled by yogasana related to neck movement. yoga reduce cortisol level, cortisol is anabolic, antagonize insulin and raise blood sugar level, has got lipogenic action so yoga apart from acting as an exercise , also reduces weight. sudden change of weight also causes secondary amenorrhea by affecting through hypothalamus so also normalize menstrual cycle¹⁷. The causes of dysmenorrhea are dysrhythmic uterine contractions and hypoxia because of the imbalance in the autonomic nervous control of uterine muscle so over activity of sympathetic nervous system and hyper tonicity of cervical os¹. Psychosomatic factors like anxiety and tension in young girls and low pain threshold, increased

production of prostaglandins or increased sensitivity of endometrium to it there is increased myometrial contraction with or without dysrhythmia. For the premenstrual syndrome the main reason lies in the hormonal imbalance/fluctuation in Eostrogen and Progesterone levels, fault in neurotransmitter activity of endorphins and psychological factors^{1,3,13}.

Material and methods: Women with menstrual disorders taking care under me were taken in the study from June 2010 to June 2012. They were investigated to rule out secondary causes for menstrual disorders. An informed written consent was taken before enrolling them. A questionnaire was designed to assess the effect of regular Yoga exercises, follow up was done. 38 women continued with regular Yoga exercises and formed the study group while 13 women discontinued Yoga exercises after a period of time and formed the controlled group.

Inclusion Criteria: age group 16 years to 40 years subject willing to do yoga exercises regularly Who would be available for follow up.

Exclusion Criteria: Who were unavailable for follow up Known to have secondary cause for menstrual disturbances. The training and motivation was done in a phased manner.

Care Techniques applied

Yoga Exercises: Duration 6 Months

Yoga Techniques Applied: Asanas:

Tadasana: upward stretching of vertebral column

Matsyasana: Muscles of the lower limb are stretched, while getting in to asans Hip Abductors, Flexors and Medial Rotators, Knee Flexors, Shoulders Joint Flexors and Elbow Flexors are exercised.

Paryankasana: Extensors of Leg, Hamstring and Quadriceps are Exercised, Medial Rotators of hip are stretched against huge resistance. While Ankle plantar Flexors, Knee Flexors, Hip Extensors and Elbow Flexors are exercised

Ustrasana: back ward bending asana

Vakrasana: Sitting and lying - Lateral Rotators of the Vertebral Column and Flexors of the Shoulder joint are exercised. Isometric contraction of the Anterior abdominal wall muscles

Hastapadanqusthasana: same side and front Rectus, Femorias, Sartorius, Elbow Extensors, Wrist Extensors and Finger and Thumb Flexors are exercised. Hamstrings and Gluteus Maximus are stretched. Upper limb carries the weight of the lower limb to variable extent. Body weight transmitted by one leg and thus all postural muscle contract, it improves the range of movement of the hip. Coordination of the muscular activity occurs.

Bhadrasana: Abductors, Flexors and Medial Rotators of the Hip are exercised. While getting into the Asan Knee Flexors, Finger Flexors and Abductors, Flexors, Lateral Rotators of Shoulder and Scapula Protractors are also exercised. Sartorius are stretched, Abductors and Adductors of Hip are also stretched.

Yoga Mudra: Extensors of vertebral column are stretched, hip abductors, Flexors and Medial Rotators and Knee Flexors along with Shoulders Girdle Retractors are exercised. There is movement towards gravity.

Pawanmuktasana, yashtikasana for reducing abdominal obesity and flabbiness.

Pranayams: Anulom Vilom, Yogendra Pranayam IV

Relaxation: Makarasan, Shavasana, Dirrhasan

Concentration: Nishpan Bhav with Music

Observation and Results:

Table 1: Women Who Were Regular With Yoga Exercises

	Regular n=38	
	Benefitted	No benefit
Dysmenorrhoea n=34	30 (88.2%)	4 (11.8%)
Menorrhagia n=20	12 (60%)	8 (40%)

Regularity of cycle n=34 (age gp 16 – 20)	32 (94%)	2 (6%)
PMS n=30	29 (96.6%)	1 (3.4%)
Oligomenorrhea n=4	4 (100%)	Nil

(Since there was overlap of symptoms n figure varies). 38 women continued regular yoga exercises. 88% women with dysmenorrhoea showed significant improvement. 60 % women with menorrhagia observed reduction in the amount and days of bleeding. Maximum benefit was seen in women with PMS (96.6%). Irregular menstrual cycles was common in teen age and 94 % showed benefit

Table 2: Women Who Were Irregular with Yoga Exercises

	Irregular n=13	
	Benefitted	No benefit
Dysmenorrheal (n=11)	2 (10%)	9 (90%)
Menorrhagia (n=8)	Nil	8 (100%)
Regularity of cycle (n=10)	2 (20%)	8 (80%)
PMS (n=12)	1(8.3%)	11(91.7%)
Oligomenorrhea (n=3)	Nil	3

(Since there was overlap of symptoms n figure varies). Sporadic response was seen.

Discussion: Yoga system is static low dynamic activity inducing significantly measurable effect on the neuro-hormonal axis which is the basic concept of yoga. 25 to 30 % of the myelinated fibers comprising sensory input nerve function as a specific regulatory receptor exclusively operating during the isometric state low dynamic muscular contraction proving proprioceptive feed back mechanism promoting neuromuscular facilitation.

The flow of blood throughout the body and specially through lungs during exercise permits

more Oxygen to be taken into the blood and more CO₂ to be excreted. Both these biological circumstances are definitely favorable to the general health, rhythm and activity of the body. What yoga regards as of greater significance is the effect of physical training on the nervous system therefore assumes paramount importance. They also maintains a balance and give tone to the three interrelated nervous systems, stimulate regeneration of nissl's granules and promotes osmosis through the medium of plasma. The capillaries and endorgans thus sustain their normal tone.

All the yoga exercises and processes characteristically aim at control, purification and co-ordination of nervous system rather than at muscular display and strength. As such yoga urge towards poise and control of body and the mind through nonviolent and non-fatiguing method of physical education.

Through yoga the endocrine glands can be brought under control and the blood supply regulated through the required part of the body. Also by increasing the inter-capillary pressure in certain yogic postures the flow of lymph is considerably enhanced resulting in better tone and regeneration of tissue elements.

The prolonged deep and rhythmic breathing associated with each asanas supply plenty of Oxygen rich blood to the muscles, internal organs and endocrine glands, increasing their efficiency many folds.

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