

Facts About Sleep -Articles Abstract

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Abstract

Sleep is a vital physiological state and one that has a profound effect on mental and physical wellbeing. When a person is asleep, the body reaches a relative unconscious state when the eyes are closed and consciousness and physical movement are reduced. Sleep is characterized by changing levels of depth, which are associated with the various stages that lead to restoration and sustainability of health. Such processes include tissue repair, memory consolidation, and hormone regulation. Sleep quality and depth are vital to well-being, as they affect our mood and performance when we are awake. This abstract discusses sleep and its importance in health as a period of mental and physical renewal.

Keywords: Sleep, Health, Consciousness, Body Restoration, Mental Health.

1.Introduction

Sleep is a critical part of a healthy lifestyle and a crucial part of physical and mental health. Quality and quantity of sleep plays a large role in how you feel throughout the day. When we sleep, our body is working hard to sustain our brain activity and health in general. Sleep is a relative unconscious state, though voluntary in nature, this phase is regularly delivered to us, giving us rest and rejuvenation(1).

When we sleep we are in a state of partial or complete absent-mindedness. It is the condition of not being aware of what is going on around us, and we are usually closed-eyed during this period. The absence of consciousness results not only in a reduced response to external stimuli but also in a decrease in physical movement. When we sleep, the level of sleep varies, and it varies depending on many factors. This difference is a further sign of the different stages of sleep, which occur at night and each stage contributes to some of the restorative processes in the body.

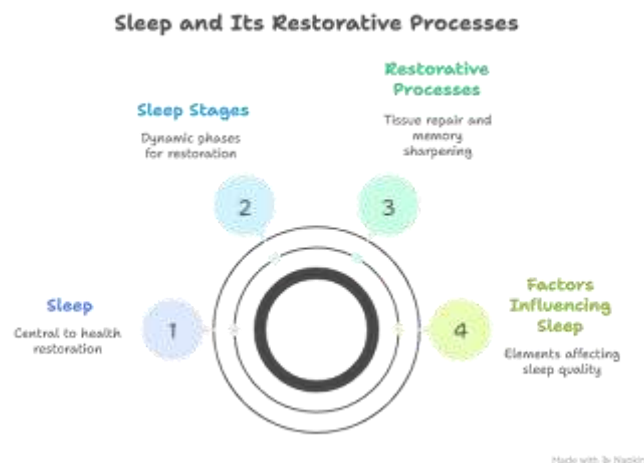


FIGURE 1 Sleep and Its Restorative Processes

There are various phases of sleep which have various functions. These are dynamic stages because they alternately change to light stages of sleep and heavy restful stages(2). The body needs the different levels of sleep to fix tissues, sharpen memories, balance hormones and other important activities that can ensure overall health. In this way, sleep serves as a critical time for both physical and mental restoration.

2.Requirement for Sleep

Sleep requirements are also determined by many factors, such as age, lifestyle, and individual health needs. But there are some basic prerequisites, which are universally necessary to achieve restorative sleep. First of all, the

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organism is to get enough sleep period depending on the age group. Adults are typically supposed to get 7-9 hours of sleep every night, but children and teenagers are supposed to get more since they need to take care of their growing bodies and developing brain. Along with the duration, the quality of sleep is important. This is beyond getting enough sleep but also having continuous and deep sleep patterns that enable the body to carry out its restorative processes efficiently(3).

A relaxing and comfortable environment is important when it comes to supporting sleep. A cool dark and silent room is usually best suited to induce deep sleep because distractions like noise or light can interfere with the natural sleep process. Sleeping schedule and maintaining a regular bedtime routine are also some of the contributing factors that ensure that the internal clock or circadian rhythm of the body works at its optimum. Last but not least, it is necessary to relax both mentally and physically before sleep. The capacity to fall and remain asleep can be greatly enhanced by avoiding caffeine, heavy meals and stressful events before sleep. A combination of these conditions leads to the conditions required to achieve physical health, psychological well-being, and overall vitality through sleep(4).

The quantity of sleep needed is different. But the daily sleep need of different age groups is:

- Newborn and infants: 18 to 20 hours
- Growing Children: 12 to 14 hours
- Adults : 7 to 9 hours
- Senior citizens: 5 and 7 hours

Sleep cycle: A sleep cycle refers to the oscillation between the rapid eye movement (REM) and non-REM sleep. The melatonin hormone usually takes between 90 and 110 minutes and an average person has four to six cycles per night. When it is dark, the pineal gland in the brain secretes melatonin.

Stages of Sleep:

Sleep has three non-rapid eye movement (non-REM) phases and rapid eye movement (REM), which is the last stage of sleep.

- ✓ Stage N1: This is the lightest of all stages of sleep, and it normally takes only a few minutes.
- ✓ Stage N2: healthy adults typically sleep half a night in N2 sleep. As the brain activity is slowed down, it has bursts of activity which could aid in the memory retention and learning process.
- ✓ Stage N3: N3 epiphany, sometimes referred to as slow wave sleep or deep sleep, is what enables an individual to wake up feeling fresh. At this phase, blood pressure decreases, heart rate decreases, breathing rate decreases, and growth hormone is released by the body. In this stage, people usually use 10 percent to 20 percent of the night.
- ✓ REM Sleep: As its name implies, in this stage of sleep, the eyes of people periodically move very quickly. The most intense dreaming happens during REM sleep and the skeletal muscles are paralyzed to ensure that a person does not act out what they dream. This is the stage of memory consolidation. It takes 20 to 25 per cent of an average nightly sleep, the greater part of which is to the morning(5).

Importance of Sleep

To be healthy and well requires sleep. It not only helps you learn, think and remember, but it also helps you feel good and prevent disease.

1.Physical health

- Sleep allows you to stay in good health.
- Sleep is useful in controlling blood pressure.
- Sleep decreases the chances of heart disease, diabetes, and other chronic diseases.
- Sleep aids your body to combat infection and inflammation.

2.Mental health

- Sleep can help you to de-stress and also boost your mood.
- Sleep makes you wiser and able to think better.
- Sleep makes you get along with other people(6).

3.Learning and memory

- Sleep assists you to build and retain memories.
- Sleep teaches you how to do things.

4.Safety

- Sleep will prevent injuries and accidents.

- Sleep is essential not only to personal security, but also to the safety in the workplace.

3. Disadvantages of Sleep

Sleep plays a vital role in general health and well-being, but there are adverse effects of excessive or poor-quality sleep. One of the primary disadvantages is the effects of oversleeping as a person can feel groggy, tired, and not mentally clear, which is often referred to as sleep inertia. Longer sleep than the 7-9 hours of sleep that are recommended in adults has also been associated with more risks of acquiring health issues like obesity, diabetes, heart diseases, and even a reduced life span. Abnormal sleep habit also affects mood and cognition negatively since sleepiness can lead the body to lose normal circadian cycle. Ongoing sleep disorders such as that caused by insomnia or sleeping disorders such as sleep apnea can result in health-related problems in the long term, such as memory loss, decreased immune response, and stress(7). The effects of low sleep quality or inadequate sleep hours may include cognitive, concentration, and emotional instability. In addition, it has been observed that the danger of accidents and errors is associated with chronic sleep deprivation due to the impact that it has on reaction, decision, and attention. So, although sleep is crucial, a disturbance in sleep patterns can cause considerable negative health, productivity, and life quality effects.

Undersleeping may leads to,

Cognitive impairment: you may not be able to recall what you learned or experienced during the day.

- Irritability: You can be slow, or irritable in the daytime.
- Chronic illnesses: You also have an increased risk of chronic illnesses such as heart disease, stroke, and diabetes.
- Fertility: Your libido may decrease and your conception difficulty in question.

Oversleeping may leads to,

Health issues: You may have an increased risk of getting chronic diseases such as heart disease, stroke and diabetes.

Headaches: You may get headaches particularly when you sleep longer than normal during the weekend or on vacation(8)..

- Back pain: You may develop back pain.
- Sleep inertia: You may feel groggy immediately after waking up, so it becomes more difficult to work and feel alert.
- Night time sleep difficulties: You may be unable to fall asleep or remain asleep at night.
- Sleep Disruptors: There are a lot of factors that can influence sleep, and these are physical, mental, and environmental factors.

Physical factors

- Medications.
- Pain: It can be difficult to fall or keep falling asleep due to pain in the body, headaches, and joints.
- Weight: Obesity and abdominal circumference may have an impact on sleep quality.
- Diet: Eating heavy meals and drinking alcohol prior to sleep can interfere with sleep.

Mental factors

- Stress: Stress, anxiety and depression can have a negative impact on sleep.
- Employees are subject to positive or negative emotions which may influence the quality of sleep.
- Coping skills, Hobbies, exercise, and positive thinking are useful in improving sleep quality.

Environmental factors

Light: Light, and artificial light, in particular, may have an impact on sleep.

- Noise
- Temperature.
- Safety and violence
- Air pollution.

Other factors

- Age.
- Medical conditions.
- Sleep changes: Jet lag and shift work may interfere with sleep.
- Bedtime habits

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- Neighborhood environment: Neighborhood environment may influence the quality of sleep.

What is sleep disorder?

Sleep disorder is a disease that interferes with your normal sleeping patterns. Sleep disorders are more than 80. Some major types include:

- Insomnia - inability to fall asleep and to remain asleep. This is the most prevalent sleep disorder.
- Sleep apnea - difficulty in breathing while sleeping: You pause breathing 10 seconds or longer.
- Restless leg syndrome (RLS) - a pins and needles feeling in your legs and the desire to move them.
- Hypersomnia - being unable to keep yourself awake during the day. This involves narcolepsy that leaves one very sleepy during the day.
- Circadian rhythm disorders - problems with the sleep-wake cycle. They make you unable to sleep and wake at the right times(9).
- Parasomnia - behaving out of the ordinary when falling asleep, when asleep or when waking up, like walking, talking or eating.

How to improve sleep?

You can change your habits, diet, and sleep environment to increase the quality of your sleep.

Habits

- Sleep and get up at the same time.
- Avoid caffeine and alcohol.
- Avoid late-night snacking.
- Turn off electronics before bed.
- Create a relaxing sleep environment.

Diet

- Consume lean proteins: Chicken, fish, and egg whites have tryptophan (increases serotonin).

With warm milk, chamomile tea, or tart cherry juice: Drinking these beverages will help you to calm down(10).

Sleep environment

- Use a supportive mattress and pillow.
- Use breathable fabrics.
- Keep your bedroom quiet, dark, and cool.
- Other tips Exercise regularly, Try meditation or mindfulness, and Avoid napping.

4.Conclusion

Sleep enhances your brain performance, mood and health. Failure to get a regular quality sleep increases the chances of most diseases and disorders. Sleep is a fundamentally essential and complex aspect of human health that builds the foundation of well-being. So as we sleep we are more in a state of relative unconsciousness and we find that we are allowed to do an important process of critical restorative processes. All these processes are essential to both physical and mental health as the body strives to mend tissues, balance hormones, form memories, and ensure the brain is functioning properly. Sleeping variability is critical to the occurrence of these processes and to the importance of enough rest in the night and its relation to performance in the day. Regular and good sleep habit helps the body to rest after a day of stress, emotional health, and cognitive performance. Conclusion Sufficient or insufficient sleep of the right or wrong quality, however, can lead to a range of health issues, including cognitive impairment, immunosuppression, and predisposition to diseases. Good sleep hygiene and getting sufficient restful sleep should be regarded as a primary goal of long-term health. Once people know and value the necessity of sleep, they are able to improve their lives, overall health, and make sure that they are performing well daily. Sleep is therefore not a luxury or even a biological need, but a valuable pillar to a healthy and productive life.

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Conflicts of interest

The authors have no conflicts of interest to declare

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