

Systematic application of **sensory integration** reduces restraints in psychiatric units

The use of restraints within the psychiatry is a major challenge for both patients, staff and the society. A research project has now shown that a systematic approach to sensory integration and sensory modulation can reduce the need for restraints in psychiatric units.

- **38% decrease in the need for restraints**
- **46% decrease in the need for forced medication**
- **Total decrease of 42% in the use of restraints and forced medication**

Teenagers and adults in the psychiatric units tend to suffer from sensory disorders. Sensory disorders can further complicate the state of mind and lead to anxiety and stress. Calming sensory stimulation can be used as a way to change the state of mind and in many cases prevent and de-escalate conflicts and in this way reduce the need for restraints.



Reduce restraints and seclusion with sensory integration



Two projects – one conclusion

The Danish research OT, Charlotte Andersen has studied how restraints can be reduced within the psychiatry by systematically using sensory integration in two large research projects. Both projects are based on the SPI-method (Sensory Processing and Intervention). This method has a methodological approach to the human senses and focuses on the processing and filtering of sensory input. By systematically offering the patients sensory stimulating activities, these two projects document that sensory integration can reduce the use of restraints among psychiatric patients.

Pilot project 2013*

- **Object:**
to reduce restraints by belt by 50% within 6 months
- **Result:**
This object was already obtained within 3 months

Case control study 2017**

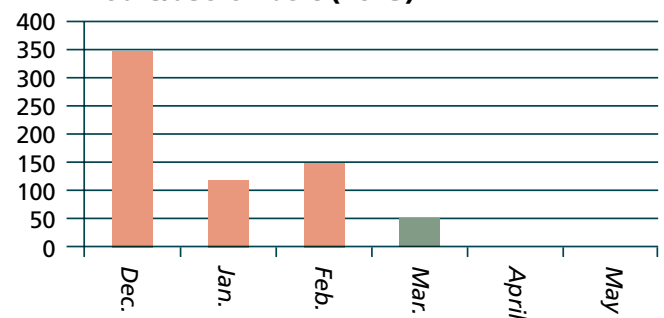
- **Object:**
to reduce restraints and seclusion in mental health care
- **Result:**
 - 38% decrease in the need for restraints
 - 46% decrease in the need for forced medication
 - Total decrease of 42% in the use of restraints and forced medication

In practice, the projects primarily consisted of:

- Making sure that sensory stimulating helping aids were available
- Plan OT-interventions focusing on the senses
- Teach the staff in performing sensory profiles (SPI-test)
- Train SPI-super users

The project from 2013 concludes that the use of belt went back to being used regularly, when the project stopped. This both confirms that the project had an effect and that the effort needs to be maintained to have a lasting effect.

Hours/use of belt (2013)



* 'Project: Reducing the use of restraints and seclusion in psychiatric units at Augustenborg Hospital, Southern Denmark' 2013

** 'Applying sensory modulation to mental health inpatient care to reduce seclusion and restraint: A case control study'
Authors: Charlotte Andersen, Anne Kolmos et al, Nordic Journal of Psychiatry, 2017



Protac SenSit® Nature

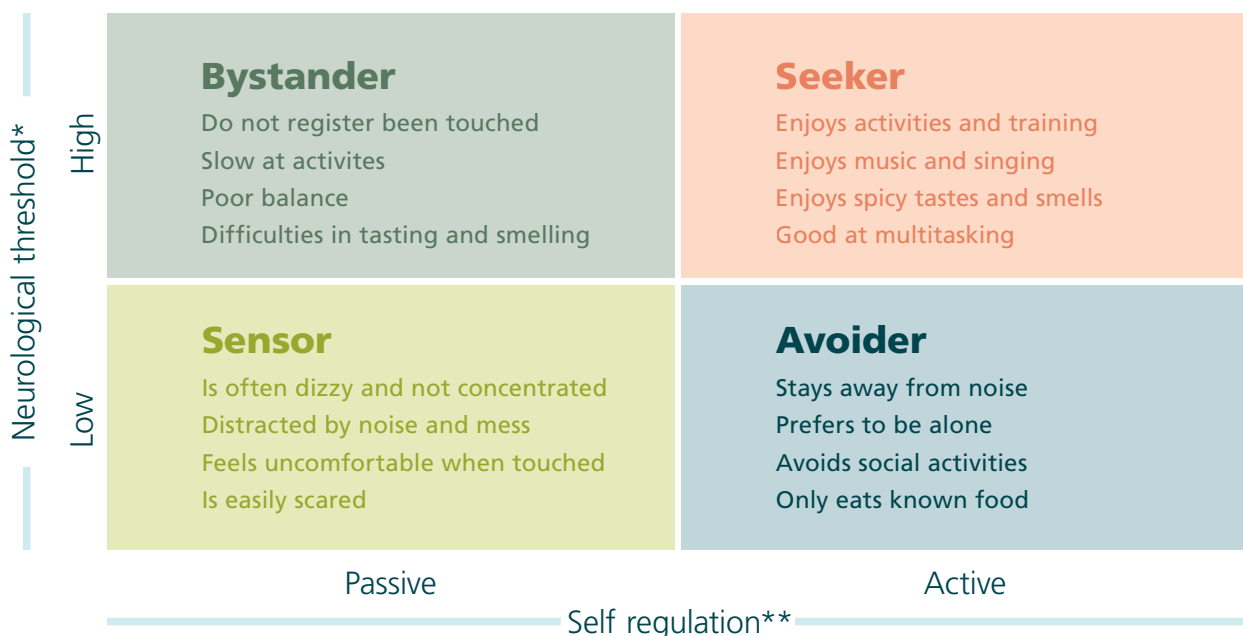
How can sensory integration help psychiatric patients?

Many psychiatric patients have struggled with sensory disorders and the side-effects like anxiety, insecurity, agitation and lack of body awareness. A sensory disorder makes it difficult for the brain to process and filter all the many sensory inputs that we constantly receive. The ability in the brain to regulate and organize these inputs is called sensory integration. This interpretation takes place unconsciously and independently. For some people it works automatically, others need help to make the sensory system work and, in that way, feel an improvement in the quality of life.

By working systematically with sensory integration, we can either arouse or tone down the senses. The proprioceptive sense that informs the brain of activity in muscles and joints, is particularly interesting to work with since it has a calming and organizing effect on the brain. We intuitively use the proprioception to create a sense of calm, e.g. if you are restless and unconsciously start tapping your foot or go for a walk. People with sensory or psychiatric disorders may have even more difficulties since their proprioception often is under-stimulated, and they will therefore instinctively move their body to feel proprioceptively stimulated. The brain does not, however, register whether the proprioception is actively stimulated through movement or passively through massage, joint compression or a sensory stimulating helping aid. In this way, sensory stimulating helping aids, giving deep and dynamic touch pressure to the muscles, can have a calming effect on psychiatric patients.

SPI-method

The starting point of the SPI-method is the sensory profile of each patient. That is defined by means of questions and preferences of the patient, that can help the staff to a better understanding of the sensory need. This figure shows some of potential indicators.



Source: Winnie Dunn 'Living Sensionally'

* Neurological threshold indicates how much stimulation is needed for the brain to be informed about the sensory input

** Self regulation indicates the ability to control the sensory input



The projects included:

Protac MyBaSe®

Protac Ball Blanket®

Protac SenSit®

Protac MyFit®

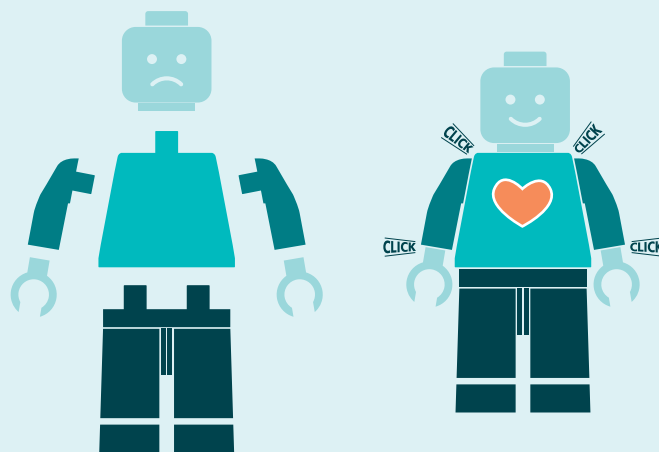


Protac MyFit® - available up to size 6XL

Structured sensory stimulation of proprioception has a coordinating and calming effect, and is our foundation for successful sensory integration of all the senses

Imagine that human beings are built from Lego blocks. When we are not receiving information through proprioception, the blocks begin to loosen, and we lose sense of our own body, which makes us insecure and restless.

Stimulation of muscles and joints is like pulling the blocks back together and reintegrating our body image, which has a calming effect and makes us secure and resilient.



Protac produces a variety of sensory stimulating helping aids. They are all characterized by containing specially-designed low-noise balls. The movement and dynamic pressures of the balls stimulate the sense of touch (tactile) and sense of muscle and joint (proprioceptive) and have a calming effect on body and mind. The products are CE-certified in accordance with the regulation on medical equipment class 1 and the effect is well-documented in several research projects.

Recent research projects with Protac products

ADHD

Child Psychiatrist, Allan Hvolby, documents that children with ADHD reduce the time it takes them to fall asleep with 40% and have fewer nightly awakenings when they sleep with the Protac Ball Blanket®. The 5-centimeter balls in the blanket stimulate the children with deep and dynamic touch pressures. Better and more deep sleep during the night improves the concentration of the children in school – their behavioral ADHD-symptoms are halved, and their general well-being is increased by 30%.

Depression and insomnia in psychiatry

Ph.D -student and nurse, Sanne Toft Kristiansen investigates the efficacy of Protac Ball Blanket® as a non-pharmacological alternative to medication on insomnia caused by depression in a randomized controlled design with the title: "The efficacy and appropriateness of Protac Ball Blanket® on insomnia in depression in outpatient clinics"

Sensory disorders for young school children

Ph.D-student and OT Ann N. Nielsen investigates the effect of Protac MyFit® (ball vest) for young school children with the title: "Effects of systematic proprioceptive-tactile stimulation with use of the Protac MyFit®". The primary objective is to determine the effect of the Protac Myfit® vest on the children's abilities for participating in school activities, and secondary their attention-, concentration- and on-task behavior abilities.

Dementia

Pilot project on a Danish nursing home documents that the Protac products have a calming effect on people with dementia. The initiatives reduced psychological and motor unrest by 60% and contributed to increased comfort and a reduction in aggressive and extrovert behaviour.

Read more about the documentation at protac.dk