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## **ВЛИЯНИЕ СНА НА ПСИХИЧЕСКОЕ И ФИЗИЧЕСКОЕ ЗДОРОВЬЕ**

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Статья посвящена изучению значения сна в жизни человека. В своей работе мы рассмотрели вопросы о том, как отражается нарушение сна на самочувствии человека, его влияние на психическое и физическое здоровье. Также выяснили, что происходит во время сна с человеком, от чего зависит качество сна.

**Ключевые слова:** сон, физическое здоровье, психическое здоровье.

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## **THE IMPACT OF SLEEP ON MENTAL AND PHYSICAL HEALTH**

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The article is devoted to the study of the importance of sleep in a human life. In our work we analysed how sleep disorders affect a person's well-being, its impact on mental and physical health. We also found out what happens during sleep with a person, what factors the quality of sleep depends on.

**Key words:** sleep, physical health, mental health.

Many people just dream of having a couple of extra hours in a day to keep up with doing more. But few people wonder what would happen if we slept a couple of hours less every night than the previous one? Of course, a lot depends on your individual need for sleep. Namely, how much time your body needs to fully rest and recover.

### **The aim**

The aim of the article is to analyse how sleep affects our mental and physical health and to identify the importance of sleep in our lives.

The definition of sleep and its stages

Sleep is a heterogeneous state, it is divided into several stages, each of which is characterized by a certain electrical activity on the electroencephalogram, as well as mental and motor activity, vegetative and endocrine features. Sleep is an active process, since there is no stage of sleep in which electrical activity is not observed in the brain.

We know about the existence of two types of sleep: fast and slow.

Slow sleep occurs immediately after falling asleep, it is divided into three stages, where with each stage we fall asleep deeper and deeper. This is accompanied by muscle relaxation, a decrease in heart rate, slowing breathing, a drop in body temperature and cessation of eye movement. It is more difficult to wake you up at this time, and having done this, it will not be easy for you to orient yourself and come to your senses. Brain waves slow down at this point, and interesting patterns can be traced.

The brain itself uses significantly less energy during deep sleep, which is important, because during wakefulness it takes from twenty to twenty-five percent of the body's total energy.

But the REM sleep phase is even more interesting. It is quite similar to wakefulness both in terms of brain waves, and in terms of rapid heartbeat and breathing, as well as active eye movement and increased body temperature. We see most of our dreams during this period. After waking you up, you will most likely be able to accurately retell them. Interestingly, in this phase, the muscles of the arms and legs are temporarily paralyzed, presumably so that we don't mess up while experiencing some vivid dream. Surely many of you have had the experience of suddenly waking up in the middle of the night and being unable to move, or it happens on the contrary that the body has not suppressed muscle activity enough, and you can twitch in your sleep. In general, both cases are not a problem, unless they happen to you consistently.

The most interesting thing is that both phases of sleep change each other several times a night. As a result, each iteration of fast and slow sleep is distinguished as one cycle, the duration of which is on average ninety minutes for a person. That is, we can experience from four to six such cycles per night. But there is also an interesting feature here: the first cycles per night are shifted towards slow sleep, and the subsequent ones gradually contain less and more fast sleep.

#### **The impact of sleep on physical and mental well-being**

After analyzing the data obtained, we found out how sleep affects our health.

##### **Physical health:**

Sleep provides rest for the body, plays an important role in metabolic processes. Slow sleep helps to restore internal organs, as it affects the pituitary gland through the hypothalamus, contributing to the release of somatotropic hormone (growth hormone). Paradoxical (fast) sleep restores the plastic properties of neurons in the brain, enhances the processes in the cells of the neuroglia, which provide neurons with nutrients and oxygen.

Sleep is an adaptation of the body to changes in illumination (day and night). It promotes the assimilation of information: during sleep, information is transferred from short-term memory to long-term memory, especially during slow (orthodox) sleep. Memorizing material before going to bed promotes memorization and better reproduction, especially of logically unrelated material. During sleep, unnecessary information accumulated during the day is deleted and new information is prepared for reception.

##### **Mental health:**

During sleep, an emotional restructuring occurs: during REM sleep, the excitability of the foci of motivational arousal that arose as a result of an unsatisfied need decreases. Unmet needs are reflected in dreams, and patients with depressive states have unusually vivid dreams. Thus, a psychological stabilization of the personality takes place in a dream. Also, during sleep, the central nervous system is cleansed.

In conclusion, sleep plays a vital role in maintaining physical and mental health. Lack of sleep can lead to serious problems such as cognitive decline, mood deterioration, a weakened immune system and an increased risk of developing chronic diseases. Regular and high-quality sleep helps to restore and strengthen the body, improves memory, concentration and general well-being. Understanding the importance of sleep and maintaining healthy sleep habits should be a priority for every person striving for a full and active life. Take care of your sleep — it is an investment in your health and well-being.

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