



Review Article

AYURVEDIC INSIGHTS ON IMPROVING POOR SLEEP QUALITY

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ABSTRACT

Sleep - this natural urge is so essential phenomenon of life that engages our one third of life-span, still indulging in being slept is mystery to everyone. At one side adequate sleep quality imparts fair concentration, emotional, cognitive motivational harmony inside body's mind, soul and consciousness. Contrary to which inadequate sleep or poor sleep quality leads to tiredness, lack of focus, exhaustion, a low pain tolerance, anxiety, irritational thoughts, hallucinations, loss of appetite, constipation and many more. Sleep has a positive impact over digestion, metabolism, nourishment and health. It is irresistible, irreplaceable and unique boon for us, which is pillar of our life. The natural cycle of sleep and awakening is depending on *Awastha* of *Sharir Dosh*, *Kaal Dosh*, and few more factors as depicted in Ayurveda texts. So, the quality of sleep depends on these factors. If there is *Kshaya* of *Kapha*, or *Vridhhi* of *Vata* and *Pitta*, then the quality of sleep disturbs. In the realm of holistic well-being, Ayurveda, the ancient Indian system of medicine, offers profound insights into optimizing sleep quality. Through personalized approaches, Ayurvedic remedies like herbal formulations, lifestyle modifications, and relaxation techniques aim to rebalance *Doshas* and promote restful sleep. Integrating practices such as meditation, gentle yoga, and consistent sleep routines can pacify *Vata* and *Pitta Dosh*, calm the mind, and induce relaxation, fostering deeper and more rejuvenating sleep. Ayurveda's holistic perspective provides a natural and sustainable pathway to address poor sleep quality and promote overall well-being. The present paper is here to discuss in detail about *Sukh Nidra*.

INTRODUCTION

Good quantity and quality of sleep is regarded as one of the most powerful tools to combat minor disease and imbalance and also the most important function of sleep is enhancement of *Ojas*- the master co-coordinator between mind, body, soul. Thus, proper sleep helps to maintain *Dhatusamy*, relaxation of body, increase of strength and the stability of life.^[1] The tired mind gets disconnection from senses, through the adequate sleep. The basic existence of theory of Ayurved focuses on maintenance of health and curing of disease. The health is also not just the absence of disease but a balance in the functioning of *Dosh*, *Dhatu*, *Mala*, *Agni* and *Ojas* along with pleasant status of *Atma*, *Indriya* and *Manas*.^[2]

As per biological clock, day-night change and seasonal changes, one must modify one's routine to adapt as per requirement. The Ayurvedic literature is so prosperous to deal with combating the daily, seasonal and other changes occurred due to natural phenomenon, that includes *Dincharya* (daily regimen), *Ratricharya* (night regimen) and *Ritucharya* (seasonal regimen) etc are prime factors to adjust the environmental changes. The faulty lifestyle in the recent times have led to a huge number of disorders like metabolic syndrome, hypertension, obesity, diabetes mellitus, Polycystic Ovary Disease (PCOD), depression and lack of proper sleep.

Nidra plays an important role in maintaining the health of a person. *Acharyas* have explained *Nidra*, its concept regarding relation with *Prakriti*, *Vikriti*, different *Ritus*, its importance, types, methods of proper sleep, consequences of improper *Nidra* and its management in detail.^[3,4,5,6,7]

Insomnia and poor sleep quality is hazardous to one's life in various ways. So, if the physiology of *Nidra* is postulated then it will become easier to open

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new horizon for various psychosomatic disorders, disorders of *Manah* and *Buddhi*.

Happiness of mind is directly related with peaceful and sound sleep without any interruption and disturbances. A happy mind can achieve the greatest goal aspired.

The 2020 survey indicated that there is prevalence of poor sleep quality of 15.9% in men and 20.2% in women.^[8] Let's delve into the causes of sleep disturbance, symptoms, treatment, and understanding of it in detail from an Ayurvedic perspective.

Sukha Nidra

Sukha the term includes happiness, pleasure of body and mind and many other feelings and emotions of wellbeing. *Nidra* i.e., sleep is one such factor which contributes towards such *Sukha*, pleasure and happiness, peace of mind and balance of physical and mental health. All the explanation and modern research works related to 'sleep and pleasure' too explain the same. The concepts and principles of Ayurved are so enriched and prosperous that the verse explaining the benefits of good sleep and harms due to imbalanced sleep^[9] is still so relevant since ages in all eras. But in present situation of busy schedules of our life in modern time, we all are either sleep deprived or managing poor quality and quantity of sleep.

How Insomnia differ from Poor Sleep Quality

Insomnia specifically refers to difficulties with the initiation and maintenance of sleep, which may result in inadequate sleep duration. On the other hand, a lack of quality sleep encompasses broader issues related to the overall restorative nature of sleep, even if the duration is sufficient. Both conditions can have significant impacts on physical and mental well-being, highlighting the importance of addressing sleep disturbances for overall health.

The *Nidra* is complex incidence including the role of *Hridaya*, *Manah*, *Indriyas*, *Sarir Dosh*, *Kapha*, and *Kaal Prabhav* of *Tama*.^[10] And if there is *Mithya Yoga* of *Manah* with *Indriyas* or *Vikruti* of *Sharirik Doshas*, than the natural occurrence of *Nidra* is hampered resulting in various disorder in terms of *Agyan*, *Moha*, *Klaibya*, *Dukh* etc.^[11]

Mechanism of Sleep

Sleep is a complex physiological process that involves multiple stages and intricate interactions between the brain and various bodily functions. The sleep-wake cycle is regulated by the circadian rhythm and is influenced by both internal and external factors. Here's a simplified overview of how sleep occurs:

Circadian Rhythm

The circadian rhythm governs the sleep-wake cycle by a natural, internal process which regulates it over a 24-hour period. This rhythm is influenced by

external cues, primarily exposure to light and darkness.^[12]

Regulation by the Brain

The brain plays a central role in the regulation of sleep. The hypothalamus, a small region in the brain, contains the suprachiasmatic nucleus (SCN), which acts as the body's internal clock. The SCN responds to light and dark signals, signaling the release of hormones that promote wakefulness or sleep.

Neurotransmitters and Sleep Stages^[13]

- The sleep-wake cycle is having two types of sleep: Rapid Eye Movement (REM) sleep and Non-Rapid Eye Movement (NREM) sleep. Various neurotransmitters are involved in these stages of sleep.
- NREM sleep has three stages (N1, N2, N3), characterized by progressively deeper sleep. During NREM sleep, helps in repairing of the body and regrows tissues. It is so essential part of sleep as it help to generate bone and muscle, strengthens the immune system and boost overall health.
- REM sleep is also along with highly important as it is associated with dreaming and plays a crucial role in emotional regulation and memory enhancement.

Initiation of Sleep (Sleep Onset)

The process of falling asleep involves a gradual transition from wakefulness to sleep. It is influenced by factors such as the reduction of external stimuli, a decrease in body temperature, and changes in the levels of neurotransmitters.

Sleep Architecture

A complete sleep cycle typically lasts about 90 to 110 minutes, and individuals go through multiple cycles during a night's sleep. Each cycle consists of NREM and REM sleep in a specific sequence.

Hormonal Regulation

Hormones play a role in regulating sleep. Melatonin, is also considered as the "sleep hormone". Its production is via pineal gland which is secreted by the response to darkness, indicating the body that it's time to sleep.

External Factors

External factors such as light exposure, noise, temperature, and lifestyle choices (e.g., caffeine intake, exercise) can influence the sleep-wake cycle. Maintaining a consistent sleep schedule and creating a conducive sleep environment are important for healthy sleep.

It's important to note that sleep is a dynamic process with individual variability. Sleep disorders can disrupt this process, leading to conditions such as insomnia, sleep apnea, narcolepsy, and others. If someone consistently experiences sleep-related difficulties, it is advisable to consult with a healthcare professional for a proper evaluation and guidance.

Acharya Charaka stated that individuals sleep when the mind comprising with sensory and motor organs and they disassociate themselves from their objects.^[14]

Acharya Sushruta said that fundamental seat of awareness in the body is thought to be the heart. When a men's heart is engulfed in the deceptive impact of *Tama*, he falls sleep. Sleep is caused by *Tama*, while awakening is brought about by the quality of *Satva*.^[15] The fundamental cause of sleep is *Swabhava* (nature). By some authors, the habitual time night or darkness in environment, mental and physical exhaustion, an increase in *Kapha*, external stimuli as influence of disease, and *Tamo guna* dominance all contribute to sleep. In *Asthanga*, the *Manovaha Srotas* become accumulated with *Kapha* and mind is devoid of sense organs because of fatigue, when individual falls sleep.^[16] According to *Yog-Ratanaakar*, it is always recommended to sleep in the left lateral position because the *Agni*, which is responsible for appropriate digestion, is located on the left side of the body above *Nabhi*.^[17]

Causes of Poor Sleep Quality

Poor sleep quality can be attributed to various factors, and it often results from a combination of physical, psychological, and lifestyle influences. Identifying and addressing these factors is crucial for improving sleep quality. Modern lifestyle factors like irregular sleep patterns, excessive screen time, and a hectic routine can also contribute to sleep disturbances. Additionally, poor digestion leading to the accumulation of toxins (*Ama*) in the body can disrupt the natural sleep cycle. Here are some common factors that may contribute to poor sleep quality:

Stress and Anxiety

High levels of stress and anxiety can lead to an overactive mind, making it difficult to relax and fall asleep. Chronic stress can contribute to persistent sleep difficulties.

Depression

Depression can affect sleep patterns, leading to insomnia or disrupted sleep. Changes in neurotransmitters associated with mood regulation may impact the sleep-wake cycle.

Sleep Disorders

Conditions such as insomnia, sleep apnea, restless legs syndrome, and narcolepsy can significantly disrupt sleep quality. These disorders may involve difficulty falling asleep, staying asleep, or achieving restorative sleep.

Poor Sleep Hygiene

Practices that interfere with good sleep hygiene, such as irregular sleep schedules, excessive use of electronic devices before bedtime, and a

disruptive sleep environment, can contribute to poor sleep quality.

Caffeine and Stimulant Consumption

Consuming stimulants like caffeine, especially close to bedtime, can interfere with the ability to fall asleep. Nicotine and certain medications may also have stimulating effects.

Alcohol and Substance Use

While alcohol may initially induce sleep, it can disrupt sleep architecture, leading to fragmented and less restorative sleep. Substance use, including recreational drugs, can also impact sleep quality.

Poor Diet and Eating Habits

Heavy or large meals close to bedtime may cause discomfort and indigestion, making it difficult to sleep. Dietary choices can also impact energy levels and sleep quality.

Physical Discomfort

Physical discomfort due to conditions such as pain, discomfort from an uncomfortable mattress or pillow, or other physical ailments can interfere with sleep.

Environmental Factors

External factors such as light, temperature variation, noise etc can affect sleep. An overly bright or noisy environment may disrupt the ability to fall or stay asleep.

Medical Conditions

Underlying medical conditions, such as chronic pain, respiratory disorders, or hormonal imbalances, can contribute to poor sleep quality.

Shift Work and Irregular Schedules

Working irregular shifts or having inconsistent sleep-wake schedules can disrupt the body's natural circadian rhythm, leading to poor sleep quality.

Age-Related Changes

Aging can bring changes in sleep patterns, with older adults often experiencing lighter sleep and more frequent awakenings during the night.

Ways to improve Poor Sleep Quality

Improving poor sleep quality often involves a combination of lifestyle changes, sleep hygiene practices, and, in some cases, medical interventions. Here are various strategies and treatments that can be helpful:

Establish a Consistent Sleep Schedule

- Going to bed at a particular time as well as wake up at the same time every day, even on holidays.
- To follow a consistent sleep routine to regulate the body's internal clock.

Create a Comfortable Sleep Environment

- Keep the bedroom dark, quiet, and cool.
- Invest in a comfortable mattress and pillows.

- Reduce noise and consider using blackout curtains or a sleep mask.

Practice Good Sleep Hygiene

- This is very important to follow good sleep hygiene like limiting the screen time of mobile and other gazettes before sleep time, as the blue light emitted from screens can disturb the melatonin production which is hormone for sleep.
- Avoid stimulating activities close to bedtime.
- Limit caffeine and nicotine intake in the evening.

Physical Activity

- Regular physical activity is healthier way to initiate and maintain the sleep, but intense exercise close to bedtime should be avoided.
- Exercise can contribute to better sleep quality and help regulate sleep patterns.

Mindfulness and Relaxation Techniques

- Practice relaxation techniques such as deep breathing, meditation, or progressive muscle relaxation before bedtime.
- Mindfulness-based therapies may be beneficial for reducing stress and improving sleep.

Limit Naps

- If nap is needed, it should be kept short (20-25 minutes) and napping late in the day should be avoided as it disturb the sleep cycle.

Manage Stress

- Identify and manage sources of stress through techniques like journaling, counselling, or stress-reduction activities.
- Stress management strategies can positively impact sleep quality.

Medications

- In some cases, healthcare professionals may prescribe medications for short-term relief of insomnia.
- However, medications are usually considered a temporary solution, and their long-term use can have side effects.

What Ayurved can Offer

Ayurveda, an ancient system of medicine originating from India, offers holistic approaches to address various health concerns, including poor sleep quality. It emphasizes balance in the body, mind, and spirit to achieve overall well-being. Here are some Ayurvedic recommendations that may be considered to improve poor sleep quality:

Establishing a Routine (*Dinacharya*)

- Ayurveda emphasizes the importance of daily routines to promote balance. It is highly essential to establish a consistent sleep schedule by going to bed and waking up at the same time per day.

Balancing *Doshas*

- Ayurveda categorizes individuals into three *Doshas* (*Vata*, *Pitta*, and *Kapha*), and an imbalance in these *doshas* can affect sleep. There should be a personalized approach based on personal *Dosha* to restore balance.

Herbal Remedies

- Ayurvedic herbs are commonly used to promote relaxation and support the nervous system. Examples include *Ashwagandha*, *Brahmi*, *Jatamansi*, and *Shankhpushpi*. These herbs may be consumed as teas, powders, or in the form of Ayurvedic formulations.

Ayurvedic Oils and Massage

- *Abhyanga*, or self-massage with warm Ayurvedic oils, can help relax the body and mind. Oils like sesame or a blend of specific herbs may be used.

Dietary Recommendations

- Avoid heavy meals close to bedtime. A light, easily digestible dinner is recommended.
- Warm milk with spices like turmeric, nutmeg, or cardamom is often suggested to promote relaxation.

Yoga and Meditation

- Gentle *Yoga Asanas* and *Pranayama* (breathing exercises) can help calm the nervous system. Practices like meditation and mindfulness can also be beneficial for promoting relaxation.

Creating a Relaxing Sleep Environment

- Sleep environment should be a place for adequate relaxation. This may include dimming lights, minimizing noise, and maintaining a comfortable room temperature. It will also include the *Sukh Shayya*- Sleeping on a cot is *Tridosha Shamaka* and is a promoter of good health. Sleeping on a bed on the ground neutralizes *Vata* and *Kapha*, sleeping on the ground results in obesity, increases virility, increases *Vata* and dryness in the body and neutralizes *Rakta Pitta*. Sleeping on a wood piece increases *Vata*. Sleeping on a comfortable bed in general increases happiness, sexual desire and virility and helps in getting rid of excess of *Vata* and exhaustion.

Ayurvedic Sleep *Panchkarma* Modalities

Ayurvedic formulations like *Shirodhara*, *Nasya*, *Pratimarsh nasya* etc. which are used to promote relaxation and improve sleep.

The potential role of *Panchkarma* therapies like *Shirodhara* and *Nasya* in improving sleep quality can be understood through its impact on the following aspects:

1. Nervous System Calming

Ayurveda views the nasal passages as a gateway to the brain. *Nasya* is believed to have a calming effect

on the nervous system, which can be beneficial for promoting relaxation and reducing stress and anxiety-factors that can contribute to poor sleep quality.

2. Balancing *Doshas*

Nasya is often used to balance specific *Doshas*, particularly *Vata*, which is associated with the elements of air and ether. Imbalances in *Vata* can lead to restlessness, insomnia, and other sleep disturbances. By addressing *Vata dosha*, *Nasya* may indirectly support better sleep.

3. Sinus and Respiratory Health

Nasya is traditionally used to promote the health of the nasal passages and respiratory system. Improved respiratory function may contribute to better sleep quality, especially for individuals with nasal congestion or sinus issues that can disrupt breathing during sleep.

4. Cognitive Clarity

Ayurvedic texts suggest that *Nasya* can enhance mental clarity and cognitive function. Clearing the nasal passages may contribute to better breathing, which can positively impact overall sleep quality.

CONCLUSION

The current scenario of abstinence from *Sneha Dravyas* due to fear of weight gain and cholesterol issues, the people do vigorous exercise and avoid use of *Sneha*, which leads to excessive *Vata Prakopa*, and *Kapha* depletion, leading to poor quality of sleep. The uses of *Sneha* in various forms like *Paan*, *Pratimarsh Nasya*, *Basti* etc. can improve the quality of sleep by improving the hormones efficiency and reducing vitiation of *Vata* resulting in better sleep quality along with improved quality of life.

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