

## A Critical Analysis On Nidranash W.S.R. Insomnia

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### ABSTRACT

*Ahara (diet), Nidra (sleep), and Brahmacharya (celibacy) are key pillars in Ayurveda, significantly influencing the prevention of major diseases affecting both physical and mental well-being. Among these, Nidra holds special prominence in the modern era as an essential component of a healthy lifestyle. Ayurveda defines Nidra as a natural physiological state of rest, crucial for the rejuvenation of the body (Sharira), mind (Mana), and sense organs (Indriya). The absence of proper sleep can lead to conditions such as Anidra (insomnia), which has been associated with the development of various diseases. Over time, insufficient sleep may progress into chronic disorders such as secondary or tertiary insomnia. **Aim:** the Ayurvedic concept of Nidra and highlight its impact on human health. **Materials and Methods:** A comprehensive literature review was conducted, analyzing classical Ayurvedic texts and contemporary articles related to Nidra and its role in sleep. **Conclusion:** Ayurveda recognizes Nidra as one of the three essential pillars of life. The Ayurvedic classics provide a detailed understanding of its classification and physiological significance. Nidra plays a critical role in overall health, and understanding the sleep phenomenon is essential for early diagnosis and management of sleep disorders.*

**Keywords:** Nidra, Anidra, Sleep, Ayurveda, Insomnia, Sharira, Mana, Indriya, Sleep disorders, Physiology, Three pillars of life, Ahara, Brahmacharya.

### INTRODUCTION

In ancient Ayurvedic scriptures, *Ahara* (diet), *Nidra* (sleep), and *Brahmacharya* (celibacy) are collectively recognized as the three foundational pillars of life, known as *Trayopastambha*. The term *Trayopastambha* is derived from two Sanskrit words—*Traya*, meaning three, and *Upastambha*, which is composed of the prefix *Upa* (indicating support) and *Stambha* (originating from the root *Stambharodhane*, meaning pillar). Thus, *Trayopastambha* refers to three strong pillars that provide the necessary support for sustaining life.<sup>1</sup> Of these three, *Nidra* stands out as a crucial factor, playing an integral role in maintaining physical, mental, and emotional

well-being, thereby making it indispensable for a balanced and healthy lifestyle.<sup>2</sup>

The concept of *Nidra* has been thoroughly explored in Ayurvedic literature, where it is considered essential for maintaining bodily equilibrium and promoting longevity. Sleep, as explained in Ayurveda, occupies nearly one-third of a person's life, which reflects its profound influence on overall health and wellness. Rather than being a mere state of rest, *Nidra* is viewed as a physiological necessity that allows both the body (*Sharira*) and mind (*Mana*) to recuperate and restore energy. It is typically characterized by closed eyes, minimal bodily movement, and a diminished response to external stimuli, with consciousness either partially or completely suspended during this period.<sup>3</sup> The importance of *Nidra* as a restorative and regenerative process is emphasized in both Ayurvedic classics and contemporary research. Disruptions in sleep or insufficient sleep can lead to the onset of various health conditions, both physical and psychological, including metabolic disorders, cognitive impairments, and emotional instability.<sup>4</sup>

Ayurveda further links the phenomenon of *Nidra* to the natural predominance of *Tama guna* (the quality of inertia and darkness) during the nighttime. According to Ayurvedic philosophy, *Tama* governs the night and induces a state of relaxation in the mind and intellect (*Buddhi*), leading to the onset of sleep.<sup>5</sup> Additionally, the classical texts explain that sleep occurs when the *Manovaha Srotas* (mental channels) are filled with *Sleshma* (Kapha dosha) and when the mind, due to fatigue and exhaustion, becomes detached from the sense organs (*Indriyas*). This allows the individual to slip into a natural state of sleep, which helps in restoring energy, maintaining homeostasis, and preventing diseases caused by stress or physical strain.<sup>6</sup>

In this regard, *Nidra* is not just a passive state of physical rest but a vital physiological process with far-reaching effects on health.<sup>7</sup> It influences key aspects of bodily function such as metabolism, immune response, cognition, and emotional stability. Adequate sleep is essential for mental clarity, emotional regulation, and physical vigor, while poor or disrupted sleep can lead to imbalances in these systems, manifesting as disorders like *Anidra* (insomnia). Understanding the Ayurvedic perspective on sleep offers a holistic framework for addressing sleep-related issues and promoting overall well-being.<sup>8</sup>

In conclusion, the study of *Nidra* as explained in Ayurveda provides significant insights into its importance in health management. It offers a comprehensive understanding of the physiological mechanisms of sleep and its critical role in the prevention and treatment of sleep disorders. Therefore, paying attention to the quality and quantity of *Nidra* is crucial for maintaining optimal health, both physically and mentally.<sup>9</sup>

**Materials and Method** - In this study, the materials and methods employed focus on an in-depth analysis of *Nidra* (sleep) from both classical Ayurvedic literature and contemporary scientific research. The following steps outline the approach taken for data collection, analysis, and interpretation:

#### 1. Literature Review:

- A comprehensive review of classical Ayurvedic texts, such as *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya*, was conducted. These texts provide detailed descriptions of *Nidra*, its classification, physiology, and the impact of sleep deprivation on health. The emphasis was on understanding the traditional Ayurvedic conceptualization of sleep and its effects on *Sharira* (body), *Mana* (mind), and *Indriya* (sense organs).

- Additionally, modern articles and research papers on sleep physiology, insomnia, and sleep disorders were reviewed. This included peer-reviewed journals and scientific publications available through online medical databases, such as PubMed, Scopus, and Google Scholar. The focus was on bridging the knowledge from classical Ayurveda with current scientific perspectives on sleep and its health implications.

## 2. Selection of Ayurvedic References:

- Key *shlokas* (verses) from Ayurvedic texts that describe the physiology of *Nidra*, the factors influencing sleep, and the disorders arising from inadequate sleep were identified and analyzed.
- Particular attention was given to *Tama guna* and *Kapha dosha* in relation to sleep onset, as well as the description of *Manovaha Srotas* (channels of the mind) and their involvement in the sleep process.

## 3. Data Collection and Analysis:

- The collected data from Ayurvedic and contemporary sources were organized and categorized to highlight the role of *Nidra* in health maintenance.
- Comparative analysis was conducted to evaluate the similarities and differences between Ayurvedic and modern views on sleep physiology, its importance in disease prevention, and the management of sleep disorders such as *Anidra* (insomnia).

## CONCEPT OF NIDRA

### Definition of Nidra

In the context of ancient texts, *Nidra* (sleep) is elaborated upon with various perspectives highlighting its significance as a natural physiological process. According to the *Mandukya Upanishad*, *Nidra* is described as the state of deep sleep where the *Atma* (soul) experiences neither dreams nor desires, a state referred to as *Susupti*. In this state, the self is in profound rest, free from any awareness or disturbance of the external world, allowing for complete rejuvenation.<sup>10</sup>

*Acharya Charaka* presents *Nidra* as a phenomenon that occurs when the sensory organs (both *Indriyas* and motor organs) cease to function due to fatigue. When the mind and intellect (*Buddhi*) are exhausted, and the soul becomes detached from external stimuli, sleep naturally arises. This condition reflects the body's need for rest after prolonged engagement with its surroundings.<sup>11</sup>

*Acharya Sushruta* further defines sleep as the state that arises when *Tamas* (the quality of inertia or darkness) dominates the mind and covers the *Hridaya* (heart), which is the seat of consciousness (*Chetana*).<sup>12</sup> He emphasizes that sleep occurs when the active and conscious functions of the body become subdued by *Tamas*, allowing the mind to enter a state of rest.<sup>13</sup>

From a modern perspective, sleep is defined as a temporary state of unconsciousness during which the individual can be aroused by appropriate sensory stimuli. While the body remains inactive, essential processes for rejuvenation and healing occur during sleep.<sup>14</sup>

**TABLE NO. 1 Mechanism of Nidra as described by various Acharyas in Ayurvedic literature:**

<b>Acharya/Source</b>	<b>Mechanism of Nidra</b>	<b>Key Factors Involved</b>
<b>Acharya Sushruta</b>	Sleep is induced when <i>Tamo guna</i> (quality of inertia) accumulates and covers the <i>Hridaya</i> (heart), the seat of <i>Chetana</i> (consciousness). This dominance of <i>Tamas</i> leads to dormancy, causing the mind and senses to become inactive.	<ul style="list-style-type: none"> <li>- <i>Hridaya</i> (heart as the seat of consciousness)</li> <li>- Predominance of <i>Tamo guna</i></li> <li>- Inactivity of the mind and senses</li> </ul>
<b>Acharya Charaka</b>	<i>Nidra</i> occurs when the <i>Mana</i> (mind) and <i>Indriyas</i> (sense organs) become fatigued and detach from their objects of perception. This detachment allows the mind to rest and recover, leading to sleep.	<ul style="list-style-type: none"> <li>- Fatigue of <i>Mana</i> and <i>Indriyas</i></li> <li>- Detachment from sensory objects</li> <li>- Mental and physical restoration</li> </ul>
<b>Ashtanga Sangraha</b>	Sleep arises when the <i>Manovaha Srotas</i> (channels of the mind) become filled with <i>Sleshma</i> (Kapha dosha). This causes the mind to lose connection with the senses, leading to sleep.	<ul style="list-style-type: none"> <li>- <i>Sleshma</i> (Kapha dosha)</li> <li>- <i>Manovaha Srotas</i> (mental channels)</li> <li>- Disconnection between the mind and sense organs</li> </ul>
<b>Acharya Sharangadhara</b>	Sleep is caused by the aggravation of <i>Kapha dosha</i> and the predominance of <i>Tamas guna</i> . The excess <i>Kapha</i> brings heaviness and lethargy, while <i>Tamas</i> reduces mental activity and awareness, promoting sleep.	<ul style="list-style-type: none"> <li>- Aggravation of <i>Kapha dosha</i></li> <li>- Dominance of <i>Tamas guna</i></li> <li>- Heaviness and lethargy contributing to the onset of sleep</li> </ul>

**TABLE NO. 2 Types of Nidra (Sleep) based on various classical Ayurvedic texts:**

<b>Text/Source</b>	<b>Type of Nidra (Sleep)</b>	<b>Description</b>
<b>Ashtanga</b>	<b>Mithya Yogaroompa</b>	Sleep at the wrong time (untimely sleep).

<b>Hridaya</b>		
	<b>Atiyogaroopa</b>	Excessive sleep, where one sleeps longer than required.
	<b>Hina Yogaroopa</b>	Insufficient or inadequate sleep, often due to stress, anxiety, or physical exhaustion.
	<b>Samyak Yogaroopa</b>	Proper sleep at the correct time and for the right duration, supporting mental and physical well-being.
<b>Ashtanga Sangraha</b>	<b>Kala Swabhava</b>	Sleep that occurs naturally due to the biological clock and circadian rhythms.
	<b>Amayaja</b>	Sleep caused by illness or disease.
	<b>Chitta Kedodbhava</b>	Sleep arising from mental exhaustion or stress.
	<b>Deha Kedodbhava</b>	Sleep resulting from physical tiredness.
	<b>Krodhodbava</b>	Sleep induced by emotional disturbances, particularly anger.
	<b>Agantu Bhava</b>	Sleep caused by external factors or trauma.
	<b>Tamobhava</b>	Sleep resulting from the predominance of <i>Tamas guna</i> , often associated with lethargy and unconsciousness.
<b>Acharya Sushruta</b>	<b>Vaishnavi Nidra</b>	Natural, healthy sleep that is considered a divine gift, promoting longevity and overall health.
	<b>Tamasi Nidra</b>	Sleep arising from the predominance of <i>Tamas guna</i> , leading to lethargy, mental dullness, and unconsciousness, often detrimental to health.
	<b>Vaikariki Nidra</b>	Sleep caused by imbalances in <i>Kapha</i> and <i>Vata doshas</i> , or due to disease, indicating an unhealthy state.
<b>Charaka Samhita</b>	<b>Tamobhava Nidra</b>	Sleep induced by the predominance of <i>Tamas guna</i> , characterized by deep unconsciousness and lethargy.
	<b>Sleshma Samudbhava Nidra</b>	Sleep caused by the accumulation of <i>Kapha dosha</i> , associated with heaviness and drowsiness, comparable to drowsiness

		induced by certain medications.
	<b>Manah Sharira Shrama Sambhava Nidra</b>	Sleep induced by mental and physical exhaustion, associated with the buildup of adenosine (from ATP breakdown), which promotes sleep after exertion.
	<b>Agantuki Nidra</b>	Sleep of unexplained origin, occurring spontaneously and sometimes seen as a sign of impending death.
	<b>Vyadhi Anuvartini Nidra</b>	Sleep that occurs as a consequence of disease, often triggered by cytokines released by the immune system during illness.
	<b>Ratri Svabhava Prabhava Nidra</b>	Normal, healthy sleep that occurs at night, driven by the natural production of melatonin, which is secreted in response to darkness and regulates the sleep-wake cycle.

### Timing of Nidra

Ayurveda emphasizes the importance of the timing of sleep. According to *Ashtanga Sangraha*, sleep is naturally aligned with the night due to the predominance of *Tamo guna* during the evening hours. Night is the optimal time for rest, as staying awake at night leads to imbalances in the doshas.<sup>15</sup>

*Acharya Sushruta* also stresses the need for sleeping at night and staying awake during the day. He suggests that if an individual stays awake at night, they should compensate by sleeping for half the duration of the missed sleep during the day, but without consuming food beforehand.<sup>16</sup>

*Kaiyadeva Nighantu* specifies that the ideal time for sleep is after the first two *Yamas* of the night, which is approximately six hours after sunset. This aligns with the body's natural circadian rhythm, which promotes sleep as darkness sets in. Ayurveda recommends waking before sunrise to harmonize with nature's cycles.<sup>17</sup>

### Age-Specific Sleep Requirements according to Ayurveda:

Age Group	Sleep Requirement	Ayurvedic Perspective
<b>Newborn Infants</b>	18 to 20 hours	Dominance of <i>Kapha dosha</i> supporting rapid growth and development.
<b>Growing Children</b>	12 to 14 hours	Crucial period for physical and cognitive development, still <i>Kapha</i> dominant.
<b>Adults</b>	7 to 9 hours	Required for optimal functioning, balancing <i>Pitta dosha</i> .
<b>Older</b>	5 to 7 hours	Reduced sleep due to <i>Vata dosha</i> dominance in later stages of life.

<b>Individuals</b>		
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### Criteria for Better Sleep

According to *Acharya Yogaratnakara*, certain guidelines should be followed to promote good sleep. After dinner, one should walk for a short distance, followed by lying down in a recumbent position. Initially, one should rest on their right side while taking slow breaths, and then gradually shift to the left side. Sleeping on the left side is considered beneficial for digestion, as it aids in the proper functioning of *Jatharagni* (digestive fire), which is located near the *Nabhi* (navel) region.<sup>18</sup>

Ayurveda also recommends using a comfortable bed that is soft and at knee level, and lying down in a relaxed posture. Avoiding negative thoughts before sleep and focusing on positive thoughts enhances mental peace and ensures restful sleep. Simple practices like gentle body massages (*Samvahana*) can also aid in sleep by calming the nervous system and reducing stress.<sup>19</sup>

### Daytime Sleep (Divaswapna)

Daytime sleep, or *Divaswapna*, is generally discouraged in Ayurveda, as it can cause imbalances in the three doshas. However, exceptions are made during certain conditions. *Acharya Sushruta* permits *Divaswapna* during the summer season or for those who stayed awake at night, allowing them to recover by sleeping for half the duration of the lost sleep. Additionally, it is recommended for children, the elderly, and those suffering from certain diseases like *Rajayakshma* (tuberculosis).<sup>20</sup>

### Significance of Nidra

*Nidra* is fundamental to a person's physical and mental health. It plays a key role in various aspects of life, such as:

- **Sukha (happiness) vs. Dukha (unhappiness)**
- **Pushti (nourishment) vs. Karshya (emaciation)**
- **Bala (strength) vs. Abala (weakness)**
- **Jivita (longevity) vs. Ajivita (shortened life)**

Inadequate or excessive sleep disrupts this balance, leading to diseases and psychological disturbances. *Acharya Charaka* considers *Nidra* as an important therapeutic tool for treating various conditions, including emaciation, anxiety, and mental stress.<sup>21</sup>

### Divaswapna (Daytime Sleep)

In Ayurveda, *Divaswapna* or daytime sleep is generally discouraged, as it is considered detrimental to health. According to *Acharya Sushruta*, sleeping during the day leads to the aggravation (*Prakopa*) of all three doshas—*Vata*, *Pitta*, and *Kapha*. However, there are differing opinions. *Hemadri* mentions that according to *Khaaranadi*, daytime sleep primarily aggravates *Pitta* and *Kapha doshas*, while *Bhela* holds that sleeping in a supine position only increases *Kapha* in the digestive tract (*Koshta*).<sup>22</sup>

*Acharya Sushruta* also provides exceptions where *Divaswapna* is permitted. For those who have stayed awake at night, they can sleep during the day for half the time they stayed awake. Furthermore, daytime sleep is allowed

during the summer season (*Greeshma Ritu*) due to the natural depletion of energy caused by excessive heat.<sup>23</sup> *Acharya Vagbhata* extends this allowance of *Divaswapna* to individuals suffering from certain diseases like *Rajayakshma* (tuberculosis), as well as elderly people and children, for whom daytime rest is considered beneficial.<sup>24</sup>

### **Ratrijagarana (Staying Awake at Night)**

*Acharya Charaka* explains that staying awake at night increases *Vata* and *Pitta doshas*, which leads to a range of health issues such as constipation, weakness, dizziness, lack of concentration, hyperacidity, burning sensations in the eyes, hands, and feet. However, if one is required to stay awake at night due to unavoidable circumstances, they should compensate by sleeping the next morning, for half the duration of their missed night sleep, before taking any food. Those who are accustomed to working night shifts, such as industrial workers, may not experience the same adverse effects, as their bodies adapt to this altered sleep cycle.<sup>25</sup>

### **Nidranaasha (Loss of Sleep)**

*Nidranaasha*, or the loss of sleep, is also considered harmful in Ayurveda. It can be caused by aggravated *Vata*, *Pitta*, depletion (*Kshaya*), or injury. Chronic sleep deprivation is known to disturb physical and mental equilibrium, and the treatment for *Nidranaasha* includes therapies like *Abhyanga* (oil massage), *Udvaltana* (herbal powder massage), and general *Brimhana Chikitsa* (nourishing therapies).<sup>26</sup>

### **Atinidra (Excessive Sleep)**

Excessive sleep, or *Atinidra*, is seen as a pathological condition caused by an increase in *Kapha dosha*. When the *Kapha* accumulates, it results in lethargy and prolonged sleep, which is considered unhealthy. Treatments for *Atinidra* include therapies such as *Dhumapana* (herbal smoking), *Virechana* (purgation), *Nasya* (nasal administration of medications), and *Langhana* (fasting or lightening therapies).<sup>27</sup>

### **Nidra as a Vegadharana (Suppression of Sleep Urge)**

Suppressing the natural urge to sleep (*Nidravegadharana*) is considered harmful in Ayurveda, leading to a range of symptoms. According to *Acharya Charaka*, suppression of sleep can cause yawning (*Jrmbha*), body aches (*Angamarda*), drowsiness (*Tandra*), head-related disorders (*Siro Roga*), and heaviness in the eyes (*Akshi Gaurava*). The recommended treatment includes taking proper sleep and soothing therapies such as *Samvahana* (gentle massage) over the hands and feet.<sup>28</sup>

*Acharya Vagbhata* mentions that the symptoms of sleep suppression include confusion (*Moha*), heaviness in the head and eyes (*Murdha Akshi Gaurava*), laziness (*Alasya*), yawning (*Jrmbha*), and body aches (*Angamarda*).<sup>29</sup>

*Acharya Bhavamisra* adds that sleep suppression can lead to heaviness in the eyes and head (*Shirolocana-Gaurava*), indigestion (*Annapaka*), and symptoms like yawning, body aches, and drowsiness.<sup>30</sup>

*Acharya Sushruta* elaborates that the symptoms of suppressed sleep resemble diseases caused by *Vata* and *Pitta doshas*, including cough (*Kasa*), difficulty breathing (*Swasa*), cold (*Pratisyaya*), heaviness in the head (*Sirogaurava*), body pain (*Angamarda*), fever (*Jwara*), and weakened digestion (*Agnidaurbalya*).<sup>31</sup>

### **Significance of Nidra**

*Nidra* is crucial for maintaining various aspects of health and well-being. It influences factors such as:

- **Sukha (happiness) vs. Dukha (unhappiness)**
- **Pushti (nourishment) vs. Karshya (emaciation)**
- **Bala (strength) vs. Abala (weakness)**
- **Vrushata (sexual strength) vs. Klibata (impotence)**
- **Gyana (knowledge) vs. Agyana (ignorance)**
- **Jivita (longevity) vs. Ajivita (death)**

Proper sleep (*Samyak Nidra*) contributes to happiness, nourishment, strength, and longevity, while improper or insufficient sleep (*Asamyak Nidra*) leads to unhappiness, weakness, impotence, and ignorance. *Acharya Charaka* emphasizes the therapeutic role of sleep in treating conditions like extreme leanness (*Atikrisata*) and mental stress. He states that just as *Ahara* (food) is essential for health maintenance, so too is *Nidra* critical for achieving happiness and well-being. Adequate and restful sleep is key to restoring the body's energy and maintaining excellent health.<sup>32</sup>

## ACCORDING TO MODERN SCIENCE

### Sleep in Modern Terms

The most notable physiological changes during sleep primarily take place in the brain. During sleep, the brain consumes significantly less energy compared to wakefulness, particularly during Non-REM (NREM) sleep. In areas of reduced brain activity, Adenosine Triphosphate (ATP), the energy molecule, is replenished. This is crucial because the brain accounts for about 20% of the body's total energy consumption even during quiet wakefulness.<sup>33</sup> The reduction in energy use during sleep leads to an overall decrease in energy consumption by the body.

During slow-wave sleep (a phase of NREM sleep), there are bursts of growth hormone released in the body, essential for tissue repair and growth. Moreover, the secretion of prolactin, a hormone associated with immune function and metabolism, occurs during all stages of sleep, including daytime naps.<sup>34</sup>

The body's biological clock, known as the circadian rhythm, is controlled by the suprachiasmatic nucleus (SCN), located in the hypothalamus. The SCN regulates the release of melatonin, a hormone that promotes sleep. When the light levels decrease, the SCN signals the brain to increase melatonin production, which aligns the sleep-wake cycle with the natural rhythm of day and night.<sup>35</sup>

### Types of Sleep<sup>36</sup>

Sleep is broadly classified into two categories:

1. **Non-Rapid Eye Movement (NREM) Sleep:** The American Academy of Sleep Medicine (AASM) divides NREM sleep into three stages:
  - **Stage N1:** This is the lightest stage of sleep, which marks the transition from wakefulness to sleep. It typically lasts less than 10 minutes and is characterized by a slowing of the heart rate, breathing, and eye movements, as well as muscle relaxation.

- **Stage N2:** In this phase of light sleep, the body prepares for deeper sleep. It lasts about 20 minutes, during which the heartbeat and breathing continue to slow. The brain generates sleep spindles, which are rapid bursts of rhythmic brain activity.
  - **Stage N3 (formerly stages 3 and 4):** Known as deep sleep or slow-wave sleep (SWS), this stage lasts 20 to 40 minutes. It is the most restorative part of sleep, during which heart rate and breathing reach their lowest levels, and the muscles are deeply relaxed. Waking up from this stage can be difficult. This stage is critical for physical recovery, immune function, and energy restoration.
2. **Rapid Eye Movement (REM) Sleep:** REM sleep occurs about 90 minutes after falling asleep, following the progression through the stages of NREM sleep. REM sleep is distinct from NREM as it involves rapid eye movements, almost complete muscle paralysis, and vivid dreams. REM sleep is thought to be important for cognitive functions such as memory consolidation and emotional regulation.

### Sleep Cycle<sup>37</sup>

A complete sleep cycle lasts around 90-100 minutes, and a typical night's sleep includes 4-5 complete cycles. Each sleep cycle consists of both NREM and REM phases. The first four stages of sleep are NREM, after which the brain transitions to the REM phase. This structure of sleep ensures both physical and mental restoration.

- **Stage 1 (N1):** Transition from wakefulness to sleep (lasting less than 10 minutes).
- **Stage 2 (N2):** Light sleep (lasting around 20 minutes), with sleep spindles signaling the onset of deeper sleep.
- **Stage 3 (N3):** Deep sleep or slow-wave sleep (lasting 20-40 minutes), crucial for physical restoration.
- **REM Sleep:** Occurs after NREM sleep, characterized by rapid eye movement, paralysis of most body muscles, and vivid dreams.

This orderly progression of sleep stages allows the body and brain to recover, with NREM stages providing physical restoration and REM sleep contributing to mental and emotional well-being.

### DISCUSSION

Sleep plays a critical role in both physiological and psychological health. Modern scientific research, like the ancient wisdom of Ayurveda, underscores the importance of restful and adequate sleep for maintaining overall well-being. This section discusses the mechanisms and effects of sleep from both Ayurvedic and modern perspectives, along with the implications for health and disease management.<sup>38</sup>

In Ayurveda, *Nidra* (sleep) is regarded as one of the three essential pillars of life (*Trayopastambha*), alongside *Ahara* (diet) and *Brahmacharya* (celibacy or self-discipline). Adequate sleep is necessary for maintaining the balance of the *doshas*—*Vata*, *Pitta*, and *Kapha*—which govern bodily functions. Disruption in sleep, whether due to insufficient rest or excessive sleep, can lead to an imbalance in the *doshas*, contributing to both physical and mental disorders. For example, excessive sleep (*Atinidra*) is linked to an increase in *Kapha dosha*, resulting in lethargy and other related disorders, while sleep deprivation (*Nidranaasha*) disturbs *Vata* and *Pitta doshas*, leading to symptoms like fatigue, dizziness, and cognitive difficulties.<sup>39</sup>

From a modern scientific perspective, sleep is crucial for restoring energy levels, repairing tissues, and

supporting cognitive functions. The brain's reduced energy consumption during sleep, particularly in the NREM phase, allows for the replenishment of ATP, which is necessary for brain function. Sleep, especially during slow-wave sleep (SWS), is also associated with the release of growth hormone, which is vital for tissue growth and repair. Furthermore, the release of prolactin during sleep contributes to immune function, demonstrating the wide-ranging impact of sleep on the body's systems.<sup>40</sup>

The synchronization of the sleep-wake cycle with the body's circadian rhythm, governed by the suprachiasmatic nucleus (SCN) and regulated by melatonin, is another key aspect of modern sleep science. This rhythm is vital for aligning sleep patterns with natural light and darkness, helping the body adjust to day-night cycles. Disruptions to this rhythm, as seen in shift workers or individuals with insomnia, can lead to a wide array of health problems, including metabolic disorders, cognitive impairment, and weakened immunity.<sup>41</sup>

Ayurveda also provides valuable insights into the timing and quality of sleep. It discourages *Divaswapna* (daytime sleep) under normal conditions due to its tendency to aggravate the *Kapha* and *Pitta doshas*. However, it acknowledges certain conditions, such as the summer season or exhaustion from staying awake at night, where daytime sleep can be beneficial. This practical approach in Ayurveda aligns with the modern understanding that sleep needs can vary based on environmental factors and individual circumstances. Moreover, modern research supports the notion that sleep disorders, such as insomnia, can stem from stress, mental exhaustion, or physical illness, echoing the Ayurvedic concept that imbalances in *doshas* contribute to sleep-related issues.<sup>42</sup>

The division of sleep into NREM and REM phases, with their distinct physiological processes, provides further clarity into the stages of sleep that correspond to the Ayurvedic concepts of light and deep sleep. REM sleep, characterized by rapid eye movements and vivid dreams, is closely linked to memory consolidation and emotional processing, further underlining the importance of a complete sleep cycle for mental health.<sup>43</sup>

In summary, both Ayurvedic and modern views emphasize the multifaceted role of sleep in maintaining health. Sleep is not just a period of rest; it is a complex physiological process that facilitates energy restoration, tissue repair, cognitive functioning, and emotional well-being. Disruptions in sleep, whether through deprivation or excess, can have far-reaching consequences on the body and mind. Understanding sleep from both perspectives offers a comprehensive approach to managing sleep disorders and promoting holistic health.<sup>44</sup>

## FINDINGS

The literary study of *Nidra* reveals that Ayurveda and modern science both emphasize the importance of sleep for maintaining health and preventing disease. Ayurveda offers a holistic understanding of sleep's role in balancing the *doshas* and promoting well-being, while modern sleep science provides insights into the neurophysiological mechanisms that regulate sleep. The convergence of these perspectives underscores the necessity of proper sleep for physical, mental, and emotional restoration, with clear therapeutic benefits for overall health.

## CONCLUSION

Sleep is an essential component of overall health, playing a vital role in both physical and mental well-being. From the perspective of Ayurveda, *Nidra* is regarded as one of the three pillars of life, alongside *Ahara* (diet) and *Brahmacharya* (self-discipline), underscoring its importance in maintaining the balance of the *doshas* and supporting vitality. Modern scientific research corroborates these ancient views, revealing the intricate physiological processes that occur during sleep, including energy restoration, hormone regulation, and cognitive

functioning.

The alignment of Ayurvedic principles with contemporary understanding of sleep illustrates that both approaches recognize the need for adequate and timely rest. Disruptions in sleep patterns, whether through insufficient sleep (*Nidranaasha*) or excessive sleep (*Atinidra*), lead to imbalances that can manifest in various physical and psychological disorders. Therefore, promoting healthy sleep practices and addressing sleep disorders is critical to ensuring the body's optimal functioning and preventing disease.

Ultimately, integrating the wisdom of Ayurveda with modern sleep science provides a holistic framework for understanding sleep's profound impact on health. It highlights the need for maintaining harmony in our sleep cycles, thus emphasizing that sleep is not just a passive state but a crucial process for rejuvenating the body and mind. Effective sleep management can improve quality of life, reduce the risk of chronic illnesses, and enhance overall well-being.

#### **CONFLICT OF INTEREST -NIL**

#### **SOURCE OF SUPPORT -NIL**

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