

Review Article

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## PHYSIOLOGICAL BASIS OF NIDRA AND ITS RELEVANCE IN MODERN LIFESTYLE DISORDERS

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### ABSTRACT

**Background:** *Nidra* is one of the three pillars of life described in *Ayurveda*, along with *Ahara* and *Brahmacharya*. Proper *Nidra* is essential for maintaining normal physiological functions of the body and mind. In the present era, rapid lifestyle changes, night-shift work, excessive screen exposure, stress, and irregular daily routines have significantly disturbed natural sleep patterns, leading to a rise in modern lifestyle disorders. **Aim:** To study the physiological basis of *Nidra* as described in *Ayurveda* and to explore its relevance and correlation with modern lifestyle disorders. **Objectives:** To explain the concept and physiological mechanism of *Nidra* according to *Ayurveda*. To understand the role of *Dosha*, *Manas*, and *Indriya* in the regulation of sleep. To correlate *Nidra Vaishamy* with common modern lifestyle disorders. **Materials and Methods:** A conceptual and literary review was carried out using classical *Ayurvedic* texts such as *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya*, along with relevant modern physiology and sleep science literature. Descriptive analysis was used to correlate classical concepts with modern understanding. **Results:** Physiologically, *Nidra* occurs due to the dominance of *Kapha Dosha*, fatigue of *Indriya*, withdrawal of *Manas*, and nourishment of the nervous system. Disturbance in these factors leads to *Nidra Vaishamy*,

12

manifesting as insufficient or excessive sleep. Such disturbances are closely associated with lifestyle disorders like obesity, diabetes mellitus, hypertension, anxiety, depression, and cardiovascular diseases. **Conclusion:** Proper *Nidra* is fundamental for physiological balance, mental well-being, and disease prevention. Understanding the *Ayurvedic* physiology of *Nidra* provides valuable insights into managing and preventing modern lifestyle disorders through simple measures like regulated sleep timing, healthy routines, and *Swasthavritta* practices.

**Keywords:** *Nidra*, *Nidra Vaishamya*, Lifestyle disorders, *Dosha*, Sleep physiology, *Swasthavritta*

## INTRODUCTION

*Nidra* is considered one of the three fundamental pillars of life in *Ayurveda*, along with *Ahara* and *Brahmacharya*. It is described as a natural physiological state that restores physical strength, mental clarity, and emotional stability. Classical texts clearly mention that proper *Nidra* promotes *Sukha*, *Bala*, *Pushti*, and *Jnana*, while disturbed or inadequate sleep becomes a root cause of multiple diseases. Thus, *Nidra* is not merely a passive state of rest but an active biological process essential for sustaining life.<sup>1</sup>

From an *Ayurvedic* physiological perspective, *Nidra* occurs when *Manas* withdraws from sensory objects and the *Indriya* become fatigued, under the predominance of *Kapha Dosha*. This state allows nourishment of *Dhatu*, stabilization of *Dosha*, and restoration of normal bodily rhythms. Classical Acharyas have also emphasized that the quality, timing, and duration of *Nidra* play a crucial role in maintaining equilibrium within the body. Any disturbance in these factors leads to *Nidra Vaishamya*, which is considered a pathological condition.<sup>2</sup>

In the modern era, lifestyle patterns have undergone significant changes due to urbanization, technological advancement, and occupational demands. Late-night work, excessive screen exposure, irregular sleep schedules, stress, and lack of physical activity have disrupted the natural circadian rhythm. These factors directly interfere with the physiological process of sleep, resulting in chronic sleep deprivation or poor-quality sleep. Such disturbances are increasingly observed across all age groups and are no longer limited to specific professions.<sup>3</sup>

The growing prevalence of modern lifestyle disorders such as obesity, diabetes mellitus, hypertension, cardiovascular diseases, anxiety, and depression has drawn attention to the

role of sleep in health and disease. Scientific research now supports the view that sleep imbalance adversely affects metabolic, hormonal, immune, and neurological functions. In this context, understanding the physiological basis of *Nidra* through the lens of *Ayurveda* offers a holistic and preventive approach. Integrating classical concepts of *Nidra* with modern sleep science can provide practical strategies for improving health and preventing lifestyle-related disorders.<sup>4</sup>

## AIM AND OBJECTIVES

### Aim:

To study the physiological basis of *Nidra* as described in *Ayurveda* and to explore its relevance and correlation with modern lifestyle disorders.

### Objectives:

1. To explain the concept and physiological mechanism of *Nidra* according to *Ayurveda*.
2. To understand the role of *Dosha*, *Manas*, and *Indriya* in the regulation of sleep.
3. To correlate *Nidra Vaishamya* with common modern lifestyle disorders.

## Materials and Methods

The present study was conducted as a conceptual and literary review. Classical *Ayurvedic* texts including *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya* were thoroughly reviewed to collect references related to the concept, physiology, and regulation of *Nidra*. Commentaries of classical Acharyas were also consulted for better understanding of the textual interpretations. Relevant modern literature on sleep physiology and lifestyle disorders was reviewed from standard physiology textbooks and published research articles. Collected data were systematically analyzed and correlated to explain the physiological basis of *Nidra* and its relevance in the development of modern lifestyle disorders.

## CONCEPTUAL STUDY

### *Nidra*

*Nidra* is described in *Ayurveda* as a natural and essential physiological state that supports both body and mind. It is counted among the *Trayopastambha* along with *Ahara* and *Brahmacharya*, highlighting its equal importance in maintaining life. Classical Acharyas explain that *Nidra* occurs when *Manas* withdraws from sensory objects and the *Indriya*

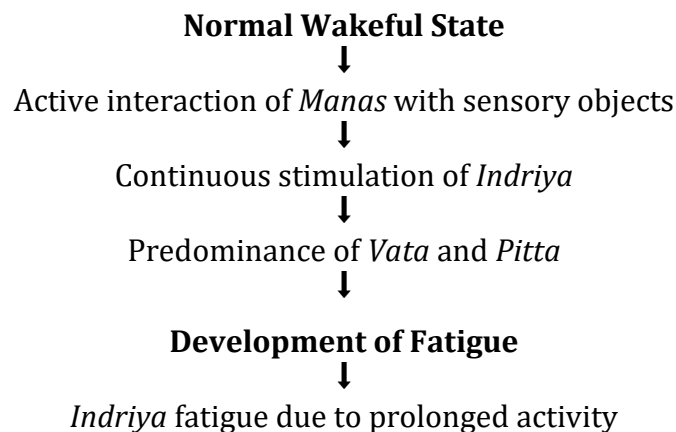
become fatigued, allowing the body to enter a state of rest and repair. This state is not considered inactivity but a purposeful biological process necessary for restoration and balance.<sup>5</sup>

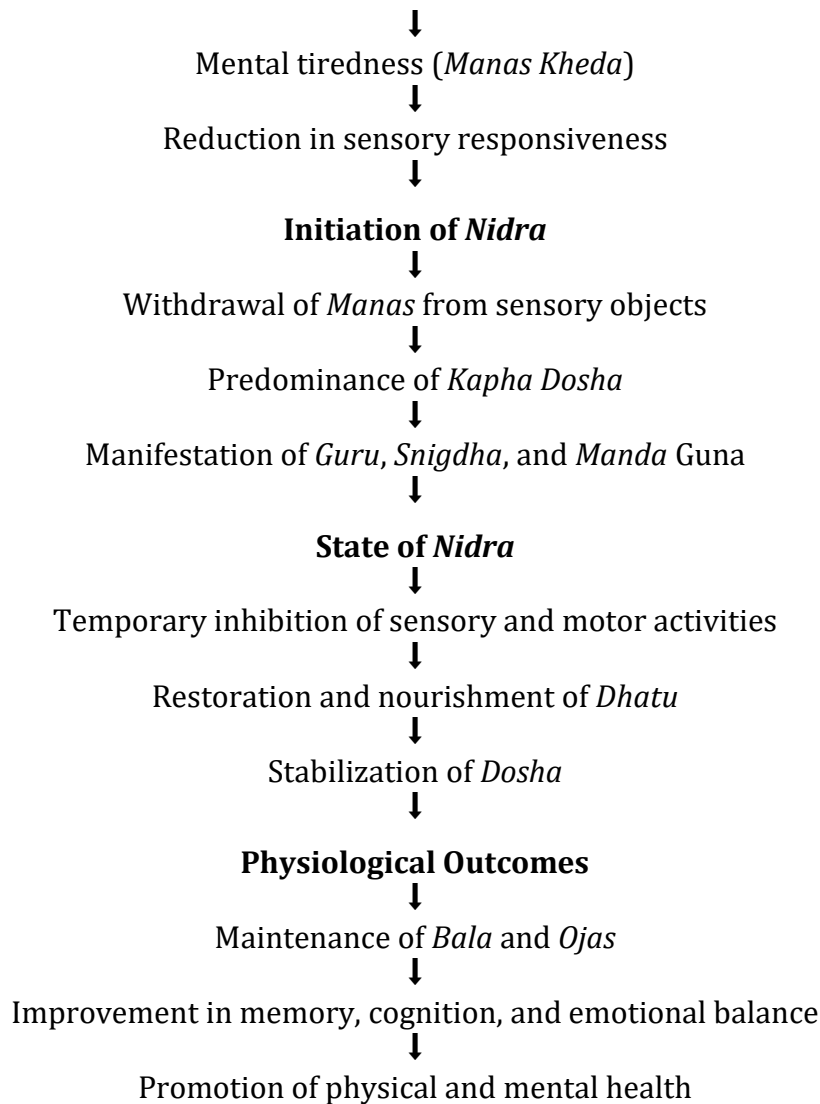
According to *Ayurvedic* texts, the predominance of *Kapha Dosha* plays a central role in the initiation of *Nidra*. The qualities of *Kapha* such as *Guru*, *Snigdha*, and *Manda* facilitate heaviness, relaxation, and stability, which promote sleep. Along with *Kapha*, the calm state of *Manas* and reduced sensory engagement are essential factors. Thus, *Nidra* is the result of coordinated functioning of *Dosha*, *Manas*, and *Indriya*, rather than a single isolated mechanism.<sup>6</sup>

Classical literature also describes different types of *Nidra* based on causative factors. *Kalaja Nidra* is considered natural and healthy, occurring at night in accordance with the biological rhythm. Other forms such as *Kapha Prabhavaja Nidra*, *Chitta Kheda Prabhavaja Nidra*, and *Vyadhi Anuvartini Nidra* arise due to *Dosha* dominance, mental fatigue, or disease conditions. Among these, only *Kalaja Nidra* is regarded as beneficial, while others may indicate imbalance or pathology.<sup>7</sup>

Disturbance in the normal pattern of *Nidra* leads to *Nidra Vaishamyā*, which includes conditions like reduced sleep, excessive sleep, or irregular sleep. Classical texts clearly state that improper *Nidra* results in *Daurbalya*, *Agnimandya*, impaired cognition, and susceptibility to diseases. Therefore, the concept of *Nidra* in *Ayurveda* is deeply connected with health preservation, disease prevention, and maintenance of physiological harmony. Understanding this conceptual framework provides a strong foundation for correlating *Nidra* with modern sleep disorders and lifestyle-related diseases.<sup>8</sup>

### **Physiological Basis of *Nidra***





### ***Nidra* in Modern Lifestyle Disorders**

In the present era, disturbance of *Nidra* has become a common health problem due to irregular daily routines, late-night work, excessive use of digital devices, mental stress, and reduced physical activity. These factors interfere with the natural physiological process of sleep, leading to *Nidra Vaishamya*. According to *Ayurveda*, improper *Nidra* directly vitiates *Vata* and *Pitta*, disturbs *Manas*, and weakens *Agni*, thereby creating a favorable ground for the development of lifestyle disorders.<sup>9</sup>

In metabolic disorders such as obesity and diabetes mellitus, disturbed *Nidra* plays a significant role by impairing glucose metabolism and increasing appetite. Sleep deprivation leads to hormonal imbalance, increased cravings, and reduced insulin sensitivity, which can be correlated with *Agnimandya* and *Kapha Dushti* described in *Ayurveda*. Excessive or

untimely sleep further aggravates *Kapha*, contributing to weight gain, lethargy, and metabolic slowdown.<sup>10</sup>

Cardiovascular disorders such as hypertension and coronary artery disease are also strongly associated with inadequate or poor-quality sleep. Chronic sleep loss increases sympathetic activity, stress hormone levels, and vascular strain, which can be explained in *Ayurvedic* terms as *Vata Prakopa* and depletion of *Ojas*. Persistent disturbance of *Nidra* thus affects both physical strength and mental stability, increasing the risk of long-term cardiac complications.<sup>11</sup>

Mental health disorders including anxiety, depression, irritability, and impaired concentration show a close relationship with disturbed *Nidra*. Insufficient sleep leads to restlessness, emotional instability, and cognitive dysfunction, reflecting *Manasika Dosha* imbalance. Therefore, restoration of healthy *Nidra* through regulated sleep habits, stress management, and *Swasthavritta* practices plays a crucial preventive and therapeutic role in controlling modern lifestyle disorders.<sup>12</sup>

**Table No.1- *Nidra* in Modern Lifestyle Disorders**

<b>Disturbance of <i>Nidra</i></b>	<b>Ayurvedic Pathophysiology</b>	<b>Modern Lifestyle Disorder</b>	<b>Physiological Impact</b>
Reduced or irregular sleep	<i>Vata</i> and <i>Pitta Prakopa</i> , <i>Manas Kheda</i>	Anxiety, stress disorders	Restlessness, irritability, impaired concentration
Chronic sleep deprivation	<i>Agnimandya</i> , <i>Ojas Kshaya</i>	Diabetes mellitus	Impaired glucose metabolism, insulin resistance
Excessive day sleep	<i>Kapha Dushti</i> , <i>Medo Dhatu Vridhhi</i>	Obesity	Weight gain, lethargy, metabolic slowdown
Poor-quality sleep	<i>Manasika Dosha</i> imbalance	Depression	Low mood, lack of interest, cognitive dysfunction
Disturbed night sleep	<i>Vata Prakopa</i> , <i>Rasa Dhatu Dushti</i>	Hypertension	Increased sympathetic activity, raised blood pressure
Prolonged <i>Nidra Vaishamya</i>	<i>Dosha</i> imbalance, <i>Dhatu Kshaya</i>	Cardiovascular disorders	Reduced endurance, increased disease susceptibility

## Results and Findings

- Proper *Nidra* was found to be essential for maintaining normal physiological balance of *Dosha*, *Dhatu*, and *Manas*.
- Disturbance of *Nidra* (*Nidra Vaishamya*) was observed to primarily cause aggravation of *Vata* and *Pitta*, leading to functional and metabolic imbalance.
- Inadequate and irregular sleep showed a close association with lifestyle disorders such as obesity, diabetes mellitus, hypertension, and cardiovascular diseases.
- Sleep deprivation resulted in *Agnimandya* and *Ojas Kshaya*, contributing to reduced immunity, fatigue, and poor disease resistance.
- Excessive or untimely sleep was found to aggravate *Kapha*, leading to *Medo Dhatu Vridhhi*, lethargy, and metabolic slowdown.
- Disturbed *Nidra* significantly affected mental health, manifesting as anxiety, depression, irritability, impaired memory, and reduced cognitive efficiency.
- Restoration of physiological *Nidra* through regulated sleep habits and *Swasthavritta* measures showed potential in prevention and management of modern lifestyle disorders.

## Conclusion

*Nidra* is a vital physiological process and an essential pillar of health that maintains the equilibrium of *Dosha*, *Dhatu*, *Manas*, and *Agni*. The present conceptual study establishes that proper and timely *Nidra* supports physical strength, metabolic stability, mental clarity, and preservation of *Ojas*, whereas disturbed sleep (*Nidra Vaishamya*) contributes significantly to the development of modern lifestyle disorders such as obesity, diabetes mellitus, hypertension, cardiovascular diseases, anxiety, and depression. Understanding the physiological basis of *Nidra* from an *Ayurvedic* perspective and correlating it with modern sleep science highlights the importance of regulated sleep habits and *Swasthavritta* practices as simple, effective, and holistic measures for prevention and management of lifestyle-related disorders.

## CONFLICT OF INTEREST -NIL

## SOURCE OF SUPPORT -NONE

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