

Introduction

As the number of prematurely born babies increases it gets more frequently necessary that these babies need intensive medical care after their birth. The use of modern medical technology – life in the incubator – ensures their survival. The environment in the incubator also means for the little new born child the deprivation of the stimulating and natural perceptions which it was exposed to in its mother's womb before. It is placed in a sensory vacuum. Moreover, the baby gets disturbed and irritated by numerous alarms (beep sound of various intensity) as well as nursing and medical activities which it cannot identify. The hectic hustle and bustle in an intensive care unit and the constant change of the contact person create additional restlessness for the baby. In the incubator the new-born is permanently exposed to stress and disstimulations which endanger its natural development.

The premature birth insufficiently provides the baby with basic experiences it needs to make in its mother's womb. These experiences are important preconditions for the later post-natal development of the newborn. The intrauterine dialogue between mother and baby was interrupted too early. In uterus, the baby already apprehends the sounds of its mother and from outside. It feels the change between activity and rest, sleep and vigil. The unborn participates in its mother's activities, enjoyments and tensions. The sensory experiences in its mother's womb during the pregnancy already provide the unborn with information about itself. Somatic, vestibular and vibratory information stimulating the whole body form the starting material to create an own Ego apart from the baby's surrounding world. This basic perception is necessary for the unborn in order to develop an idea of the own body and of itself. Thereby, the skin serves as a tool for contact as well as for segregation. The inner ear enables the child to determine its position in the womb and to coordinate its movements. The baby's sense for vibration helps it to perceive and process oscillations from outside (voices, sounds) with its body. The unborn baby experiences lasting impressions through vibration.

Already, in the fourth month of the pregnancy, complex responses of the fetus to external changes can be observed. It reacts with coordinated movements to position changes of its mother. It locates touches and responds with precise movements. Sufficient time to mature in its mother's womb is required to ensure normal further development of the child. In the case of premature babies, this time is decisively shortened.

A respective number of premature babies are children with significant support needs. **Contrary to normal children, premature babies will have a reduced potential for activity and movement.** They are only insufficiently able to perceive their own body and environment. Subsequently, an undifferentiated body concept reduces the possible movement potentials. The baby only indifferently or not at all perceives its body as a whole - or crucial parts of it. Movement and development, perception and communication ability directly interrelate with each other and cannot be separated.

Also, the development of an interpersonal relation between the parents and their premature baby is disturbed. The mature baby itself with its differentiated expression movements can initiate and coordinate activities with its mother or its father. During this encounter the baby is the real actor. Its parents only react with caring and stimulating activities. The premature baby does not have the psychobiological necessary set of activity programs at its disposal in order to stimulate its parents correspondingly. Additionally, the ideal imaginations of parents about birth and parenthood often make them experience the premature birth as their personal failure. Moreover, the stabilization of the parent-child-relation gets more complicated if feelings like guilt occur.

Hence, the unfavorable starting conditions for the premature baby should be reduced. Its survival should be ensured, but at the same time its human needs should be met in order to support its individual development and the parent-child relation. Stimulation and care cannot be replaced by classic therapy. They are the more important the closer a human being is to the beginning of life.

Basic Stimulation

In the 1970s, Prof. Dr. päd. Andreas Fröhlich developed the concept of Basic Stimulation firstly in order to promote the perception of people with significant mental and physical support needs. **Basic Stimulation promotes communication, encounter and development focusing on basic human needs in all realms.** In general, the principles of Basic Stimulation address ill as well as healthy people of all age. These principles need to be individually adjusted for premature babies with limited perception potential – they need to become more basic and more elementary.

Premature babies need a lot physical closeness to have direct experiences and perceive other human beings around them. They need a nurse who gives them an understanding of their environment in simple way, makes movement and changing of position possible and understands them without words. The use of the principles of Basic Stimulation in the care of premature babies

- supports their development**
- protects from sensory deprivation and disstimulation**
- strengthens the parent-child and the nurse-child relation**
- serves as crisis support for the parents and**
- sensitizes the parents and respectively the nurses for the needs of the child.**

Integrating Basic Stimulation in the daily care tries to compensate the premature baby's lack of own experience, movement and knowledge about its environment. It should provide contact to the external world and to its own body with its perceptions. Hence, these experiences should stabilize the baby's ego and help to establish relations to its environment. As part of the activating care the Basic Stimulation should help to counter the sensory depletion and disorientation as well as to avoid psychological and physical harm.

“Basic Stimulation” means to make simple, elementary sensory offers which should influence a baby’s development favorably. The children do not have to meet any mental or physical requirements to participate. All measures will be adjusted to the individual needs of a patient.

Corporality is the starting point for Basic Stimulation. Also, the nurse or parent of the premature baby participates physically in the therapy. Body contact provides a holistic mediation of experiences and impressions. Therefore, Basic Stimulation can also be described as a **consistent repetitive and systematic care**, which signalizes closeness, attention and a certain exclusiveness of the relations. This care is not legitimized by reaching certain aims and a certain point of time. Rather, it wants to enable the baby here and now to contact others, to experience itself through activity, to move and perceive and last but not least to suffer less.

The principles of Basic Stimulation derive from the basic principles of human life. Polite manners coin the living together of human beings: Knocking on doors before entering the room, friendly greetings, shaking hands when meeting somebody else. We should approach premature babies with the same respect and pay attention to the basic principles of human life when ing with them.

It is important to disturb the sensitive baby as little as possible. Contrary to a therapy rhythm, its development of a biological rhythm should be promoted. Hence, nursing as well as medical-therapeutic measures should be coordinated wisely. The most important precondition for such coordination is the close cooperation between the nurses.

The parents should be integrated into the care of the baby as close as possible, so that they can take over after appropriate instruction. Also, the parents need support and encouragement. That way they can handle their elementary feelings of fear and pain. They benefit from a calm and stimulating care through which they learn how to give their baby safety and security. **By this means, the Basic Stimulation also promotes the parent-child relation.** Additionally, the

integration of the parents into the care brings a reduction of contact persons for the baby.

Basic Stimulation tries to resume the early elementary perceptions (somatic, vestibular and vibratory) of the baby and its experiences in the mother's womb. Somatic stimulation targeting the whole skin and muscles should provide a positive experience with the own body and its contacts to the external world. That way, the torso should be modeled as the center point of the body. Later, arms and legs are added to the perception of the stimulation which ends with hands and feet. The touching of the skin should be floating, steady and uninterrupted. Interruptions irritate and disturb a consistent body perception.

Additionally, experiences and perceptions in the oral-tactile (touching), oral-gustatory (tasting), olfactory (smell), auditory (hear) and visual (see) realm can be mediated. The baby not only learns to sense, move, feel, smell, taste, hear and see, but also to link these experiences with each other.

Basic Stimulation mediates the premature baby elementary physical stimulations in order to support it to better organize itself. A well structured experience with its own body is the foundation to create a body identity as a starting point for the development of one's personality. Care that follows the principles of Basic Stimulation reduces stress and promotes the early stabilization of the baby's sensitivities.

Also, American scientists were able to prove the meaning of touching for premature babies. Several researchers reported about positive experiences with touch stimulation (Field, T.M., 1986; Ottenbacher, K.J., 1987; White-Traut, R.C., 1988). Higher gains in weight and better results of development tests among children were observed (Field, T.M., 1987; Scafidi, F.A., 1990). Recent research points out that touch stimulation can relieve stress hormones and influence the immune system favorably (Field, T.M., 1990; Reite, M., 1990; Acolet, D., 1993; Suomi, S.J., 1994).

Basic Stimulation in the daily care of premature babies

On the basis of a daily care the principles of Basic Stimulation will be elucidated as follows:

Before beginning the actual care in an incubator all necessary materials will be prepared and place within reach, so that the procedure can be carried out continuously. Hence, the baby will not be irritated by an interruption of contact.

A disinfection of the hands should take place before starting the care in the incubator. Every contact with the baby should start with a greeting – a clear touch. The greeting hand should not move on straight away. Instead, it takes up and accompanies the movements of the baby. The baby should be approached calmly; it should not be taken by surprise. The nurse should give the baby the time it needs to be prepared for the subsequent activities.

The care activities should be ritualized and systematized. As the activities are ritualized (i.e. through repetitive touches of the foot or the hand as a greeting), the nurse signalizes to the baby, that the activity is going to start. Systematizing activities would mean that the beginning and end is marked with calm greeting or farewell activities. For the baby this would ease the transition from resting to activity and the other way round.

All touches should be carried out slowly, clearly and with calm. Sketchy or grazing touches can irritate the baby and should be avoided. The whole care procedure should be supported by an elementary communication. The nurse should speak softly with the baby. During the whole activity there should be continuous body contact with the baby, i.e. one hand should always touch it. This mediates closeness and safeness. Also, the several care activities should give the baby an idea about its body. For example, washing can help the baby to develop a complete body concept: The baby feels the various parts of its body and becomes

aware of their interrelations. For the baby washing will be a great experience to learn from.

The torso and the extremities will be washed first. Then, the genital and anal regions will follow. Due to its high sensitivity the face will be washed at last. After washing the genital and anal regions a second disinfection of the hands will be necessary. Also, the old washrag should be replaced by a new and clean one that has been wetted with fresh water. **Instead of tap water one should use boiled water that has normal body temperature.** The comprehensive, repetitive, calm and intensive touches with the washrag should cover a large area.

The nurse should model the torso as the center of the baby's body where all movement activities start from. The baby should feel it as a whole. **One should bear in mind that touching the ECG electrodes directly or showering them with water could trigger false alarms.** In order to wash the back side the baby will be slowly turned over on its pad. It should not be lifted as it must not leave its safe pad. A soft initial turn over movement signalizes the baby that it will be turned. This message asks the baby whether it is ready for the full turn over. If it responds positively the nurse begins to turn it over slowly. A slowly turn over on the pad will give the baby the chance to follow the change of position.

Subsequently, the arms and legs will be washed. The washrag will be wrapped around the arm and respectively the leg. It will wash every extremity softly to the top of each finger and toe. **The washing and drying of the skin follows the principle of tracing.** Hence, every baby receives information about its body as a whole including such details like fingertips. Then, the genital and anal regions will be washed. The baby is invited to a discovery tour through its own body which it happily accepts. The procedure ends with the washing of the face.

General Information about Hygiene

One should pay attention to all prescribed hygiene measures. Some of them can be integrated into the perception environment. For example, the damp pad on

which the baby lies should be replaced with a clean and dry one during the last roll over of the baby (not shown in the video). Also, the baby should be cocooned (enshrouded) in dry and clean sheets after washing it.

When interrupting or finishing the washing procedure, the contact to the baby should not be ended abruptly. **A nest should be built for snuggling.** The baby has to be placed in a way that it can feel itself well. It should be able to collect information about the position of its head, its extremities, etc. The baby should be covered with a sheet as a protecting cocoon. A ritualizing farewell (i.e. the touching of the baby's hand) signalizes the end of the interaction. It should be accompanied vocally. The baby remains in the protecting cocoon and will be able to process the impressions it just gained. Placing a toy (in the video it is the Punch) can additionally indicate the ending of the interaction and symbolizes the beginning of a new situation (i.e. to rest). Subsequently, the incubator will be covered with a cloth to protect the child from disturbing light. Now, it can safely rest as it is protected from external stimuli.

Also, feeding the baby should follow the principles of Basic Stimulation.

Thereby, the mouth is very important as it takes a central role to explore objects in the first two years of life. Exploring taste and structure are important experiences of the mouth – in particular this is the case with a baby fed by a probe which lacks tasting and oral-tactile stimuli. A swab tintured with glucose can mediate the baby important experiences for the ingestion of food. At first, holding the swab close in front of the nose stimulates the olfactory sense. Touching the cheeks and the mouth triggers active movements to search, suck and swallow. The baby can take the swab into the mouth, hold it, suck liquid out of it and taste it. Smelling and tasting can improve the sucking ability of babies. A baby fed by a probe can experience smell, taste and saturation when it gets fed naturally. (A primary aim should be that a baby ingests food itself if it is able to drink. Feeding by a probe should only be carried out, if the baby is not able to drink.)

Within the scope of necessary medical care for the baby it will not be able to avoid measures which can irritate or cause pain (i.e. the introduction of an infusion or a stomach tube, blood collection, or simply the weighing or changing of the incubator). Carrying out these measures, the principles of Basic Stimulation should be respected. The nurse should approach the baby calmly and greet it first.

Above all it is important that during these irritating measures (i.e. blood collection) a familiar person accompanies and calms the baby.

The baby should not be disturbed frequently during its resting phases when it is unnecessary as it can enduringly irritate the baby. **Hence, caring and medical diagnostic/therapeutic measures should appropriately happen at the same time.** Therefore, a wise coordination of the necessary and planned measures is a precondition. It requires the close cooperation of everybody involved – the nurses as well as the doctors. Team spirit as well as sufficient sensitivity will take a positive effect on the small patient.

Basic Stimulation is no luxury

Basic Stimulation is no luxury that should be carried out if there is sufficient time for it. According to the previous experiences with Basic Stimulation, the initially higher sacrifice of time will be evened out once the baby got used to the new care. The babies who have been nursed according to the principles of Basic Stimulation are from experience calmer and more balanced. Hence, the number of alarms decreases and empirically the resting phases of the babies get longer. An optimized care according to the principles of Basic Stimulation promotes the stabilization and development of the baby which favors for everyone involved.

Caring activity is always a form of elementary communication. A conscious application can support the development of babies individually. **Care should not be stress. Instead, it is a joint experience that also is of value for the nurse itself.**