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YOGA THERAPY FOR THYROID DISORDER: A MINI REVIEW

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ABSTRACT

The thyroid gland is a butterfly-shaped endocrine gland in the lower front of the neck. Thyroid hormones are required for growth and development, myelination of the nervous system, metabolism, and organ function. Thyroid stimulating hormone (TSH), which is secreted by the anterior pituitary, regulates thyroxine production. Thyrotropin-releasing hormone regulates the generation of TSH (TRH). It has an impact on the functioning of practically all organ systems, which are crucial in normal physical and mental growth and function from conception to old age. The hormone thyroxine (T4 serum) has a typical adult limit of 4.5 to 12.0 ng/dl.Hypothyroidism, hyperthyroidism, goitre and iodine deficient disorders, Hashimoto's thyroiditis, and thyroid cancer are the five most frequent thyroid diseases in India. Yoga therapy is effective, according to medical specialists, since it creates balance in the neurological system and organs of the body. It has now been established beyond a shadow of a doubt that Yogic Science not only aids in the maintenance of normal physical and mental health, but it is also incredibly beneficial in the treatment of certain disorders. Yogic asana uses various postures to improve physical strength, flexibility, balance, co-ordination and endurance. Yogic asana or specific posture, Pranayama or controlled breathing and dhyana or meditation practice has its own specific and overall benefits. Hence the present study was undertaken to find out the effect of yoga therapy in Thyroid diosrder.

KEYWORDS: Thyroid, Thyroxine, Yoga

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INTRODUCTION

Thyroid diseases impact the thyroid gland, which is a butterfly-shaped gland located in the front of the neck. The thyroid is responsible for regulating a variety of metabolic activities throughout the body. Thyroid problems impact the structure or function of the thyroid gland. The thyroid gland is beneath the Adam's apple, which is coiled around the trachea (windpipe). The isthmus connects the two thyroid lobes on each side of the gland, which is a small piece of tissue in the gland's midsection. Iodine is used by the thyroid to make important hormones. The principal hormone generated by the gland is thyroxine, often known as T4. A small percentage of the T4 generated by the gland is transformed to triiodothyronine (T3), the most active hormone, once it is delivered to the body's tissues via the bloodstream. The thyroid gland's function is controlled by a brain-based feedback process. The hypothalamus in the brain generates thyrotropin releasing hormone (TRH), which stimulates the pituitary gland (located at the base of the brain) to release thyroid stimulating hormone when thyroid hormone levels are low (TSH). TSH causes the thyroid gland to produce more T4 by stimulating it because the pituitary gland and hypothalamus control thyroid function, abnormalities with these tissues can impact thyroid function and create thyroid difficulties (1)

Hypothyroidism symptoms vary depending on the degree of thyroid hormone depletion, however they might include: gaining weight, Depression, Fatigue, and Increased Cholesterol Levels, Hair loss, memory loss, and baldness are all symptoms of Alzheimer's disease, Swelling of the legs, dry, rough skin, constipation, Muscle cramps, decreased concentration, Graves' disease, toxic multinodular, goitre, thyroid nodules that over express thyroid hormone (known as "hot" nodules), and excessive iodine consumption are some of the most prevalent causes of hyperthyroidism (2). Yoga is one of the complementary medicine treatments that have been shown to have some long-term effect in treating people with thyroid issues who practice it on a regular basis, and yogic practices can alter physiological hormone secretions (3). Yoga is thought to be a simple and potentially cost-effective therapy that can be used in conjunction with medical Thyroid treatment. Complementary medicine is defined by the National Institutes of Health National Center for Complementary and Alternative Medicine (NIH NCCAM) as therapies that are used in addition to standard medical treatments (2017), which should not be confused with alternative medicine, which is

defined as therapies that are used instead of conventional medicine.According to the United States Department of Health and Human Services National Institutes of Health report from the 2012 national survey (National Center for Complementary and Integrative Health), more than 30% of adults in the United States are likely to use healthcare approaches that are not in line with traditional "western medicine (4).Shoulder stand (Saravang-asana), plough pose (Halasana), fish pose (Matsy-asana), camel pose (Ustrasana), cobra pose (Bhujang-asana), bridge formation pose (Sethubandhasana), shoulder-stand pose, and bow pose (Dhanurasana) are some of the yoga poses that help balance and regulate thyroid gland function.

METHODOLOGY

The current review was conducted using a complete and organized search of the available literature on the Yoga in Thyroid. The searches were performed using various databases, including Scopus (http://www.scopus.com/), PubMed (http://www.ncbi.nlm.nih.gov/pubmed), Scirus (http://www.scirus.com/), Science Direct (http://www.sciencedirect.com/), and Google Scholar (http://www.scholar.google.com/).

YOGA

Yoga is an ancient Indian science. It is India's unrivalled gift to the world. It is a science that teaches you how to know yourself and how to know the everlasting truth. Yoga is a philosophy, a way of life, and it is for everyone: not as a fad, as it has become in recent years, but as a means of meeting a genuine need. Yoga's systematic techniques to overcoming illness can be split into three categories: preventative, promotive, and curative. Yoga is defined as an action that leads to the unification of the body and mind, improving physical, mental, and spiritual well-being.

It's an ancient kind of mind-body control that dates back over 5,000 years in India and is currently practiced all over the world. According to the National Health Statistics, around 21 million adults in the United States practice yoga as a supplemental health method (5). Yoga therapy is the use of yoga to treat various symptoms and disorders of the body and mind. This can be controlled with medication; however there is a growing body of research that supports the use of complementary therapies for hormone management alone or in thyroid disease (6).

Patanjali is regarded as the founder of modern yoga. Yama (moral behaviour), Niyama (healthy habits), Asana (postures), Pranayama (breathing exercises), Pratyahara (sensory-motor activity withdrawal), Dharana (mind contents), Dhyana (contemplation), and Samadhi (higher consciousness) are the eight limbs of yoga, according to him (7-15). Pranayama consists of two words Prana and Ayama. Pranic force can be regulated by air and good diet. Hatha Pradipaka author gives eight types of Pranayama, one of which is Ujjayi. The main feature of Ujjayi Pranayama is that it enhances blood circulation, which is capable of producing extremely high pressure in the lungs and thorax (16). Ujjayi Pranayama also helps to rebalance metabolism and improve concentration.

EFFECT OF YOGA IN THYROID DISORDER

Yogic practices have the ability to alter the secretions of body hormones. In a study called "Effect of Yogic exercises on thyroid function in subjects resident at sea level upon exposure to high altitude," it was discovered that doing a Yogic schedule of prayer (3 minutes), Hatha Yoga asana (50 minutes), Pranayama (5 minutes), and meditation (5 minutes) for one month reduced the concentration of radio-iodine in the thyroid of subjects at sea level (17).

A search of the literature for papers on the use of yogic practices in the treatment of thyroid diseases was carried out. Studies (18-21) that support the practice of yoga to manage the side effects of thyroid disorders such as stress, anxiety, and sleep disturbances have not been consistently supported in the literature (22).

“Treatment of hypothyroidism through Yoga therapy – A study,” according to the study. The current study demonstrates the effectiveness of yogic practices in the treatment of hypothyroidism. Tests to measure the amounts of thyroxine, triiodothyronine, and thyroid stimulating hormone in the blood have proven to be useful in identifying hypothyroidism. They were also crucial in establishing the degree of improvement in individuals with thyroid diseases following the practice of yogic practices, as well as ensuring that the medication administered was effective. The efficiency of yoga practices on thyroid diseases was sufficient when considering changes in the levels of these hormones in the blood stream (23).

Another study by Swami G et.al. on the effect of yogic practice on pulmonary function tests in hypothyroidism patients found that yoga improves respiratory muscular strength and increases air entry, increasing oxygen concentration at the tissue level (24, 25).

The relevance of Ujjayi is highlighted in the following study by Minal S. Pajai et.al. Ujjai is also known as "the ocean breath." Ujjayi is a diaphragmatic breath that fills the lower abdomen first (stimulating the first and second chakras) before moving into the upper chest and neck. The nose is used for both inhalation and exhalation. Moving the glottis as air travels in and out produces the "Ocean sound." A rushing sound is produced as the neck passage narrows. The mind's length and quickness are also improved. It benefits the entire mind and body, particularly the nerve system. Its calming effect promotes the functioning of all endocrine glands. It aids in the proper secretion of hormones from the thyroid gland. According to the findings, yoga is beneficial in assisting hypothyroidism patients in managing their disease-related symptoms (26).

Yoga can be used in conjunction with medical treatment to treat hypothyroidism as a supporting or supplementary therapy. The yogic Asana, Pranayama, and Kriya are the best and most useful, according to the research, because they help not only to strengthen each organ and develop every muscle in the body, but also to regulate body blood circulation, lungs purity, inspire the mind, and thus develop the harmonious development of human personality (27).

Such awareness, according to Poonam Singh, helps to produce a more balanced balance between the sympathetic and parasympathetic autonomic nerve systems, and hence a better state of health. A month of yoga practices enhanced the quality of life of 20 hypothyroidism women in one study (28), while 6 months of Pranayama (yogic breathing) practices enhanced forced expiratory volume in a lung function test of women with hypothyroidism in another study (29).

CONCLUSION

The thyroid gland is placed below the Adam's apple in the front of the neck. It is located in the neck of humans and comprises of two linked lobes. A small band of tissue termed the thyroid isthmus connects the lower two-thirds of the lobes. The

thyroid gland produces three hormones: triiodothyronine (T3) and thyroxine (T4), as well as calcitonin, a peptide hormone. Hypothyroidism affects roughly 4-5 percent of people in the developed world because communicable diseases contribute so much to the national disease burden in a developing and highly populated country like India, researchers and scientists are finding it difficult to solve these problems. Various studies have shown that yoga is a crucial part of maintaining one's health and body, as well as one of the most effective treatments for thyroid disorders. Pranayama-based yogic disciplines are said to have a positive impact on thyroid function, resulting in a psychological and somatic balance of physiological systems. In reality, pranayama is the science of regulated and intentional expansion of the prana, or life force. The practice of Pranayama aids in the therapeutic potential for a variety of systemic issues. As a result, yoga therapy is regarded as a safe and cost-effective treatment option for thyroid disorders.

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