

General knowledge about sleep
3 - 6 years
Generel viden om søvn



Engelsk

Good sleep results in happy and bright children

Knowledge about sleep is the first step towards good sleep.

There is much research concerning sleep and its vital importance to biological processes, life quality and ability to function during the waking hours, and more is added on an ongoing basis. In the following, we provide an outline of the most important knowledge, which up to now is considered to be well-researched.

Concentration, memory and learning

Sleep greatly influences the power of concentration and memory and consequently learning. Lack of sleep will reduce concentration and reactivity immediately, but more long-term sleep deprivation is of importance to the storage of information in the long-term memory. Children or young persons who sleep too little perform less in school.

Lack of sleep

Behaviourally, lack of sleep may trigger bodily restlessness, hyperactivity, increased irritability, aggressiveness and an increased stress level. In the long term, chronic lack of sleep can increase the risk of developing anxiety, depression and suicidal thoughts, among other things.

Growth

Sleep has a growth-stimulating and regenerating function in the body, among other things through increased production of growth hormone. Stress hormones are reduced during sleep, as with the metabolism. This influence takes place through many hormones, among them cortisol, insulin, leptin and ghrelin. Disturbance of these processes may result in reduced height growth, poor composition and regeneration of tissue.

Excess weight

An increased tendency for excess weight is seen in connection with long-term lack of sleep, among other things because of an inappropriate change of the appetite regulation, insulin sensitivity and destabilization of the blood sugar.

The immune system

The immune system is also influenced by sleep, among other things through the stress hormones. Chronic lack of sleep may thus weaken the immune response so that resistance to infections is reduced.

Let the children sleep

Sleep is important to the generation and regeneration of the brain and is life-essential already at the foetal stage. Babies and infants cannot sleep too much. The brain needs rest, and dreams are healthy, in that dreams stimulate the brain cells and keep them alive. From the 23rd week of pregnancy, the child almost dreams day and night.

The dream stimulation continues after the birth, then reduces slowly, but plays a vital role to the brain and the mind for the entire life. Small children benefit from sleeping as much as they can. Infants get many sense impressions and experiences during the waking hours of the day, and these must "be put in place on the right shelves" in the brain during the night. Therefore, the child needs extra much sleep.

Sleep stages

When we sleep, we undergo four sleep stages. In particular, the deep sleep is important for us to function well the next day. We most often have this type of sleep early in the night. The first stage is when we fall asleep. Then we go through stages 2, 3 and 4, which are repeated in a pattern (a sleep cycle) throughout the sleep period.

1. **Falling asleep:** We doze for 5 to 15 minutes. Thoughts are blurred, and recollection of visual images takes place.
2. **Light sleep:** During this stage we have no thoughts, but we are easily awakened. The stage lasts for about 30-40 minutes.
3. **Deep sleep:** The stage where we sleep deeply and are difficult to wake. Here, we release a growth hormone, and this is why children need more periods of deep sleep than adults. The stage lasts for 30-40 minutes.
4. **Dreaming sleep/REM sleep:** Here, all muscular activity stops, and the body becomes limp. The stage is called REM sleep, meaning "rapid eye movement" because the eyes can be seen

to move quickly under the eyelids. That is also the stage at which we dream. This stage takes up 20-30% of the sleep and starts after about 80 minutes of sleep.

Sleeping problems

Many things can influence the sleep, both in adults and children, and there may be many different sleeping problems. For some periods we sleep well, and for others not so well. In particular, things go up and down in various periods, for example during teething and illness.

Ordinary sleeping problems, such as not being able to fall asleep at night, may be owing to too little sleep or inappropriate sleep habits. Cohesion has been found between the sleep habits of parents and children so that the more the parents sleep, the more their children sleep. Likewise, inappropriate sleep habits of parents may influence their children. Consequently, the parents may benefit from looking into their own habits if the children's habits need to be changed.

The need for sleep differs from person to person and depends i.a. on the child's age. The younger you are, the more the body and brain need sleep. The most important thing is that you recognise your child's needs and look for the signs of sleepiness in the child.

Good sleep habits are established by means of regularity and good routines around bedtime and by not extending the time awake in bed. Fixed sleeping and eating times contribute to ensuring a good circadian rhythm. The responsibility that rhythms and bedtimes are kept lies with the parents. Recommendations about children's need for sleep are based on the Danish Health Authority's **Vejledning om forebyggende sundhedsydelser til børn og unge (guidelines on preventive health services for children and young people)**.

Need for sleep

By creating the framework of good sleep and having routines surrounding bedtime, you give your child the opportunity to have the sleep it needs.

3-6 years: 10-12 hours per night.

Some children of 3 still require a nap in the daytime, perhaps in particular when they have just started kindergarten with many new impressions. We recommend that parents and staff together find the best solution for the child.

If the child still needs its afternoon nap and it has problems falling asleep at night owing to lack of sleepiness, you may consider if the afternoon nap should be shorter or eliminated entirely.

Good advice

Ensure:

- That the child has a quiet and safe place to sleep with a minimum of noise, dust, light and free from smoke.
- Blackout curtains can be used advantageously, a proper mattress fitting to the weight of the child so that the body is supported correctly
- A good duvet and perhaps a teddy/comfort blanket - this creates a good atmosphere and security
- To make the bedroom ready for the night by cleaning up, airing the room and drawing the curtains
- That the bed is used only when the child is going to sleep (and not for punishment/timeout)
- Calm surrounding the child, for instance by turning of the TV, radio and other noisy devices well before bedtime
- Fixed sleeping times and tucking-in rituals
- To tuck in the child when it is tired and not overtired
- That the child is happy to go to bed (an hour before it is to sleep), so there will be time for washing the face/body, brushing teeth, talking and reading a bedtime story
- Ensure that the putting to bed is connected to something nice. After all, it is something you have to do every day.
- That there are two hours to slow down from sports and until the expected time of sleep

Tucking-in rituals

Having good rituals for tucking in is important and it is significant what you do together with your child before it goes to sleep. Spend time together with your child in the afternoon and evening. It will be easier for the child to go to sleep, if its need for presence and having a cosy time has been met. Follow the same pleasant tucking-in ritual, and put the child to bed at approximately the same time every night. Children love routines, and children with good sleeping habits will sleep better.

This is how an evening could be:

Eat early. Of course, the child should not be hungry or thirsty when you tuck in, but the child will not sleep very well on a too full stomach.

After supper, calm and pleasant rituals such as having a bath, tooth-brushing and a bedtime story will help the child calm down and indicate that the day is over.

Spend time with the child, sit quietly together reading a book or singing a song so that peace sets in.

Watch the child and pay attention to the signs of tiredness. Children who have difficulties falling to sleep at night are usually exhausted. Children may also have difficulties falling to sleep if they are put to bed too early – before they show any signs of sleepiness.

Once the child shows signs of sleepiness, you will have about 10-15 minutes to put the child to bed. Then it will be too late for tucking-in rituals if you have not had time for them. The child will then hopefully go to sleep quickly. If the child does not go to sleep quickly and has become exhausted, then put the child to sleep when it has calmed down again. Put the child to bed earlier the next day.

Stick to the same bedtime to avoid any discussions about when the child must go to bed.

Sleeping difficulties

If your child has many thoughts at bedtime, a brief "good-night talk" in which you talk about something pleasant, may provide the child with positive thoughts when it is going to sleep. Quiet music or a story on CD may function well if there are problems with falling asleep. It functions as a kind of "tapestry" removing all the small noises in the home and keeps excessive thoughts at bay.

What screens do to the sleep

In general, watching TV does not make children sleepy. On the contrary, they can get more awake and find it more difficult to fall asleep.

The use of screens in the form of TV, computers, cell phones and tablets before bedtime may make it more difficult to fall asleep at night. By using screens, you are exposed to artificial light. Light from screens represses the sleep hormone melatonin which keeps us artificially awake. This may mean that attentiveness is increased, and the circadian rhythm is shifted.

Therefore it can be a good idea to turn off TV's, radio and other noisy devices well before bedtime. It is recommended that these devices are turned off one hour before bedtime. It means peace when there are no light and sounds from TV's and other devices, and at the same time it gives the child the possibility of finding peace in itself.

Get control of the circadian rhythm

A fixed circadian rhythm is one of the most effective initiatives to alleviate sleep problems. If you have a child who falls asleep very late in the night, it is important first of all to adjust bedtime. Then, you should stick to a very fixed rhythm with the same bedtimes and getting up times, also during weekends and holidays for a period in order to establish the new rhythm. Once you have got control of the circadian rhythm, you may try to relax the routine a bit to see how things go.

Set limits and agree

The absence of setting limits on the part of the parents may result in problems when putting the children to bed. As parents, you decide routines and bedtime. Agree on bedtimes and routines. Agree on an approach and stick to your decision. The child will quickly perceive the lack of limits and disagreement between you.

Sources:

Danish Health Authority: Sunde børn – om barnets første 3 år (healthy children – about the first three years of a child's life)

Elizabeth Pantley: Sov igennem uden gråd (Sleep through the night without crying)

Vibeke Manniche: Børns søvn – din lille sovetryne (Children's sleep – you little sleepyhead)

If you have questions about children and sleep, we recommend that you contact the Health Services of Egedal Municipality, on telephone 7259 6720.

A visiting nurse will answer your questions or provide guidance.

See the website of the Health Services:

www.sundhedstjenesten-egedal.dk

