



**Support for interactions, routines, structure, and sleep**  
for people with an autism spectrum disorder, ASD



# ABILIA

## About Abilia

Abilia works for a socially sustainable and inclusive society, in which people with special needs feel secure, independent and involved. We are passionate about creating conditions for everyone to live a more fulfilling life. We work towards the UN's Sustainable Development Goals, as our assistive technology is adapted to the individual, creates a change in behaviour, has a lasting effect on individuals, customers and society.

With more than 40 years of experience, supported by research evidence, we know that our assistive technology makes a difference. Early intervention is an important key for improving levels of education, inclusion in work life, and life-long health.

## Health, equality and inclusion

More and more people are being diagnosed with autism spectrum disorders, probably due to increased awareness and broadening of diagnostic criteria.

Society needs to become more inclusive in order for these people to get better conditions and quality of life.

Early intervention can prevent serious consequences.

Knowing which disabilities may occur with autism guides treatment. In addition, learn how to adapt the environment and understand which cognitive support may be needed.

Abilia's cognitive support provides value for the user, as well as family members and friends – at home, in education and at work.





# Autism spectrum disorder

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Neurodevelopmental disorders depend on how the brain operates and works. The most common diagnoses are autism spectrum disorder, ADHD/ADD, Tourette's syndrome, and language disorder.

Autism is expressed within a spectrum, hence the designation autism spectrum disorder, abbreviated to ASD. The level of disability can vary greatly.

Autism is common in combination with ADHD/ADD and Tourette's syndrome. Intellectual disability and epilepsy may occur.

## Common challenges in autism

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The degree of difficulty can vary greatly, but common characteristics are:

- difficulties with reciprocity, interaction and communication
- great attention to detail and special interests
- difficulty in managing changes and switching between activities
- difficulty in changing behaviours and habits
- challenges in adapting to learning techniques
- strong reaction to sensory impressions
- difficulty sleeping

Additional challenges arise when diagnosed in combination with ADHD/ADD, including anxiety, intellectual disability, epilepsy.

The degree of independence in personal care, housing, education and working life depends on where on the autism spectrum the individual is located, any other diagnoses, as well as which environment and what support the individual receives.

# Routines, structure, predictability, and good sleep make everyday life easier

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Factors that can affect a person with autism is that they receive;

- information about their disability based on age and maturity
- knowledge and the right treatment from those in their environment
- a calm and predictable environment
- stimulation of language development, support for communication
- visualisation of time, and clarity in what is to happen and when
- routines and support for sleeping
- autism-friendly education establishment
- autism-friendly workplaces



# Assistive devices can contribute to participation and independence

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Compensating assistive technology can enable an individual to better manage personal care, housing, education, work, and leisure time.

Early intervention can prevent exclusion and over-dependence, contributing towards increased participation and independence.

- a communication aid aims to stimulate language development, facilitate interaction and communication
- sensory-stimulating weighted products aim to facilitate falling asleep and maintaining sleep at night, creating a sense of calmness and focus during the day
- cognitive support aims to help the user get an increased sense of time, make it easier to maintain routines, structure, and to achieve predictability in everyday life



## Individualised aids can make everyday life easier for the whole family

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Assistive devices should be selected and adapted to the individual, but can also become a shared tool for everyone making every day life work better

- improved interaction and communication
- better sleep for everyone in the family
- less need to remind the individual about activities
- better relationships and fewer conflicts





# Regular education and special education

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Regardless of the type of education, adaptation of the environment, attitudes, and routines are important in supporting students with autism.

Even if the student has personal aids with them, it is of value to equip classrooms with products that can support concentration, motivation and predictability.

- weighted collars and weighted blankets can help with concentration and focus
- timers that visualise the passage of time can motivate users to maintain focus and prepare them to switch between activities
- stationary and mobile planning tools that clarify time and schedule make the student prepared for what is to happen and when



## Supported Living

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Supported Living and daily activities need to be of good quality, giving the individual self-determination, integrity, influence, and co-determination

- in Supported Living where the residents have been given tools for structure, clarity and recovery in their lives, this has led to both increased cognitive and communicative capability
- the same individual cognitive assistive tools have had a positive impact on the company's working environment, and increased well-being among the staff
- the staff receives more time for meaningful activities that create value – both for the residents and for themselves\*



\*-How using assistive technology for cognitive impairments improves the participation and self-determination of young adults with intellectual developmental disabilities, 21 September 2021

-Jeg kan! Innovasjon i livslange tjenester til personer med utviklingshemming, rapport 2019

# Workplaces

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Employers can do a lot to make it easier for employees with autism.

- tasks can be adapted and performed one at a time, support can be given in structuring and prioritising tasks
- the working environment can be adapted so that the individual can move to a quieter and calmer location, noise dampening room dividers and noise-cancelling headphones can help
- working hours can be flexible to suit the individual's needs, opportunities for individual breaks and rest rooms
- work aids, e.g. weighted collars, weighted vests, visual timers, digital time and planning tools can help





# The Quarter Hour Principle visualises time as a quantity

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The Quarter Hour Principle is the basis of Abilia's time aids. Time is abstract and often difficult to manage. Time perception is based on the individual having a sense of the passage of time, being able to orientate themselves in time, and plan their time.

- the Quarter Hour Principle shows the time as a quantity
- everyone can follow what is more and less, and that when a dot "disappears" it is less
- the term "dot" can be used in daily speech
- you don't need to know time concepts such as hours and minutes
- comprehensible terms allow many people to increase their perception of time

The time pillar counts down to an event with fixed, countable steps.

Dots go out from top to bottom:

1 dot = 15 minutes = "1 quarter"

More than 8 dots = "a long time"



A lot or a little lemonade



A lot or a little time

# Proven and evidence-based medical devices

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The following products are Abilia's solutions for supporting individuals with autism. They can be used at home, in day-to-day operations, in group homes, education, or in workplaces.

## MEMO Timer

MEMO Timer is a robust timer that visualises time as a quantity.

The product supports the user:

- for an increase sense of time
- to wait for something and to "hurry up"
- to focus on mentally demanding activities
- to complete an activity
- to increased self-esteem and control of impulses
- to reduce stress, conflicts, and aggressive behaviour



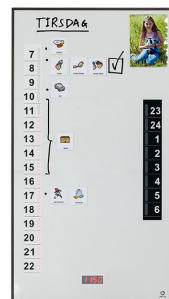
MEMO Timer is available in four different variants with 8, 20, 60 or 80 minutes.

## MEMO Dashboard

MEMO Dashboard is a planning board for those who need a visual overview of the day in relation to the course of time.

The product supports the user in:

- getting a better understanding and feeling for time
- staying in bed at night and not waking up other family members
- being involved in activities
- communicating about activities
- knowing in advance what will happen and when in time it will happen
- to feel calm, in control, and reduce aggressive behaviour



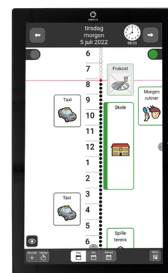
MEMO Dashboard

## MEMOplanner

MEMOplanner is a digital time and planning support tool that can also be administered remotely. The product comes with an app for portable support on their smart device.

The product supports the user in:

- gaining a better understanding and sense of time
- staying in bed at night and not waking up other family members
- being involved in activities
- communicating about activities
- knowing in advance what will happen and when it will happen
- Feeling calm, in control, and reducing aggressive behaviour
- balancing energy-intensive activities and rest



MEMOplanner

## HandiCalendar

HandiCalendar is an app that the user has on their smart device. Support persons can administer the app via a web portal remote calendar.

The product supports the user in:

- getting a better sense of time
- creating routines and structure in everyday life
- participating in activities
- balancing energy-intensive activities and rest
- managing personal care and accommodation, arriving on time for activities outside of the home
- reducing stress and conflicts with others



HandiCalendar

## Somna Blanket

The Somna Blanket is intended for sleep problems caused by stress and anxiety.

- the product provides a calming effect
- it can be easier to settle down before going to bed
- the blanket can improve the quality of sleep during the night
- the chains in the blanket provide sensory stimulation and the blanket also provides an enveloping feeling.
- with better sleep, an individual may have more capacity for daytime activities



Somna Blanket



Somna Comforter

## Somna Comforter

Somna Comforter is a sensory-stimulating weight product that can be used during the day.

- the comforter can be used to relieve anxiety so that the user achieves a greater sense of calm
- the comforter can improve body image and provide better levels of attention and concentration
- the flexibility of the steel chains helps to shape the chain comforter tightly around the body's contours, which provides a calming weight and even pressure on the body

## Somna Vest Balance

A weighted vest is a daytime product, and is used before, during, or after a demanding activity. Somna Chain Vest Balance can be used in combination with a weighted collar.

The weighted vest can:

- reduce anxiety and unrest
- allows the user to achieve a greater level of calm
- improve body image
- improve attention and concentration

## Somna Collar

The Somna weighted collar is a day product, and can be used alone or together with the Somna Chain Vest Balance.

- the collar helps the user to relieve tension in the body and shoulders
- the collar can be used while both sedentary and in motion
- examples of applications are in the home as recovery after a demanding day, for increased concentration, and for sedentary static work
- used together with Somna Chain Vest Balance, the collar contributes to an increased body image and level of concentration



Somna Vest Balance



Somna Collar





# User-friendly and safe products

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Abilia's products are developed for a specific target group and for a specific purpose.

The products:

- are based on research and clinical evidence
- safely compensate for disabilities
- take into account risks that may arise during use
- feedback on use and continuous improvements provide increased security for the user

Abilia's products are medical devices, class I, and are CE marked in accordance with the European Regulation 2017 / 745 – MDR.

## **Abilia is certified according to ISO 13485 - safety for customers and users**

As a medical technology company, Abilia is certified in accordance with the international standard ISO 13485. This means that Abilia has a quality management system in accordance with applicable regulatory requirements.



**Access to the right assistive tool at the right time can make all the difference**