

2. Information Text: Sleep well?

We spend about a third of our lives asleep. Time thrown out? Not at all! Even if we have the feeling that we don't do anything during these hours, our bodies are busy at work.

It breaks down harmful substances, renews cells and recharges our energy stores. Our brain is also active. It repeats what it has learned during the day in order to remember it better.

From Sleeping & Dreaming

In the course of one night we walk through several sleep cycles. Each of these sleep cycles lasts between 90 and 120 minutes and consists of three sleep phases: light sleep, deep sleep and dream sleep.

In the first half of the night, long deep sleep phases predominate. The first starts between 10 p.m. and 11 p.m. depending on sleep rhythm and lasts 90 to 120 minutes, the second, which is 20 to 30 minutes shorter, we reach between 2 a.m. and 3 a.m..

During the deep sleep phases our body recovers. Our breathing and heartbeat become slower and more regular, our muscles relax, and our eyes barely move. At the beginning of the night in the first deep sleep phase, more growth hormones are also released. Our brain finally has time to process all the stimuli that were absorbed and collected during the day. It repeats the information we fed it, sorts it and stores it so that we can retrieve it on demand. In the deep sleep phases it is decided what we actually keep in mind of all that we have tried to learn.

Waking up from deep sleep is particularly difficult. Sometimes it takes several minutes to find your way around again. If you are woken up during a deep sleep phase, it is all the easier to fall asleep again. Often you don't even remember being awake the next day.

The later the night or the earlier the morning, the longer the light sleep phases and the dream phases, the REM phases. REM stands for "Rapid Eye Movement" - because these phases are characterized by rapid eye movements. In these times of intense dreams, pulse and respiratory rate are different from those in the deep sleep phase and irregular, and the features of the face also change depending on what is happening in the dream. On the other hand, the remaining muscles relax even more than in deep sleep. We are in a kind of paralysis that ensures that movements we make in dreams are not made in reality.

While the REM phase lasts only about ten minutes in the first sleep cycle, it doubles in the second cycle. In the second half of the night, the REM phases last about one hour, sometimes even up to two hours.

Basically, we dream in real time, i.e. the time span in the dream corresponds approximately to the actual past time. Sometimes, however, a dream plot can extend over a longer period of time, in this case, as in the film, there are cuts between the different periods.

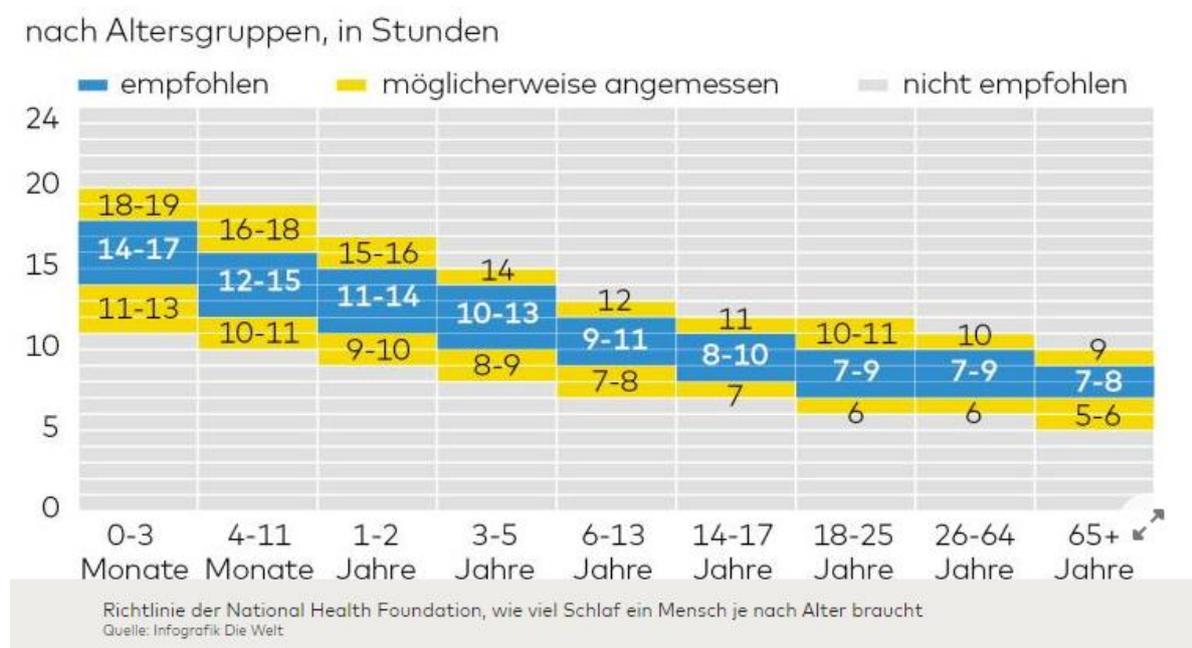
How much sleep do young people and young adults need?

Young people between the ages of 12 and 18 need at least 8.5 hours sleep. 9.5 hours of sleep would be optimal to be fit for the enormous growth and change processes that occur during puberty. At the age of 18 - 25 we get along with about one hour less, that is 7.5 hours.

In fact, however, young people and young adults sleep significantly less. This is probably due not least to the change in sleep behaviour during puberty. Young people are becoming more nocturnal. They go to bed later, but often have to get up at the "usual" time for school, vocational training or work. This leads to a sleep deficit.

Researchers attribute the shift in sleep rhythm not only to the changed interests, but also to the hormone melatonin. Melatonin regulates the day-night rhythm - it makes you tired. From puberty onwards, it is distributed later in the evening, but the output lasts correspondingly longer in the morning.

If the alarm clock rings at seven in the morning, many people of this age are still in the middle of their sleep and recovery phase. Only around nine o'clock they become receptive and efficient again.



It depends on the rhythm...

In addition to the duration of sleep, the sleep rhythm is also responsible for whether we feel comfortable. Anyone who goes to bed at different times or tries to "make up for" the lack of sleep during the week by sleeping late at weekends causes stress to their body with this irregular sleep-wake rhythm. This can take the form of aggression, depression or mood swings. Therefore, as hard as it may be sometimes, one should try to go to bed regularly during the week and not sleep until noon at the weekend.

Sleep deprivation

Chronic sleep deficiency affects not only our mood but also our health. Our immune system lacks the necessary time to recover, and our heart is also under greater strain. Vascular deposits, a high risk factor for cardiovascular diseases, are increasing.

Too little sleep can also affect our weight. While the appetite-stimulating hormone ghrelin is produced when awake, the appetite-suppressing hormone leptin is produced during night sleep. This supports the body to get along up to 12 hours without food intake. If there is too

little night sleep, this hormonal balance is shifted and the leptin cannot take effect. Many people therefore suffer from ravenous hunger attacks after short nights or eat much more frequently and much more than after sufficient sleep.

Our brain stores new memory contents while we sleep. During the dream phase, motor skills such as cycling are strengthened, while during the deep sleep phases it is typical subject matter, such as vocabulary.

If we do not get enough sleep, our brain does not get enough time to store all content. Our learning successes are diminishing. Sleep deprivation affects body and mind. After 24 hours of sleep deprivation, our threshold of irritation drops, we become more aggressive and at the same time much more inattentive. It's getting harder and harder for us to concentrate. After about 60 hours of sleep deprivation, we are already suffering from hallucinations and delusions.