



ISSN 2456-3110

Vol 8 · Issue 3

March 2023

Journal of
**Ayurveda and Integrated
Medical Sciences**

www.jaims.in

JAIMS

An International Journal for Researches in Ayurveda and Allied Sciences



Maharshi Charaka
Ayurveda

Indexed

Role of *Simhasana* in the management of Hypothyroidism: A Review

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ABSTRACT

Hypothyroidism is a condition in which thyroid does not create and release enough thyroid hormone into blood Stream. People with thyroid disorder often have emotional or mental health symptoms as well as physical symptom. *Yoga* is a series practises i.e., physical, mental, and spiritual practices which are originated from ancient India. Application of *Yoga* posture and practice to the treatment of hypothyroidism is the main aim of this article. In *Yoga Bandhas* are the most powerful technique as they change internal chemistry of the body in a fundamental way. Out of 4 types of *Bandhas*, *Jalandhar Bandha* (throat lock) is most important in treating throat disorder. In *Simhasana* there is application of *Jalandhar Bandha*, due to application of *Jalandhar Bandha* blood flow through carotid arteries get reduces which send signal to the brain activates parasympathetic nervous system as a result it create calmness in mind and relieve stress, anxiety, depression, and chronic pain, improve sleep patterns, and enhance overall well-being and quality of in thyroid disorder. *Simhasana* presses the thyroid gland thereby increasing vascularity of the gland and maintaining proper functioning of gland, hence by practising this *Asanas* over a few months will definitely helps in hypothyroidism.

Key words: *Simhasana, Hypothyroidism, Jalandhar Bandha, throat lock*

INTRODUCTION

In India, there is significant cases of thyroid diseases. As per various studies on thyroid disease, it has seen that 42 million people suffer from thyroid disorder.^[1] Thyroid is an major endocrine gland situated at the root of the neck on either side of the trachea.^[2] It secrete important thyroid hormones having major action on our body. Like, action on basal metabolic rate, action on carbohydrates, protein, fat metabolism,

action on body temperature, action on sleep, action on sexual function and action on various other endocrine gland.^[3]

When there is imbalance of these thyroid hormones all the system of our body get affected, so to improve the function of these system and to maintain a good health we need to improve the thyroid function. *Yoga* is a series of practises i.e physical, mental, and spiritual practices which is originated from ancient India. In *Simhasana* there is application of *Jalandhar Bandha*. *Jalandhar Bandha* (throat lock) is most important in treating throat disorder. *Bandha* reduces blood supply to the carotid arteries which send signal to the brain thereby activating parasympathetic nervous system as a result it creates calmness in mind and relieve stress, anxiety, depression, and chronic pain, improve sleep patterns, and enhance overall well-being and quality of life in thyroid disorder.

AIM

To study the effect and role of *Simhasana* in the management of Hypothyroidism

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Submission Date: 11/01/2022

Accepted Date: 18/02/2023

Access this article online

Quick Response Code



Website: www.jaims.in

DOI: 10.21760/jaims.8.3.21

REVIEW OF LITERATURE

Yoga

Yoga is a series of physical, mental, and spiritual practices which is originated from ancient India.^[4]

The Sanskrit noun Yoga is derived from the Sanskrit root Yuj, which means "to attach, to join."^[5]

As per Yoga Sutras Of Patanjali

Yogas Chitta Vritti Nirodhah.

It means Yoga is responsible to remove fluctuation from mind.

Bandha

The word Bandha means to hold, lock tightens. So, it is a posture which gripped, contracted, or controlled certain organ or parts of the body.^[6] Bandhas are the types of neuromuscular locks and most powerful technique in yoga and performed to control the function of endocrine gland in the body.^[7]

Jalandhar Bandha

The name comes from the Sanskrit, Jal, meaning "throat". Dharan, meaning "stream". And Bandha, meaning "lock". According to Hath Yoga Pradeepika, extending neck while lifting the heart then dropping the chin to the chest is called Jalandhar Bandha. Which destroy old age and death.^[8]

Simhasana

The name comes from the Sanskrit word Simha meaning "lion" and Asana meaning "posture" or "seat". The pose has also been named Narasimhasana, as in the 19th century Joga Pradipika, from Sanskrit Narasimha, a lion - man Avtar of the god Vishnu.^[9]

Standard Operating Procedure^[10]

Sthiti: Sitting position

- Sit down on your knees in Vajrasans. Spread your knees as far apart as possible.
- Lean forward, place the palms between your knees on the floor, but the fingers facing back towards the body. Open the eyes and focus your gaze on the centre of your brow.

- Keep your mouth closed and inhale deeply while relaxing the body.
- Exhale through your mouth, bring out the tongue and produce a powerful, clear 'haa' sound.
- Close the mouth and inhale again through the nose.
- Try to maintain the pose for up to 30 second or more.
- Perform it twice or thrice.

The Thyroid Gland

It is an endocrine gland found in the front of the neck, and connected by an isthmus containing two lobes, just below the Adam's apple. The thyroid gland secretes three hormones namely thyroxin i.e., T4, triiodothyronine i.e., T3, and Calcitonin.^[11] The thyroid hormones primarily influence the metabolic rate and protein synthesis. Calcitonin plays an important role in keeping calcium at normal level. Thyroid stimulating hormone regulate the secretion of hormone from the thyroid gland, secreted from the anterior pituitary gland, and TSH secretion is regulated by thyrotropin-releasing (TRH) which is secreted by the hypothalamus.^[12]

Blood Supply of Thyroid Gland

Arterial Supply

The superior thyroid artery supplies arterial blood to thyroid. The superior thyroid artery divides into anterior and posterior branches supplying the thyroid and the inferior thyroid artery divided into superior and inferior branches.^[13] Behind the outer part of the thyroid lobes, the superior and inferior thyroid arteries join together.

Venous Supply

The venous blood is drain into the internal jugular vein.^[14] The inferior thyroid veins drains into the left and right brachiocephalic veins.^[15]

Nerve Supply

The superior, middle and inferior cervical ganglion of the sympathetic trunk supplies sympathetic nerve supply to the gland. Superior laryngeal nerve and the

recurrent laryngeal nerve supplies parasympathetic nerve supply to the gland.

Hypothyroidism

Hypothyroidism is defined as a clinical state resulting from insufficient secretion of the thyroid hormone from thyroid gland due to some of the structural or functional impairment of the thyroid hormone production.^[16] The thyroid gland situated just below adam's apple. It produces two thyroid hormones, triiodothyronine (T3) and thyroxine (T4), which regulate the body metabolic rate.^[17]

Primary hypothyroidism - When thyroxin (T4) and triiodothyronine (T3) levels are low and levels of thyroid stimulating hormone (TSH) secreted by anterior pituitary high then it is called as primary hypothyroidism.

Secondary hypothyroidism - when TSH is low and T4 and T3 levels are high then it is called as secondary hypothyroidism.^[18]

Subclinical Hypothyroidism - Subclinical hypothyroidism is defined as a thyroid stimulating hormone (TSH) level of 4.6 to 10 mIU/L.

DISCUSSION

As in *Simhasana* there is application of *Jalandhar Bandha*, *Jalandhar Bandha* exerts pressure on many major nerve fibres pass through the neck and the flow of nervous impulses to the brain is restricted. Due to pressure impulses collect in the cervical plexus and flood into the brain when pressure due to *Jalandhar Bandh* released. Higher centres in the brain get activated due to force of these impulses. Pituitary hormonal secretions flow through the blood stream to the endocrine glands.

The Carotid Sinus is flat portion where the blood vessel is divided into two parts. Due to inner or outside pressure wall surrounding Carotid Sinus which is thin and can easily get affected. Carotid Nerve passing from here goes high up into the skull and then down into the brain, which has relation with internal carotid, external carotid sinus. The *Jalandhar Bandha* is the process where pressure exerted on this nerve is transmitted to

the Brain. The nerves are activated to send a signal to the brain when the pressure is exerted on carotid sinus due to the peculiar position of the neck.

CONCLUSION

As we practice *Simhasana* by applying *Jalandhar Bandha* with breath retention and due to pressure of *Bandhas* slows down the blood supply to the carotid arteries for a moment and then released forcefully which send signal to the brain and stimulate parasympathetic nervous system as a result it create calmness in mind and relieve emotional or mental symptoms associated with thyroid disorder, relieving stress, anxiety and anger and thereby increasing the thyroid gland function and metabolism.

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How to cite this article: Neha P. Pawar, Vrushali Khandekar, Sumeeta Jain. Role of Simhasana in the management of Hypothyroidism: A Review. J Ayurveda Integr Med Sci 2023;03:116-119. <http://dx.doi.org/10.21760/jaims.8.3.21>

Source of Support: Nil, **Conflict of Interest:** None declared.
