

# IGAP

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## Nursing Information 7

# Dementia — MiS Micro-Stimulation<sup>®</sup> as an intervention in demential changes

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Dear reader,

Nearly everyone has experienced it - the word is at the tip of one's tongue, or one could have sworn that one had put down the key over there. Everyday situations in which our memory occasionally plays tricks on us. In numerous people, the occasional trick of our memory becomes a constantly increasing breakdown of our memory with consequences in our everyday existence and lives. There are increasing negative effects in the areas of activities of daily life, orientation, learning ability, language, comprehension as well as our capacity to make judgements.

The Federation's health reports show that within Germany, nearly one million people from the age of 65 up suffer from dementia, and the number of new illnesses is almost 200 000 every year<sup>1</sup>.

The umbrella term dementia stands for a reduction in the mental capacities due to brain damage. However, it is frequently difficult to assess whether an age appropriate change in mental capacity is present or the person has an early stage of dementia.

If one wants to have only a minimal idea of what happens to affected persons, this becomes clear from the Latin literal translation of the word dementia: „**to be without spirit**!“ The person loses control over themselves, right through to changes in personality, behaviour and personal characteristics.

It is particularly here that outsiders and affected persons are equally exposed to a situation which often makes it difficult to interact.

<sup>1</sup> Robert Koch Institute Statistical Federal Office Health Reporting in the Federation Book 28  
Old Age Dementia



# Body sensation and body structure

*The brain requires information about:*

## **Skin senses**

(surface sensation)

- **Pressure**  
(Merkel cells,  
Ruffini endings)
- **Temperature**  
(sensors for cold and warm)
- **Pain**  
(nociceptor)
- **Vibration**  
(Father Pacini cells)
- **Touch**  
(Meissner bodies)

## **Proprioception**

(depth sensation)

- **Neuromuscular spind**
- **Mechanoreceptors /  
pressure receptors**



***Body perception***

In the field of decubitus prophylaxis and therapy as well as in pain therapy, the successes of MiS also speak for themselves, and have found high acceptance in everyday care.

## Forms of dementia

Approximately two thirds of all affected persons suffer from the probably best known form, the **dementia of the Alzheimer type**, conversationally known as Alzheimer's. This disease of the brain was described for the first time in 1906 by neurologist Alois Alzheimer, and was later named for him. This type of dementia is also termed a **degenerative form**, since nerve cells in the brain die off slowly but permanently. Consequently, the brain performance of affected persons is steadily reduced. This is expressed, for instance, in orientation and perception disturbances. The initially gradual progression as well as the already mentioned steady decline in brain performance are characteristic signs of the illness. Alzheimer's may progress continuously or in stages. There are increasing restrictions in the activities of daily life until the person requires full care.

A further 15 – 20 % of demential disorders are **vascular ( = affecting the blood vessels)**. They are triggered by circulatory disturbances of the brain, e.g. after a stroke. The narrowing or closure of blood vessels which supply the brain cause the brain cells to suffer from oxygen and nutrient deficiency, and eventually they die. With regard to the prognosis, the condition does not necessarily worsen in vascular-related dementia by comparison to Alzheimer's.

Lastly, there are the so-called **secondary dementia** forms. Unlike the advancing forms, these types of dementia are, for instance, due to alcohol or pill addiction, inflammatory or transmissible diseases, or metabolic disorders.

Approx. 10 % of all affected persons are affected by underlying illnesses of these or similar types. If the diagnosis is made in time, the underlying illnesses may respond to therapy, so that the dementia may become lessened. In the most favourable cases, the dementia may disappear entirely.

## Interventions in dementia

Even though much is already known about demential illnesses today, there is still no form of treatment which can stop the advancing degenerative processes. Through the use of non-medicamentous treatment forms and a multitude of newly developed drugs, attempts are made to delay the reduction of mental capacity in order to counteract the increasing loss of independence and thereby quality of life insofar as possible.

With regard to the limited therapeutic options, the affected persons must be supported at the psycho-social level as well as being treated with medications. There are already numerous approaches to intervention in dementia. They may positively influence both the management of the illness and the well-being and quality of life of the affected persons.

### **Approaches for intervention in dementia:**

- **Validation<sup>2</sup>**
- **Biographical work / memory care**
- **Encouragement of perception and movement**

The need for such approaches becomes apparent in the example of support for perception and movement. Human interaction with one's environment is among the most important influencing factors of life quality, and makes a significant contribution to the maintenance of health and well-being. Therefore, one must try to maintain wholeness as long as possible, encouraging and supporting elementary needs for perception, movement and active communication.

Lasting perception of our body and our environment is only guaranteed if the physical senses are faced with suitable demands and stimuli. On the other hand, monotonous - that is, unchanging – stimuli are no longer perceived after only a short time. The lack of stimuli which results from this situation will, in the short or long term, lead to a loss of reality and finally, to a loss of orientation.

<sup>2</sup> The focus of the validation, particularly in handling persons who are ill with dementia, is on acceptingly allowing the affected person to remain within their living worlds and taking statements, feelings and actions seriously. The term 'validation' also refers to 'valuing something'.

One can frequently observe that old people try to defend themselves against this lack of stimuli. For instance, the affected persons will nest their fingers in the bed covers or sway their upper body. In a kind of self-help, the affected person begins to stimulate him/herself (auto-stimulation) in order to obtain information about their body and their environment, even though it is only in a limited manner. Dementia sufferers who are bedridden or suffer from restricted mobility are at particular risk in this regard.

Possible interventions for supporting perception and movement in those who suffer from dementia can, for instance, be found in **basal stimulation** or **MiS Micro-Stimulation®**.

**Basal stimulation** is a concept for encouraging perception and communication. The concept was developed in the 70s by specialised pedagogue and healing pedagogical psychologist Prof. Dr. Andreas Fröhlich to encourage the early development and perception of children with severe or multiple disabilities. It supports severely disabled persons in experiencing their own body and in interacting with their environment. The support concept is oriented to basic and thereby familiar sensory experiences which human beings experience in their developmental processes from the embryonal period.

In the 80s, the concept of basal stimulation was taken up by nurse and diploma pedagogue Prof. Christel Bienstein and transferred to the care of adults in cooperation with Prof. Dr. Fröhlich. From this approach, Bienstein and Fröhlich developed “**basal stimulation in care**”

**MiS Micro-Stimulation®** is a dynamic, therapeutic care approach to support perception and movement. It is in a continuous development process.

It links neurophysiological fundamentals with movement and perception training approaches such as basal stimulation and the Aktivitas concept.

MiS supports the body image through body orientation. In order to obtain this, the brain requires sensory information.

For this purpose, MiS utilises – among other things – the sensory apparatus of the skin, muscles and bones. The acquired information is transmitted to the brain and from here, transferred – for example – into motion at the respective location.