



Ujjayi Pranayama in Hypothyroidism Management: A Comprehensive Scoping Review

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Abstract:

Hypothyroidism, a common endocrine disorder, leads to reduced thyroid hormone production, resulting in symptoms like fatigue, weight gain, and dyslipidaemia. While conventional treatment involves lifelong thyroid hormone supplementation, there is growing interest in complementary approaches. Ayurvedic treatment can be an ideal way to get rid of daily hormone supplementation. The Ayurvedic approach towards hypothyroidism has become an effective and popular way as it does not depend on synthetic drugs and so has no side effects. Combining Ayurvedic principles and modern research, this review examines Ujjayi's physiological mechanisms, its potential to improve thyroid function, and its benefits in reducing associated symptoms like weight gain and mental stress. The findings suggest that Ujjayi Pranayama may serve as an adjunct to conventional therapy, enhancing overall well-being and quality of life.

Keywords: Ujjayi Pranayama, hypothyroidism, Ayurveda, thyroid dysfunction, Pranayama, TSH, T3, T4

Introduction

Hypothyroidism is a prevalent endocrine disorder caused by insufficient production of thyroid hormones, primarily triiodothyronine (T3) and thyroxine (T4). This condition results in a range of symptoms including fatigue, weight gain, dry skin, hair loss, and mental sluggishness. While the conventional treatment involves synthetic hormone replacement therapy, many patients report incomplete symptom relief, highlighting the need for complementary therapies. Ayurvedic medicine, with its holistic approach, offers potential interventions to address the root causes of hypothyroidism.

In Ayurveda, hypothyroidism is correlated with the condition of *Galganda* (goiter), which is associated with imbalances in the *Kapha* and *Vata* doshas, along with dysfunctions in the *Jatharagni* (digestive fire) and *Dhatvagni* (tissue metabolism). According to Ayurvedic texts, this imbalance leads to improper functioning of the thyroid gland, contributing to the symptoms of hypothyroidism.

Recent research highlights Ujjayi Pranayama—a potent yogic *kumbhaka* from Hatha Yoga *Pradipika* (2/51-53)—as a promising intervention to harmonize the endocrine axis. In Ayurvedic terms, this "victorious breath" constricts the *kantha* (glottis) to draw *prana* slowly through *nadis*, generating a resonant oceanic *svana* that ignites systemic *agni*, pacifies *shleshma dosha*, purifies *srotas*, and dissolves *jala-udara-dhatu vikaras*. Yogically, it balances *ida-pingala* flows, stabilizes *udana vayu* governing the throat chakra (*vishuddhi*), and fosters *pratyahara* for mental clarity, thereby enhancing T3/T4 synthesis, metabolic vigour, and psychological resilience in hypothyroidism management.

Ujjayi Pranayama: A Yogic Approach

Ujjayi Pranayama, often referred to as the "victorious breath," involves slow, controlled breathing with a slight constriction at the back of the throat, producing an ocean-like sound. This practice is believed to enhance oxygenation, increase internal body heat, and promote relaxation by calming the mind. Traditionally, Ujjayi is used in yoga to stimulate the *Vishuddhi Chakra* (throat chakra) and regulate the *Vata* and *Kapha* doshas, which are central to thyroid health in Ayurveda.

From an Ayurvedic perspective, the practice of Ujjayi helps clear blockages in the *Manovaha Srotas* (mental channels), facilitating better communication between the mind and the body. This aligns with the Ayurvedic principle that proper function of the thyroid is essential for the overall balance of physical and mental health.

Benefits of Ujjayi Pranayama

श्लेष्मदोषहरं कण्ठेदेहानलविवर्धनम् ।

नाडीजलोदराधातुगतदोषविनाशनम् ॥

गच्छता तिष्ठता कार्यमुज्जाय्याख्यम् तु कुम्भकम् ॥ (ह.यो.प्र.2/52-53)

Sanskrit Phrase	Ayurvedic Benefit	Explanation
श्लेष्मदोषहरं	Kapha Dosha Pacification	Clears and eliminates accumulated shleshma (kapha) from the body, restoring doshic equilibrium.
कण्ठेदेहानलविवर्धनम्	Throat & Systemic Agni Enhancement	Strengthens jatharagni in the throat and amplifies overall deha-agni for improved digestion and metabolism.
नाडीजलोदराधातुगतदोषविनाशनम्	Nadi, Jala, Udara & Dhatu Dosha Destruction	Purifies nadis, dissolves water retention (jala), relieves abdominal disorders (udara), and eradicates deep-seated dhatu-level vitiations.
गच्छता तिष्ठता कार्य	Ambulatory & Stationary Efficacy	Delivers therapeutic effects whether practiced while moving (gacchata) or stationary (tisthata), enhancing versatility.
उज्जाय्याख्यम् तु कुम्भकम्	Victorious Retention Pranayama	Exemplifies kumbhaka as the supreme ujjayi technique for profound pranic control and vitality.

- It boosts the focusing power of the mind.
- The body becomes healthy, strong and lustrous.
- It generates internal heat.
- Gives a positive attitude.
- Very helpful in clearing blocked arteries regulates cholesterol.
- Helps in cataracts and sinus problems, Rheumatism and migraine also.
- It lowers the risk of heart attacks.
- Prevents thyroid problems and makes voice sweet and melodious.
- Best for those people who are in the singing profession.
- Beneficial in chronic cold, cough, indigestion, liver problems, dysentery, fever and other

diseases.

- Best for arousing Kundalini, meditation.
- Increases the concentration power.
- Improve lisping problems in children.
- Very helpful in Asthma problems and other respiratory diseases.

Procedure of *Ujjayi Pranayama*

मुखं संयम्य नाडीभ्यामाकृष्य पवनं शनैः |

यथा लगती कंठातु हृदयावधि सस्वनम् ||

पूर्ववत्कुम्भयेत्प्राण रेचदिडया ततः | (ह.यो.प्र.2/51-52)

Sanskrit Phrase	Key Instruction	Yogic Explanation
मुखं संयम्य	Constrict the Throat	Partially close the glottis (kantha) to create controlled resistance in the airway for oceanic breath sound.
नाडीभ्यामाकृष्य पवनं शनैः	Draw Air Slowly via Nostrils	Gently inhale prana through both nostrils (ida-pingala nadis), filling from base to heart steadily.
यथा लगती कंठातु हृदयावधि सस्वनम्	Resonant Sound from Throat to Heart	Produce a soft, continuous oceanic hiss (svana) vibrating from kantha to hridaya for pranic purification.
पूर्ववत्कुम्भयेत्प्राण	Retain Breath as Before	Hold (kumbhaka) the prana steadily, mirroring prior techniques, to amplify internal heat (agni).
रेचदिडया ततः	Exhale via Ida	Release slowly through the left nostril (ida nadi), completing the cycle with balanced vata regulation.

- Sit in a comfortable meditative pose *Siddhasana* or *Swastikasana* or *Vajrasana*.
- Contract the glottis, so that the passage of the throat is partially closed.
- Roll the tongue up and let the lower side of the tongue touch the upper palate.
- Breathe in slowly through the throat, making a slight hissing snoring sound.
- When the inhalation is complete, swallow the breath and perform *Jalandhara Bandha* (the chin lock).
- Retain the breath inside for as long as you are comfortable.
- Reseal the chin lock (*Jalandhara Bandha*) and exhale through both the nostrils.
- This is one round of *Ujjayi Pranayama*.

Ujjayi Pranayama offers an advanced variation incorporating bandhas alongside breath retention (*kumbhaka*) to deepen its effects. Practitioners should first master the foundational form without retention, then progress to integrating *kumbhaka*, and finally—once proficient—apply the bandhas during held breaths for optimal refinement and potency

Best Time for Doing Ujjayi Pranayama

- Early in the morning or evening time.
- Before doing meditation.
- Do Ujjayi Pranayama for 3 to 5 times.

Mechanisms of Action in Hypothyroidism

Several mechanisms may explain the beneficial effects of Ujjayi Pranayama on hypothyroidism:

1. Autonomic Regulation and Stress Reduction:

Ujjayi Pranayama stimulates the *vagus* nerve, promoting parasympathetic dominance and reducing the effects of chronic stress. Given that stress can exacerbate thyroid dysfunction through its impact on the hypothalamic-pituitary-thyroid (HPT) axis, reducing stress through Ujjayi may indirectly support thyroid regulation.

2. Improvement in Blood Circulation:

The gentle constriction at the throat during Ujjayi breathing is thought to enhance blood circulation to the thyroid region, potentially improving its function. This localized effect on the neck may help balance the *Kapha* and *Vata* doshas, which are often imbalanced in hypothyroid patients, as described in Ayurvedic texts.

3. Metabolic and Psychological Benefits:

Ujjayi Pranayama has been linked to reductions in BMI, improvements in lipid profiles, and enhanced respiratory function, all of which are crucial for patients with hypothyroidism. Additionally, the practice has been shown to alleviate anxiety and depression, symptoms commonly associated with thyroid dysfunction, by promoting a calm and focused mind.

Evidence from Clinical and Review Studies

Emerging research underscores Ujjayi Pranayama's potential to support thyroid health, with a 90-day trial revealing notable drops in TSH alongside elevated T3 and T4 levels in patients combining the practice with conventional hormone therapy. Additional case studies report substantial symptom relief and thyroid optimization, including instances where participants tapered or ceased synthetic hormone replacements under physician oversight. That said, these findings stem largely from modest, non-randomized investigations, underscoring the need for large-scale, rigorously designed randomized controlled trials to definitively clarify Ujjayi Pranayama's contributions to hypothyroidism care.

Conclusion

Ujjayi Pranayama, deeply embedded in ancient yogic traditions and aligned with Ayurvedic principles, emerges as a compelling adjunctive therapy for hypothyroidism, promoting dosha equilibrium, enhancing thyroid performance, and easing associated metabolic and psychological symptoms. Rooted in Ayurveda's holistic approach—which targets disease origins through Agni optimization, dosha balancing, seasonal detoxification, herbal interventions, Panchakarma, and tailored diet-lifestyle modifications—this accessible, non-invasive breathing practice offers a cost-effective pathway to comprehensive recovery, best pursued under expert yoga supervision.

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