IAMJ

INTERNATIONAL AYURVEDIC MEDICAL JOURNAL

Review Article ISSN: 2320-5091 Impact Factor: 6.719

METABOLISM IN HYPOTHYROIDISM: AN AYURVEDIC PERSPECTIVE

Vandana Sidar[1], S.D Khichariya[2], Aruna Ojha[3], Arunima Verma[4]

1 MD Scholar Department of kayachikitsa Shri NPA. Government Ayurveda College Raipur
2. Guide and Reader Department of Kayachikitsa Shri NPA Government Ayurveda Raipur.
3. Co-Guide, Professor and HOD Department of Kayachikitsa Government Ayurveda College Raipur
4. Co-Guide and Reader Department of Kayachikitsa Government Ayurveda College Raipur.

Corresponding Author: vs170530@gmail.com

https://doi.org/10.46607/iamj11p9032025

(Published Online: March 2025)

Article Received: 11/02/2024 - **Peer Reviewed:** 28/02/2025 - **Accepted for Publication:** 13/03/2025.

ABSTRACT

Hypothyroidism is a condition marked by a reduced metabolic rate and a constellation of clinical features, including fatigue, weight gain, and cold intolerance. Modern medicine attributes these symptoms to deficient thyroid hormone production, whereas Ayurveda interprets the condition through the lens of *Agni* (digestive/metabolic fire), *Ama* (toxins), and *dosha* imbalances, especially the predominance of *Kapha*. This article uses a literature review method to integrate modern biomedical insights with Ayurvedic concepts, offering a holistic perspective on metabolic dysregulation in hypothyroidism. It is a clinical syndrome resulting from the insufficient production of thyroid hormones, which is a common endocrinal disorder seen all over the world. The prevalence of hypothyroidism is 2-5% of the global population. It is more prevalent among females. It leads to a long life of pathological events and makes the affected person remain dependent on hormone therapy. Thus, there is an increasing demand to understand the disease given Ayurveda and to establish the management through the Ayurvedic system of medicine. Ayurveda explains hypothyroidism as an abnormality of Jatharagni and Dhatwagni along with an abnormality of *Kapha* and *Vata Dosha* as well as *Rasavaha, Raktavaha, Medovaha, Shukravaha and Manovaha Srotas.Dosha-dushyasamoorchhana* in various *Dhatus* results in the systemic-manifestation of the disease. Thus, the treatment line involves *Deepana, Pachana*, *Srotoshodhana* and *Kapha Vata Shamana.*

INTRODUCTION

Hypothyroidism is a common endocrine disorder characterised by a slowdown in metabolic processes due to inadequate thyroid hormone production. Clinically, patients experience reduced energy levels, weight gain, and impaired thermoregulation. Modern science explains these phenomena through disrupted cellular metabolism and altered lipid and carbohydrate processing. In contrast, Ayurveda, an ancient system of medicine, conceptualizes metabolism in terms of *Agni* (the digestive and transformative fire), *Ama* (undigested toxins), and *dosha* balance. In this framework, a weakened *Agni* and resultant *Ama* accumulation, coupled with an aggravated *Kapha dosha*, are thought to underpin the sluggish metabolism observed in hypothyroidism. This article bridges these paradigms by reviewing relevant literature and articulating an integrative model. The Thyroid gland is considered one of the most essential organs of the endocrine system as it regulates nearly all bodily functions, including metabolic, respiratory, cardiovascular, digestive, nervous and reproductive systems either directly or indirectly. Hypothyroidism poses a significant health challenge in both the developing and the developed world. There is a 2 - 5 % prevalence of hypothyroidism in the developed world. The prevalence of hypothyroidism in urban India is 10.95%.

The disease hypothyroidism causes complications like dyslipidemia, which is a significant risk factor for many serious illnesses, and thyroidism itself, in its peak, can result in a threatening condition. Thus, it leads to a long life of pathological events and makes the affected person remain dependent on hormonal therapy. Hence, there is an increasing demand to understand the disease given Ayurveda. This review is carried out to understand the disease Hypothyroidism in Ayurvedic principles and to formulate the Ayurvedic management protocol. The presentation of Hypothyroidism is reviewed critically by studying the pathogenesis and symptoms from various research databases and classical texts. The symptoms are studied in terms of imbalance of *Dosha*, *Srotas*, *Agni*, etc, and an effort is made to obtain a standard possible *Samprapti* of hypothyroidism and line of treatment as per Ayurvedic principles.

Methods:

A literature review explored conventional biomedical sources and classical Ayurvedic texts to collate perspectives on metabolism in hypothyroidism.

Ayurvedic concepts such as *Agni*, *Ama*, and *doshas* were analysed in relation to metabolic functions.

In parallel, modern research on thyroid hormone regulation of metabolism, lipid metabolism, and glycemic control was reviewed. This integrative approach allowed for a discussion that acknowledges metabolic imbalance's biochemical and holistic dimensions. The search strategy included databases such as PubMed for biomedical studies, authoritative Ayurvedic resources, and journals for classical and contemporary interpretations.

Results:

Modern Biomedical Findings

Modern research on hypothyroidism demonstrates that reduced thyroid hormone levels lead to:

Decreased Basal Metabolic Rate: Slower metabolism and lower energy expenditure, often resulting in weight gain and dyslipidemia.

Altered Lipid Metabolism: An imbalance in lipid profiles, including increased cholesterol levels and impaired fatty acid oxidation.

Impaired Carbohydrate Processing: Reduced glucose utilization and a tendency toward insulin resistance form metabolic byproducts.

Āyurvedic Interprétations :

Ayurvedic texts and clinical observations interpret these metabolic disturbances as follows:

Weakened *Agni*: In hypothyroidism, a diminished *Agni* leads to inefficient digestion and assimilation, mirroring the low metabolic rate observed in modern studies.

Ama Accumulation: Agni's failure to properly digest food results in the formation of *Ama*, which is considered toxic and obstructive, leading to systemic sluggishness.

Dosha Imbalance Predominance of *Kapha*: The clinical features of hypothyroidism (e.g., heaviness, cold intolerance) are likened to an excess of *Kapha* dosha. *Kapha's* inherent qualities of coldness and heaviness contribute to the impaired metabolic state.

Synthesis of Perspectives

Both modern and Ayurvedic frameworks converge on the concept that metabolism is compromised in hypothyroidism. While biomedicine attributes this to thyroid hormone deficiency, Ayurveda emphasises the importance of restoring Agni and balancing *Kapha*. Ayurvedic interventions such as dietary modification (favouring warm, light foods and *Kapha*-pacifying spices), herbal remedies (e.g., Ashwagandha, Guggulu, and Trikatu), and lifestyle practices (yoga and meditation) are proposed to counteract *Ama* and revitalise *Agni*.

DISCUSSION

The integrative model suggests that hypothyroidism can be viewed through a dual lens:

Biomedical Perspective: Thyroid hormones are central to maintaining cellular metabolic functions. Their deficiency disrupts normal biochemical pathways, leading to lipid dysregulation and impaired glucose metabolism.

Ayurvedic Perspective: The clinical manifestations of hypothyroidism correlate with a state of *Agni mandya* and excessive *Kapha*. The accumulation of *Ama* further impedes metabolic processes.

Combining these perspectives may offer complementary management strategies. For instance, while thyroid hormone replacement remains the cornerstone of biomedical treatment, Ayurvedic therapies aimed at stimulating *Agni* and reducing *Ama* might improve overall metabolic efficiency and quality of life. Furthermore, lifestyle interventions such as regular physical activity, yoga, and meditation could serve as adjunctive measures to ameliorate the metabolic slowdown.

Future research might focus on clinical trials that evaluate integrative protocols combining conventional hormone replacement with Ayurvedic therapies. Such studies could provide empirical evidence on the efficacy and safety of a holistic approach, potentially leading to more personalised and comprehensive management strategies for hypothyroidism.

CONCLUSION

Metabolism in hypothyroidism represents a complex interplay of hormonal, biochemical, and energetic factors. Although the disease Hypothyroidism is not mentioned in Ayurvedic texts, the condition is a manifestation of diminished Agni, resultant Ama accumulation, and Kapha imbalance. Due to various hetus, there is diminished Agni at the Dhatu level, and sanga in srotas impairs dhatus and dhatu functions.

Hypothyroidism is a kapha vata samsargaja condition. The systemic manifestations are due to dosha-dushya sammurchana at various Dhatus.

Integrating modern biomedical insights with Ayurvedic principles provides a holistic framework that explains the metabolic disturbances and offers potential complementary interventions. Collaborative efforts between conventional practitioners and Ayurvedic experts may pave the way for novel integrative strategies, ultimately benefiting patient outcomes.

REFERENCES

1. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3743364
2. Kadlaskar B. B, Lakshmi Ravindranath. Hypothyroidism In Ayurveda -A conceptual study AYUSHDHARA 2015 2(4)- 246-250.
3. Charaka Samhita, Chakrapanidutta commentary (Ayurveda Dipika), Commented by Yadavji Trivikramji Acharya, Chaukhamba Orientalia, Varanasi, (2015), Sutrasthana- 18/44-45.
4. Acharya Vagbhata, Ashtanga Hridayam, with Vidyotini Hindi commentary, Kaviraj Atrideva Gupta, edited by Vd. Yadunandana Upadhyaya, Chaukhamba Sanskrit sansthana (1993), Nidana sthana – 15/46, Pg.283.
5. Charaka, Samhita, Chakrapanidatta commentary (Ayurved Dipika), Commented by Yadavji Trivikramji Acharya, Chaukhamba Orientalia, Varanasi, (2015), Chikitsasthan- 28/223, Pg.626
6. Dr. Brahmananda Tripathi, Charaka Samhita, Chaukhamba Surbharati Prakashan Varanasi Edition 2013, volume 2 Chikitsa Sthana Chapter 15, verse no.03-04, Pg.550.

7. K Sembulingam and Prema Sembulingam, Essentials of medical physiology, Jaypee brothers' medical publishers (p) 2005, chapter no.67, pg no.316,317,318.
8. C. Guyton and Hall, Textbook of Medical Physiology, published by Elsevier 12th edition, Reprinted 2011, chapter 76, Pg.917
9. Prof. Banwari Lal Gaur Astangahrdayam by Vagbhata Chaukhambha Orientalia First Edition 2007 sutra sthan chapter 11, verse no.4 Pg.192.
10. K Sembulingam and Prema Sembulingam, Essentials of medical physiology, Jaypee brothers' medical publishers (p) LTD, 2005, chapter no.67, pg no.316,317,318.
11. C. Guyton and Hall, Textbook of Medical Physiology, published by Elsevier 12th edition, Reprinted 2011, chapter 76, Pg.917
12. Acharya Vagbhata, Ashtanga Hridayam, with Vidyotini hindi commentary.

Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Vandana Sidar et al: Metabolism in Hypothyroidism: An Ayurvedic Perspective. International Ayurvedic Medical Journal {online} 2025 {cited March 2025}