

# Physiological Impact of *Nidra* (Sleep) on Human Body

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## Abstract

*Nidra* is one of the three major life milestones listed in the Ancient Ayurvedic classics along with *Ahara* and *Brahmacharya*. *Nidra* is a very important component of daily living. Regular *nidra* use can prevent major diseases that have an impact on both physical and mental health. The three members of this significant triad are *Ahara* (eating), *Nidra* (sleep), and *Brahmacarya* (Good conduct). *These* three have been considered as *Upastambha* or the basis of life and health. Out of the three *Upastambhas*, *Nidra* or sleep is the secondary important pillar of life. It is a physiological state of rest for the body, mind, sense and motor organs. When the mind is exhausted and ex-*hausted* sense organs detract from their objects, *Nidra* has been given more importance and considered to be the best in Ayurveda. In this study, a Critical explanation, presented on “*Nidra* and its physiological importance on Human body” is explained.

**Keywords:** *Nidra*, *Upstambha*, Physiology of sleep.

## INTRODUCTION

*Ayurveda*, the science of life has mentioned various principles, for wellbeing of the humans. There are two basic aims of *Ayurveda*, which are mentioned in the following quote-*Swasthasya swastha rachanam* (prevention of disease) and *Aturasya vikara prashanam* (cure of disease). The notion of *Triupastambha* is important for achieving *Ayurveda*'s goal of life (the prevention of disease), according to Acharya Caraka, who claims that *Ahara*, *Nidra*, and *Brahmacharya* are the three *Upastambhas* of life and are essential for maintaining good health and a long life. For as long as a person refrains from engaging in practises that are harmful to their health, the body is supported by these three will regulate components of life and is bestowed with strength, complexion, and growth.

The word *Nidra* is feminine, formed by the prefix ni+dra+rak+ta. This is a state of nature which causes encapsulation to the consciousness of a person<sup>1</sup>.

in ancient texts, Sleep is the mental operation having the absence of cognition for its grasp. Acharya Vyas made a statement that - “sleep is a state of unconsciousness, but the unconsciousness remains about his own unconsciousness<sup>2</sup>. Acharya *Susruta*, described the sleep occurs when the *Hridaya*, the seat of *chetana* is

covered by *Tamas*.<sup>3</sup> According to *AstangaSangraha* commentary, stated that, the *manovahaSrotas* become accumulated with *sleshma* and mind is devoid of sense organs because of fatigue, when individual fell asleep.<sup>4</sup>

Acharya *Dalhana*, the commentator of *Susruta* states, that- *Nidra* is the state of combination of mind and intellectual in which the person feels happy.<sup>5</sup>

The three primary pyramids of life—*Ahara*, *Nidra*, and *Brahmacharya*—play a crucial role in human health maintenance. Three components, *Ahara*, *Nidra*, and *Brahmacharya*, are compared to triangles in ayurvedic literature and are known as the three *Upastambhas* or Tripods.<sup>6</sup> *Nidra's* worth is established by the three *Upastambha's* inclusion of it. When describing *Nidra*, Acharyas said that sleep determines everything in life, including happiness and sadness, growth and wasting away, strength and impotence, knowledge and ignorance, and both the continuation of life and its death.<sup>7</sup>

**CLASSIFICATION OF NIDRA (SLEEP)-**

S.NO.	Charak	Sushruta	Vagbhatt
1	<i>Tamobhava</i>	<i>Vaishnvi</i>	<i>Tamobhava</i>
2	<i>Shleshmasamdbhava</i>	<i>Vaikariki</i>	<i>Aamayakhedaprabhavaja</i>
3	<i>Manasharira shrama Sambhava</i>	<i>Tamsi</i>	<i>Chittakhedaprabhavaja</i>
4	<i>Agantuki</i>		<i>Agantuki</i>
5	<i>Vyadhyanuvartini</i>		<i>Kaphaprabhavaja</i>
6	<i>Ratriswabhavaprabhava</i>		<i>Dehakhedaprabhavaja</i>
7			<i>Kalavabhavaja</i>

**PHYSIOLOGY OF SLEEP (AYURVEDA & MODERN SCIENCE)**

Sleep happens when the mind is worn out. According to Howell, cerebral ischaemia is the cause of sleep. The pre and post central gyrus and associated area, among other higher centres, are located in the cerebral cortex and are correlated with the mental activities mentioned in Ayurveda. Therefore, because of the decrease in cerebral blood flow, the mind becomes tranquil, which promotes sleep.<sup>8</sup>

According to modern text the interaction of two primary networks of nerve cells, in the upper portion of the pons and in the midbrain, which produce acetylcholine as their neurotransmitter (NT), transmits signals to the thalamus to activate it, keeps the brain aware throughout wakefulness. The cerebral cortex is then stimulated, which results in an Electroencephalography (EEG) pattern that is indicative of waking up. The cholinergic nerve cells, thalamus, and cortex are in a state that resembles wakefulness during Random Eye Movement (REM) sleep, but the brain is actually experiencing sleep. Three sets of nerve cells in the top region of the brain stem provide the distinction. The nerve cells that contain the neurotransmitter – nor-epinephrine, histamin, serotonin etc.

Two types of nerve cells in the hypothalamus govern the brain stem cells that control arousal. The ventrolateral pre-optic nucleus houses a collection of nerve cells that release inhibitory NT and GABA. The suprachiasmatic nucleus, which regulates the body's circadian rhythm, has a significant impact on the sleep cycle. The clock genes in the hypothalamus' nerve cells cycle through a biochemical cycle that includes nearly 24 hours of sleep, hormone production, and other body processes.<sup>9</sup>

## PHYSIOLOGICAL IMPACT OF SLEEP

According to *AcharyaCharak*, the body elements soften at night because the *Hridaya* (Heart) contracts, the *Srotasa* (Circulation Channels) contracts, and the *Koshtha* (Gastrointestinal Tract) contracts.<sup>10</sup>

According to modern view, sleep causes two major types of physiological effects.

1) Effects on the Nervous System itself.

2) Effects on the other structures of the body

Sleeping at night promotes the balance of the body's components (*Dhatusamyā*), alertness, clear vision, a healthy complexion, and strong digestive function.<sup>11</sup>

According to Acharya *Susruta*, those who get enough sleep at the right times won't get sick, their minds will be calm and collected, they'll develop potency and attractive features, they won't get weak or obese, and they'll live long, healthy lives.<sup>12</sup>

## DISCUSSION

The study's key finding: There is a direct relationship between sleep and mental health. In every area of life, *Sharira* and *Satva* interact with one another, according to Ayurveda. Sleep is very important to psychiatric illness and is typically included in the diagnostic standards for particular disorders. Because of their hectic schedules and overload, individuals do not get enough sleep these days. As a result, work hours have taken over sleep time. Another factor that decreased the amount of time spent sleeping was tension. A healthy individual will become a patient if they don't get enough sleep. In the beginning, it's not a big deal. But later on, it causes a variety of health issues and maladies.

## CONCLUSION

This article's primary goal is to introduce and emphasise the concept of *nidra* and its significance to human life. *Nidra* is one of the most significant variables to be examined in the modern period. *Nidra* is an important component of a healthy lifestyle. In the modern world, when many people have demanding job and study schedules, *anidra* is a significant feature. Prior to 5000 years ago, Our Acharyas had previously discussed *Nidra*, its upkeep, and the meanings of *Ritu* according to *Ahara* and *Vihara*. Additionally, Acharyas discussed the aetiology, symptoms, diagnosis, and therapy of *anidra*.

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