



The Effect of Yogic Practices on Thyroid Functions

KEYWORDS

thyroid, yogic practice, hormone.

Dr. Krishna Sharma

Chairman, Dept of Human Consciousness and Yogic Sciences, Mangalore University, Mangalagangothri -574199.

Dr. Udayakumara K

Research Fellow, Dharmanidhi Yogapeetha, Dept of Human Consciousness and Yogic Sciences, Mangalore University, Mangalagangothri -574199.

Dr. Thirumaleshwara Prasada H

Research Fellow, Dharmanidhi Yogapeetha, Dept of Human Consciousness and Yogic Sciences, Mangalore University, Mangalagangothri -574199.

Mahabala P

Research Scholar, Dept of Human Consciousness and Yogic Sciences, Mangalore University, Mangalagangothri -574199.

ABSTRACT A study on the "Effect of Yogic practices Thyroid Functions" was conducted in the department of Human Consciousness and Yogic Science, Mangalore University. There were seven (five Female and two Male) subjects chosen for the above study to know the change in thyroid functions before and after the yogic practice with age group 20- 50 years. A 30 days long practical session were conducted in the department daily between 7.30 am and 8.30 am for one hour. The session included a series of Āsanas (like – Tadasana, Trikonasana, Pavanmuktasana), Prāṇāyāmas (like - Ujjayi, Bhastrika) and Relaxation techniques. Three parameters were considered for the present work. They are; Tri-iodothyronine, Tetra-iodothyronine and Thyroid stimulating Hormone. There was a remarkable difference in the Hormonal levels with the subjects.

Introduction:

The aim of yoga is self realization i.e., Samadhi. Yoga is a science of conscious evolution or self-perfection, which has been cherished over thousands of years of its documented existence in India. It covers all the conceivable aspects of human life that leads to physical fitness, mental harmony and spiritual consciousness. Yoga is the removal of the imperfection in us to allow purity to shine forth. In short, it is communion with our inner selves. Yoga elevates man from the lowest to the highest level of human existence. Yoga is life itself. Hence one can Yoga as alternative medicine in the treatment of psycho-somatic disorders. Yogic techniques include Asana, Pranayama, Meditation and Relaxation.

In the conflict torn world of today, most of us are under any one of disorder because of induced stress and strain reflects directly in the body such as endocrine glands. When the stress become unbearable, it give rise to psycho-somatic disorders such as hypertension, Acidity, Insomnia, Glandular disorders (like - Hypothyroidism, Hyperthyroidism). Treating it through modern medicine has side effect too.

Materials and Methods:

The present study was conducted in the department to find out the Effect of Yogic practices on Thyroid disorders between the age group of 20 and 50. Seven subjects (5 female and 2 male) selected for the current study. Certain Yogic practices were given to the subjects systematically for a period of one month once in a day from 7.30 AM to 8.30 AM. The Yogic practices include, Āsana, Prāṇāyāma and Yoganidrā for one hour.

Parameters:

The following parameters were taken for the present study.

Triiodothyronine (T_3):

It is a thyroid hormone. It affects almost every physiological process in the body, including growth and development, metabolism, body temperature, and heart rate. Production of T_3 is activated by TSH (Thyroid Stimulating Hormone) which is released from the pituitary gland. This pathway is regulated

via a closed-loop feedback process: Elevated concentrations of T_3 in the blood plasma inhibit the production of TSH in the pituitary gland. As concentrations of these hormones decrease, the pituitary gland increases production of TSH, and by these processes, a feedback control system is set up to regulate the amount of thyroid hormones that are in the bloodstream. The normal value of Triiodothyronine in adult is 60 - 200 ug/dL.

Thyroxine (T_4):

It is also called 3,5,3',5'-tetraiodothyronine, or T_4 , one of the two major hormones secreted by the thyroid gland (the other is Triiodothyronine). Thyroxine's principal function is to stimulate the consumption of oxygen and thus the metabolism of all cells and tissues in the body. Thyroxine is formed by the molecular addition of iodine to the amino acid tyrosine while the latter is bound to the protein thyroglobuline. Excessive secretion of thyroxine in the body is known as hyperthyroidism, and the deficient secretion of it is called hypothyroidism. The normal value of Thyroxine is 4.5 -11.5ug/dL.

Thyroid-stimulating hormone (TSH):

Thyroid-stimulating hormone (TSH) is generally elevated in hypothyroidism and decreased in hyperthyroidism. It is the most sensitive test for thyroid hormone function. TSH is produced in the pituitary gland. The production of TSH is controlled by TRH, which is produced in the hypothalamus. TSH levels may be suppressed by excess free T_3 or free T_4 in the blood. The normal range of TSH is 0.3-5.0 U/mL.

Yogic Practices

The following Yogic practices were given to the subjects for a period of one month. Kapalabhti - Kriya. Āsana like - Svastikasana, Tadasana-I, Tadasana-II, Vajrasana, Supta Vajra, Trikonasana, Parsvakona, Pascimottanasana, Purvottaadsana, Pavanamukta, Bhujangasana, Yoga Mudrasana, Ustrasana, Janusirasana, Matsyendrasana, Uttanapada, Viparitarani Mudra Halasana. Prāṇāyāma like - Ujjayi, Anuloma - Viloma, Bhastrika. Ajapajapa Meditation and Yoganidra - a deep relaxation technique.

RESULTS:**Table 1: Thyroid Hormone values before and after Yoga practice**

Subject	Age	Sex	T ₃		T ₄		TSH	
			(60 - 200 µg/dL)		(4.5 - 11.5 µg/dL)		(0.3-5.0 U/mL)	
			Before	After	Before	After	Before	After
1	21	F	103	107	7.8	7.6	1.42	1.72
2	37	F	158	132	10	10.3	0.02	0.09
3	39	M	145	131	8.9	9.1	3.37	3.01
4	42	F	137	129	9.8	8.3	5.55	0.59
5	43	F	152	135	7.5	6.3	7.25	4.72
6	43	F	134	152	6.8	7.6	0.2	0.1
7	37	M	149	144	9.35	8.9	0.79	0.52

T₃ = Triiodothyronine, T₄ = Thyroxine, TSH = Thyroid-stimulating hormone

OBSERVATIONS:

The changes in the Thyroid Hormones obtained before and after the yogic practices were compared. The results showed significance difference. Before the yoga practice, they had sudden problems like-increase in the weight, tiredness, Hair loss, Constipation, Weight loss, tremor, laziness and improper hormone level. After Yoga practice, the above mentioned problems were reduced significantly. A follow up was made of for a period of 15 days.

DISCUSSION:

The Yogic practices brought changes in the Thyroid disordered patients. One can see the variation in the T₃, T₄ and TSH after Yoga practice. In the therapeutic view, psycho-somatic diseases aroused from the Citta Vritti (Mind-stuff). So by decreasing the Vritti, one can achieve good health.

CONCLUSION:

By the practice of Yoga, one can see that the clear cut improvement in the health of the entire subject domain. This was achieved by regular practice of Yoga. Thus, one can conclude that Yogic practices brought Hormone balance in the body. It is evident that the Yogic practices could be used to improve the health of any Individual. However, long term of such study with good number of subjects could bring better significant results and helps in the improvement of general health in economic way.

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