

**General knowledge about sleep  
1 - 3 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.

### **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 the 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 for children's sleep need are based on the guidelines **Sunde Børn (healthy children)** from the Danish Health Authority.

### **Need for sleep**

By creating the framework of good sleep and having routines around bedtime, you give your child the opportunity to have the sleep it needs. A child between 1 and 3 needs 12-14 hours of sleep during a 24-hour period. Children are different, but most children of 1 sleep 12-14 hours during a 24-hour period, out of which 1 or 2 naps during the day. Between the age of 1 or 2, most children make do with 1 nap in the afternoon.

## **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), a calm atmosphere around the child, for instance by turning off 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 associated with something pleasant. After all, it is something you have to do every day.

## **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 tiredness.

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.

It is a good idea that the child learns to go to sleep without the parents being present in the child's room. Thus, it will be easier for the child to fall asleep again on its own if it wakes up in the middle of the night.

### **A nap – do not wake up the child**

We recommend that you do not wake children having a nap. Children cannot sleep too much, but they can sleep too little. If the child's natural need for sleep during the daytime is disturbed, the night's sleep may be negatively influenced. Children who are allowed to have a nap until they wake themselves sleep better at night. A good nap during the day improves the sleep at night because the child gets more out of the day and is more naturally tired in the evening.

We recommend that the parents and the day-care staff talk about what is best for the child. If there are problems getting the child to sleep in the night, you can talk about whether the solution may be to make the child nap a little bit earlier in the day so that the child will not sleep too late in the afternoon. Preferably, the child should not sleep after 3 pm, or it will influence the sleeping time, which is around 6.30 or 7 for this age. In this way, the children can get 12 hours of sleep at night.

### **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 the circadian rhythm is under control, 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. The child will quickly sense it if you feel insecure.

### **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-egekom.dk](http://www.sundhedstjenesten-egekom.dk)

