24 hour postural care management

Able-bodied individuals can easily change and adapt their body position to suit their daily tasks and are able to move freely without support. People who have a disability may, in varying degrees, have a posture that is affected by increased or decreased muscle tone, limited range of motion in joints, reduced muscle strength, and motor function limitations.

This influences their ability to position the body independently. It often becomes difficult to move freely in lying, sitting, standing and to change position whenever required. The need for external support to manage a position is crucial and can be accomplished by using assistive devices in:

LYING

SITTING

STANDING

WALKING

What is postural care management?

Postural management is achieved through a combination of therapy and the use of assistive devices to support the person in different positions like lying, sitting, standing and walking.

The devices are individually adapted to fit the individuals needs, with the intention to:

- Enable and improve functional ability
- Facilitate development of motor function and control abnormal movement patterns
- Encourage activity and participation
- Prevent secondary complications (hip dislocation, deformities, contractures etc.)
- Manage pressure points
- Promote comfort and relaxation
- Enhance breathing, swallowing, digestion and cardiac function

Assistive device equipment enables:

- Symmetry and alignment
- Comfort and relaxation
- Stability, but not fixation
- Variability
- Activity and participation

Symmetry and alignment

People with disabilities often have problems with postural symmetry due to reduced muscle strength and altered muscle tone. With limited support in sitting or standing, he or she will try to hold the head upright and keep the body in balance, but at some point lose the battle against gravity and slowly collapse into an asymmetric position. The person might lean towards one side, bending the trunk to one side and have a stretch on the other side. He or she might not have enough strength to counteract and move the body back into a symmetrical position. Over time, this asymmetric position will negatively impact the body and cause skeletal distortion, like scoliosis. Asymmetrical positions also limit independence and ability to be active and participate in daily life.

Supportive equipment is used to counteract asymmetry and promote alignment to avoid negative outcomes on body function and structure, but also to increase the person's ability to live an active life.

Symmetry and appropriate body position can help to promote:

Comfort and relaxation

It is important with comfort in all positions. If a position is causing pain, for example, spasticity might be triggered and increase inappropriate positioning. In situations where the person is showing discomfort, it is important to act and find out WHY! 1. Is it because there is a need for a new position? 2. Is it related to pressure points? 3. Has the person grown out of the assistive device and therefore is not supported well enough anymore?

Comfort encourages relaxation, and in lying it is essential that this is achieved. Especially during nighttime when sleep and relaxtion is needed.

Stability, but not fixation

Postural support equipment should stabilise, but not fixate the person. For example, a special seating system should stabilise the proximal trunk and facilitate mobility of the arms and hands to encourage the individual to engage in activities, eat, handle remote controls etc. The goal is to support well enough to promote selective movements of limbs.

Variability

People with severe disabilities have limited voluntary variability in their movements. They may not at all be able to change positions themselves and are completely depending on you as a caregiver changing positions for them. Frequent change of positions in lying, sitting, standing and walking will prevent pressure areas, reduce stiffness and contractures, as well as letting the person experience movement in different positions.

Activity and participation

It is natural for people to be active and participate in activity with family or friends. Good and appropriate positioning enables people with moderate to severe disabilities to be active and participate in daily activities. It is important to be aware that sedentary behaviour among people with moderate to severe disabilities is already increasing at the age of 3-4 years. Awareness of positioning from an early age may promote activity and decrease sedentary time which also has a great impact on general health

For postural care management to be effective we need to be aware of the child's positioning throughout the day and night – 24 hour positioning

Postural management in lying

Children and adults with postural care needs to spend from 33% to 50% of their day in a lying position. When lying, disturbed muscle tone, decreased muscle strength and gravity have negative impact on the body's position and it may pull the person into harmful postures.

To avoid asymmetry, different types of positioning equipment, like pillows with diverse shapes can be used to support the child or adult. Also, specialist beds can be helpful for more appropriate positioning in lying. It is also important that the person finds comfort and rest in lying as this will influence muscle tone, pain, and sleep.

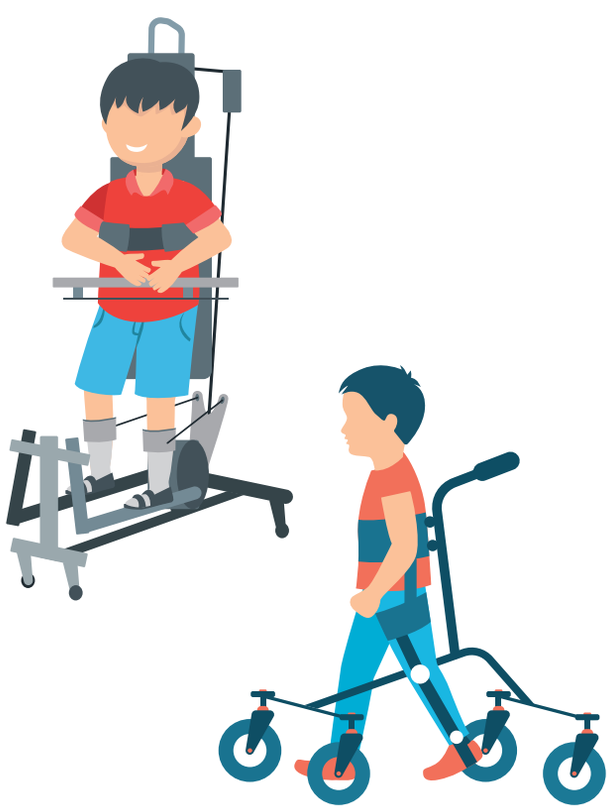
Postural care management in sitting

People with a disability also spend many hours in sitting during the day and good seating equipment for different purposes can be beneficial.

This will give variability during the day and encourage activity and participation, engagement in upper limbs, as well as independence. There might be a need for a special chair at home and at school or work supporting the person in an appropriate position that enables use of their hands freely. For mobility, there might be a need for a manual wheelchair or electrical wheelchair, supporting them to enable self-propelling or handling of the joystick. Car seats with special support ensure good positioning and safety when driving. Additionally, equipment for toileting and bathing may be needed.

Postural care management in standing

It is recommended that people with disabilities, who are not able to stand and walk on their own, have standing and walking equipment available. Being in an upright standing position has many benefits on health and wellbeing. Changes of position into supported standing and walking enhances circulation and blood pressure as well as respiration. Some even experience when in an upright position that they get better control of and higher volume of the voice. This is often related to deeper breathing when in this position. Standing and walking enables eye-to-eye contact with peers which may have an impact on the person's confidence and self-esteem. Supported standing and walking with weight-bearing has positive impact on muscle length, joint mobility and bone density. It also helps with digestion and toileting. There are several standing and walking devices available for both children and adults. Some might need less support to walk, for example with a posterior walker, while others need more body support and correction like in an NF-Walker. Several assistive devices for standing are available when it comes to static standing, or you might prefer a more dynamic stander such as the Innowalk.



What type of equipment to choose from?

There are several types of postural support equipment available on the market, and sometimes it can be difficult to decide on which type of equipment that fits best. It is recommended to seek support and advice from your physiotherapist and/or occupational therapist. They will analyze needs based on diagnosis, functional ability, time spent in different positions during the day, as well as physical examination.
An examination includes:

Observation of the person in lying, sitting, standing and walking:

- Ability to position themselves
- Ability to change position
- What happens when left in a position over time?
- How much support is needed to be in a position?
- Functional ability of limbs when in a position?
- If supported does functional ability of limbs change?

Mapping of:

- Joint Range of Movement
- Spasticity

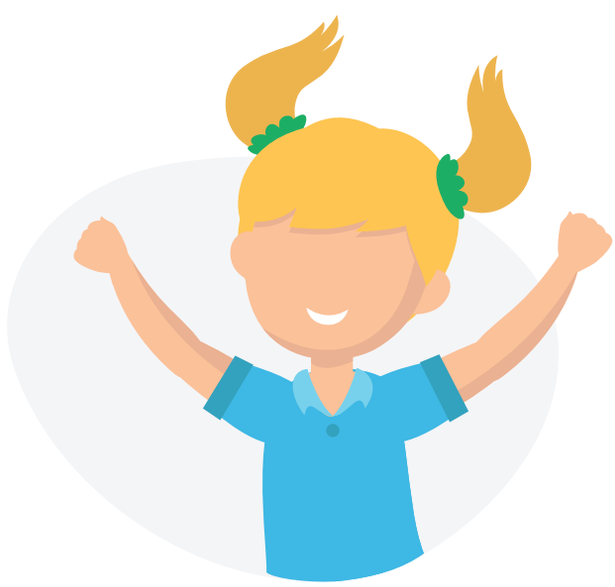
Therapists will also gather information from you as parents or caregiver on your needs in daily life like preferable activities, home situation and surrounding environment. All this information allows the therapist to recommend equipment that meets both the individual user and the caregiver's needs.

When to start with postural care management?

Postural control is established early in life, therefore the need for early diagnosis and early intervention is paramount.

As soon as we suspect that a child has a developmental disorder or shows signs of an asymmetrical movement pattern, we should start with postural care management.
For people with a disability this is a lifelong approach, and adaptation of the equipment and program is a continuous requirement.

Postural care management in lying should start at infancy or as soon as asymmetries are observed. Positioning in sitting and standing should ideally be initiated at the age of 9-12 months, in alignment with the age when typically developing children naturally move into these positions.



Resource

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made for movement