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# Nursing Info 9

## The meaning of sleep and movement for the care of people with dementia

### Part 2 „Sleep“

(Information brochure for caregiving relatives and caregivers)

# IGAP

Institute for Innovations in Healthcare  
and Applied Nursing Science

nursing-science

### Dear reader,

Seven out of ten people with dementia suffer from sleep disorders. The nightly sleep deprivation resulting from this causes a very particular problem to the caregiving person at home. Clear structures of the day and distractions can no longer be ensured due to the exhaustion.

Thus, the person with dementia is free to sleep whenever they want. This again results in another shifting and fragmentation of sleep. The situation for the caregiver becomes worse and worse.

The day and night courses arising from this are often not bearable at home and then require for the persons with dementia to be admitted to a care facility. This is the case at the latest when the caregiving relatives reached their physical and health limits.

Their physical and mental ability decreases and the immune system is disturbed. Besides being tired during the day, they also get a bad temper. The entire recreation and regeneration process, which takes place during sleep, is disturbed.

All parties involved suffer from this.

Caregiving relatives suffer to the same extent from the lack of sleep as the persons affected.

### What happens during sleep?

We spend a good third of our life with sleep and are very active during sleeping.

There is a constant change between light sleep, deep sleep, and dream sleep. During the dream sleep phase our brain works at full speed. In the stadium of light sleep we move, turn, and change our position in bed. This definitely has a deeper meaning.

1. The body regulates its heat balance:  
If it is too warm → arms and legs stick out of the blanket  
It is too cold → arms and legs are covered by the blanket again
2. Changing the position of the body leads to a continuous relief of pressure of the single body parts and thus means excellent pressure ulcer prevention.
3. By alternately tensing and relaxing the muscles they are stretched and relieved regularly. This prevents painful muscle tensions.
4. The feedback given to the brain from the movements of muscles, ligaments and joints and from the sensation of the skin given by the regular positioning provides for a safe sensing of the body.

In this way sleep becomes restorative and we can start the day well-rested.

Healthy sleep takes an averaged seven hours. This however is not a fixed time target. The duration varies individually. Those who feel well-rested and powerful have slept sufficiently normally.

An inner clock sets our biological rhythm which makes us active and powerful during the day and lets us reach our slump at night to sleep. This inner clock sends signals for the day and the night. Even if the doze off time is shifted forcedly our inner clock often makes us wake up in the morning hours. The recreational value of the day's sleep is not on par with the night's sleep.

### **What are the effects of a restorative sleep?**

Sleep serves for the recreation and regeneration of body and mind. Different processes take place in the different sleep phases.

Spent energies are replaced, metabolism is stimulated, toxic substances and waste products are removed. Children grow at night, the somatic cells of adults are being reproduced, dead ones are being replaced, and muscles are being built up. The immune system works during sleep and protects the body against infections. Learned information is stored during sleep.

### **Does sleep change at old age?**

The sleep-wake rhythm changes at old age. It shifts backwards.

The consequence is that in the morning the elderly wake up earlier and that in the evening they are tired earlier. The duration of sleep at night decreases in the elderly, since it is being disturbed by wake phases that are more frequent and longer than the ones of the younger. However, by taking a nap the elderly often reach the same amount of sleep as a younger person.

### **How does the sleep behaviour change in dementia?**

According to studies, the elderly person with dementia needs longer to fall asleep than an elderly person not suffering from dementia. They wake up more often at night and then stay awake longer. They are often very active during these wake phases. Relatives sometimes describe this as a restless tossing and turning in bed.

One reason for this is the search for sensational and motional feedback in order to feel their body. This provides for orientation and security, takes fear away and thus helps in finding back to sleep. If they don't get the perception they look for, this can lead to nightly roaming – provided the person affected is still able to – or to sleeplessness. A reversal of the day-night rhythm is often described.

As a consequence of the lack of sleep at night, this or the other nap is taken during the day, which again results in a lack of fatigue in the evening. Sleep is being fragmented.

### **What to do when the nightly sleep is disturbed?**

Structuring the daily routine and its activities is helpful. Adjusted activities prevent from boredom and passivity.

Taking an afternoon nap is normal for most elderly people and serves for relaxation. If possible, any sleep in excess thereof should be avoided, as it reduces the need of sleep at night. Exciting activities should be made in the morning or in the early afternoon, so that the day can conclude serenely towards the evening.

### **Optimum sleep conditions can help!**

As described above, persons with dementia need longer to fall asleep than healthy elderly people. After approx. 10 minutes of lying down the perception of their body gets lost. This lack of orientation and security is worrying for the persons affected and can result in fear. The person lying down needs the perception from movement and touch to sense their body.

The sensation of the own body provides for security. This perception is multiply disturbed in people suffering from dementia. Just like they used the nightly movements to maintain their body image when they were healthy, they now try to get information and feedback to make them sense their body by moving intensively.

On mattresses being too soft the body image can get lost. Furthermore, they often make it difficult for the weak person to turn without problems. They literally lose themselves in these mattresses; they then try in vain to get the necessary information for their body by moving intensively. This again makes it difficult for them to get back to sleep, if they can at all.

Movement and perception concepts like the Basal Stimulation, Kinaesthesia, Aktivitas, the Bobath Concept, and MiS Micro-Stimulation® can be helpful here.

MiS Micro-Stimulation® means supporting the recreation of the body image by slight touch and slight movements.

The aim of this perception support is to stimulate movement. This provides for the preservation of the ability to move and thus supports the patient in independently changing their body position.

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