

ROLE OF NIDRA IN MAINTAINING AGNI, OJAS AND VYADHIKSHAMATVA: AN INTEGRATIVE REVIEW OF AYURVEDIC AND CONTEMPORARY PERSPECTIVES

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ABSTRACT

Background: *Nidra* (sleep), one of the *Trayopastambha* (three pillars of life) in *Ayurveda*, is essential for maintaining health and physiological balance. Classical *Ayurvedic* texts associate proper *Nidra* with the maintenance of *Agni*, *Ojas*, and *Vyadhiikshamatva*, while contemporary research highlights the role of sleep in metabolic regulation and immune function. **Objective:** To review the role of *nidra* in maintaining *agni*, *ojas* and *Vyadhiikshamatva* from *Ayurvedic* and contemporary perspectives. **Materials and Methods:** A narrative review was conducted using classical *Ayurvedic* texts and relevant scientific literature retrieved from PubMed, Google Scholar, and Scopus. Evidence related to sleep physiology, metabolism, and immunity was analyzed in the context of *Ayurvedic* principles. **Results:** Appropriate *Nidra* supports physiological equilibrium, promotes normal *Agni*, facilitates proper *Dhatu* nourishment, and helps preserve *Ojas*, thereby supporting *Vyadhiikshamatva*. Contemporary evidence indicates that adequate sleep maintains metabolic and hormonal homeostasis and immune function, whereas sleep

deprivation impairs metabolism and increases susceptibility to disease. These findings conceptually parallel the *Ayurvedic* understanding of disturbed *Agni* leading to impaired tissue nourishment and reduced disease resistance. **Conclusion:** Adequate and timely *Nidra* is fundamental for maintaining metabolic health, tissue integrity, and immunity. Further well-designed studies are required to validate the relationship between *Nidra*, *Agni*, *Ojas*, and *Vyadhikshamatva*.

KEYWORDS: *Nidra*, *Agni*, *Ojas*, *Vyadhikshamatva*, *Ayurveda*, Sleep, Metabolism, Immunity.

INTRODUCTION

Sleep deprivation and sleep fragmentation have emerged as important public health concerns worldwide. Evidence suggests that average sleep duration has declined substantially over the past century, from approximately 9 hours to nearly 6.8 hours per night, while nearly 30% of adults report sleeping for less than 6 hours each night. The increasing demands of a 24-hour society, shift work, and changing lifestyle patterns have challenged the body's ability to maintain metabolic and hormonal homeostasis. Consequently, inadequate sleep has been increasingly recognized as a potential contributor to the rising prevalence of obesity, type 2 diabetes mellitus, and other metabolic disorders.^[1]

Recognizing its indispensable role in health maintenance, *Ayurveda* describes *Nidra* as one of the *Trayopastambha* (three pillars of life), along with *Ahara* and *Brahmacarya*. According to *Charaka Samhita*, *Nidra* determines *Sukha* (well-being and happiness) and *Dukha* (distress and suffering), *Pushti* (proper nourishment and optimal nutritional status) and *Karshya* (emaciation or undernutrition), *Bala* (physical strength) and *Abala* (weakness or reduced functional capacity), *Vrushata* (virility and reproductive competence) and *Kleebata* (sexual dysfunction or impotence), *Gyana* (knowledge and cognitive function) and *Agyana* (ignorance and cognitive impairment), as well as *Jivita* (life and longevity). Thus, adequate *Nidra* is regarded as an indispensable determinant of physical, mental, and reproductive health, ultimately influencing longevity and overall well-being.^[2]

Among the various physiological principles responsible for maintaining health, *Agni* occupies a central position in *Ayurveda*. *Acharya Charaka* further states that the cessation of *Agni* results in death, whereas the presence of *Samagni* is the hallmark of health, longevity, and well-being. Conversely, impairment of *Agni* disturbs the body's metabolic processes, leading to disease. Therefore, *Agni* is regarded as the very foundation (*Mula*) of life and health.^[3]

In *Ayurveda*, the proper functioning of *Agni* ensures the digestion and transformation of food into nutrients that nourish the *Dhatus*. Well-nourished *Dhatus* ultimately give rise to *Ojas*, which is regarded as the essence of all bodily tissues and the basis of strength, vitality, and resistance against disease.^[4] *Vyadhikṣamatva*, the inherent capacity of the body to resist the onset and progression of diseases, is closely associated with the integrity of *Ojas*. Thus, the maintenance of *Agni* is fundamental not only for metabolism and tissue nourishment but also for preserving *Ojas* and supporting *Vyadhikṣamatva*.^[5]

Therefore, the present review aims to explore the role of *Nidra* in maintaining *Agni*, preserving *Ojas*, and supporting *Vyadhikṣamatva* by integrating classical *Ayurvedic* concepts with contemporary scientific evidence.

LITERARY REVIEW

The present review was compiled using classical *Ayurvedic* texts and relevant contemporary scientific literature retrieved from electronic databases, including PubMed, Google Scholar, and Scopus.

PHYSIOLOGY OF NIDRA: AYURVEDIC CONCEPTS AND CONTEMPORARY UNDERSTANDING

According to *Acharya Charaka*, physiological sleep (*Nidra*) occurs when the mind (*Mana*), along with the sensory and motor organs (*Indriyas*), becomes fatigued and withdraws from their respective objects. This functional disengagement reduces sensory perception and voluntary activity, resulting in the natural onset of sleep. Thus, *Ayurveda* considers *Nidra* as a physiological process that allows the body and mind to recover from daily exertion and restore normal functional capacity.^[6]

From a contemporary perspective, sleep is a complex physiological process rather than a passive state of rest. It is characterized by a reversible state of reduced consciousness, during which the brain remains responsive primarily to internal stimuli while carrying out essential restorative functions. Although the exact biological purpose of sleep has not been fully elucidated, several theories, including the inactivity, energy conservation, restorative, and brain plasticity theories, have been proposed to explain its significance. Collectively, these theories suggest that sleep is essential for energy conservation, tissue repair, metabolic regulation, neural plasticity, and the maintenance of overall physiological homeostasis.^[7]

AGNI: THE FUNDAMENTAL CONCEPT OF METABOLISM IN AYURVEDA

Importance of *Jatharagni* (*Pachakagni*)

Jatharagni, also referred to as *Pachakagni*, is regarded as the principal *Agni* in *Ayurveda* and forms the basis for the functioning of the remaining twelve *Agnis*. According to *Acharya Charaka*, the food consumed by an individual nourishes the body, *Dhatus* (body tissues), *Ojas*, *Bala* (strength), *Varna* (complexion), and other vital components only after proper digestion by *Jatharagni*. Impairment of *Jatharagni* leads to defective formation of *Ahara Rasa* and subsequent *Dhatus*, resulting in inadequate tissue nourishment. Since the proper functioning of the remaining *Agnis* depends upon *Pachakagni*, *Ayurveda* emphasizes its protection through appropriate dietary practices, as food and drink serve as its fuel. Thus, the maintenance of healthy *Jatharagni* is essential for sustaining *Ayu* (longevity), *Bala* (strength), and overall physiological homeostasis.^[8,9]

CONTEMPORARY EVIDENCE ON SLEEP AND METABOLIC REGULATION

The body's metabolism, particularly fat metabolism, is influenced by circadian clocks located in the liver, adipose tissue, and skeletal muscle. These biological clocks ensure that the liver is prepared to digest and metabolize dietary fats at appropriate times. However, consuming food at unusual times may alter the normal metabolism of fats.

Studies have shown that inadequate or poor-quality sleep is associated with increased levels of appetite-regulating hormones, including leptin and ghrelin, reduced insulin sensitivity, increased consumption of fatty, sweet, and salty foods, decreased physical activity, and the development of metabolic syndrome. Together, these changes contribute to an increased risk of overweight and obesity.^[10]

OJAS AND VYADHIKSHAMATVA: FUNDAMENTAL CONCEPTS IN AYURVEDA

In *Ayurveda*, *Ojas* is regarded as the essence of all the *Dhatus* and is considered the basis of *Bala* (strength), vitality, and overall health. The preservation of *Ojas* is essential for maintaining normal physiological functions and resistance to disease.^[11] *Vyadhikshamatva*, as described by *Acharya Chakrapani*, refers to the body's inherent capacity to resist the onset and progression of disease. Thus, *Ojas* and *Vyadhikshamatva* together represent the *Ayurvedic* concepts of vitality and disease resistance, forming the foundation for the maintenance of health.

DISCUSSION

The findings of the present review indicate that adequate sleep is essential for maintaining physiological homeostasis from both *Ayurvedic* and contemporary perspectives. While *Ayurveda* emphasizes the importance of appropriate and timely *Nidra* for sustaining normal bodily functions, modern research similarly recognizes sleep as a fundamental biological process involved in metabolic regulation, tissue restoration, neuroendocrine balance, and immune function. Thus, despite differences in their theoretical frameworks, both systems acknowledge sleep as an indispensable determinant of health.

Ayurveda emphasizes that appropriate sleep is essential for maintaining physiological equilibrium, whereas untimely, excessive, or inadequate sleep disturbs normal bodily functions. Classical texts specifically mention that inappropriate sleeping habits like daytime sleep (*Divasvapna*), except under prescribed conditions, aggravates *Kapha*. From an *Ayurvedic* perspective, *Kapha* aggravation may lead to *Mandagni*, resulting in improper digestion and transformation of *Ahara* into *Ahara Rasa*. Inadequately formed *Ahara Rasa* may subsequently impair the sequential nourishment of the *Dhatus*, leading to suboptimal tissue formation. Although classical *Ayurvedic* texts do not explicitly describe a direct relationship between *Nidra* and *Agni*, proper sleep may be interpreted as an important factor in maintaining Doshic equilibrium and supporting normal *Agni*.

This interpretation is further supported by the *Ayurvedic* concept of *Agni*. *Acharya Charaka* describes *Agni* as the fundamental factor responsible for the proper digestion and transformation of *Ahara* into *Ahara Rasa*, which subsequently nourishes the *Dhatus* in a sequential manner. Thus, *Samagni* is essential for maintaining proper *Dhatu-poshana* and overall physiological homeostasis. Likewise, *Acharya Charaka* states that appropriate *Nidra* promotes *Dhatu Samyata Pushti* and *Bala*, indicating its vital role in preserving the structural and functional integrity of the *Dhatus*. Since both *Samagni* and *Yukta Nidra* ultimately contribute to healthy *Dhatu* formation and maintenance, a close conceptual relationship between *Nidra* and *Agni* may be inferred. In this context, *Agni* provides the metabolic basis for *Dhatu* nourishment, whereas *Nidra* creates the physiological environment necessary for optimal tissue restoration and equilibrium. Consequently, adequate *Nidra* may indirectly support the maintenance of *Samagni*, thereby facilitating proper *Dhatu-Samya*, preservation of *Ojas*, and enhancement of *Vyadhikshamatva*. Furthermore, *Samagni* ensures proper digestion and metabolism, leading to the formation of healthy *Dhatus*, whereas *Vishamagni*,

Tikshnagni, and *Mandagni* impair the digestion and transformation of food, resulting in defective tissue nourishment. The beneficial effects of *Yukta Nidra* and the harmful consequences of *Atiyoga*, *Hinayoga*, and *Mithyayoga* of *Nidra* further support the view that appropriate sleep is essential for maintaining the physiological conditions necessary for optimal *Agni* and tissue metabolism.

Since *Ojas* is considered the essence of well-nourished *Dhatus* and the substratum of *Vyadhikshamatva*, proper *Dhatu-poshana* ultimately contributes to the preservation of *Ojas* and disease resistance. Conversely, defective *Dhatu* nourishment may compromise *Ojas* and reduce *Vyadhikshamatva*, thereby increasing susceptibility to disease. Thus, by supporting physiological balance, *Agni*, and *Dhatu* nourishment, proper *Nidra* may conceptually contribute to the preservation of *Ojas* and enhancement of *Vyadhikshamatva*.

A comparable sequence can be appreciated from the contemporary perspective, where sleep deprivation and circadian rhythm disturbances have been shown to impair metabolic homeostasis through reduced insulin sensitivity, dysregulation of appetite-related hormones such as leptin and ghrelin, altered nutrient metabolism, and increased preference for energy-dense foods. Persistent metabolic dysregulation is associated with obesity, metabolic syndrome, and impaired immune responses. These findings indicate that disturbed sleep adversely affects both metabolic and immune functions, which conceptually resemble the *Ayurvedic* sequence of impaired *Agni*, defective *Dhatu* nourishment, diminished *Ojas*, and reduced *Vyadhikshamatva*.

Overall, the present review indicates that adequate and timely *Nidra* is fundamental for maintaining physiological homeostasis and promoting health. Integrating *Ayurvedic* concepts with contemporary scientific evidence provides a comprehensive understanding of the role of *Nidra* in preserving *Agni*, *Ojas*, and *Vyadhikshamatva*.

CONCLUSION

Nidra plays a vital role in maintaining health in *Ayurveda* by supporting physiological balance and overall well-being. The present review suggests that adequate and timely *Nidra* may contribute to the maintenance of *Agni*, thereby facilitating proper digestion, *Dhatu* nourishment, and the preservation of *Ojas*, which ultimately supports *Vyadhikshamatva*. Contemporary scientific evidence demonstrating the influence of sleep on metabolic regulation and immune function conceptually complements these classical *Ayurvedic*

principles. Although direct mechanistic correlations between *Ayurvedic* concepts and modern biomedical science require further validation, integrating these perspectives provides a holistic understanding of the role of sleep in health maintenance and disease prevention. Further well-designed observational, survey-based, and clinical studies using validated assessment tools are warranted to explore the relationship between *Nidra*, *Agni*, *Ojas*, and *Vyadhikshamatva* and to strengthen the scientific evidence supporting these classical concepts.

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