Product catalogue
<table>
<thead>
<tr>
<th>CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of the balls</td>
</tr>
<tr>
<td>Protac Ball Blanket™</td>
</tr>
<tr>
<td>Protac Ball Blanket™ news</td>
</tr>
<tr>
<td>Protac Ball Blanket™, cases</td>
</tr>
<tr>
<td>Research article</td>
</tr>
<tr>
<td>Protac SenSit® and Protac SenSit® Puff, cases</td>
</tr>
<tr>
<td>Protac SenSit® and Protac SenSit® Puff</td>
</tr>
<tr>
<td>Protac MyFit®, cases</td>
</tr>
<tr>
<td>Protac MyFit®</td>
</tr>
<tr>
<td>Protac Ball Cushion™, cases</td>
</tr>
<tr>
<td>Protac GroundMe®, cases</td>
</tr>
<tr>
<td>Protac GroundMe®</td>
</tr>
<tr>
<td>New Protac KneedMe®, cases</td>
</tr>
<tr>
<td>New Protac KneedMe®</td>
</tr>
<tr>
<td>Protac MyBaSe®, cases</td>
</tr>
<tr>
<td>Protac A/S</td>
</tr>
<tr>
<td>Consultancy</td>
</tr>
</tbody>
</table>
Protac’s products help many people with conditions such as:
Abuse
ADHD
Anorexia
Anxiety
Apoplexy
Autism
Brain damage
Cerebral palsy
Chronic pain
Deafness and/or blindness
Dementia
Depression
Developmental disorders
Huntington’s Chorea
Hypermobility
Multiple sclerosis
Neurological disorders
Parkinson’s disease
Psychiatric disorders
Sensory disturbances
Sensory Processing Disorder
Sleep disorders
Stress
Tourette’s syndrome
Effect of the balls

All Protac's products contain balls which, thanks to the deep touch-pressure and constant contact to the body's surface which they provide, activate the sense of touch and the sense of body position and movement.

Normally, we say that we can see, hear, feel, smell and taste. When our body and our brain work as they should, we talk about being in full command of our senses. However, we as human beings actually have more than the above five senses.

Our most important sense is the sense of touch in our skin which registers contact. In therapeutic terms, the sense of touch is referred to as the tactile sense. Touching the skin sends stimuli to the brain and gives us a sense of the body's boundaries. The skin thus serves as a boundary which helps us to distinguish between what is 'me' and what is outside 'me'. The sense of touch thus helps us to establish a sense of our own bodies and helps the brain to keep us up to date so that we can feel our bodies.

Changing pressure enhances body awareness

When the contact is uniform and lasting, the brain has a sort of 'fade-out function', which means that the contact ceases to be registered – the sensory impression simply fades. To maintain a sense of your body, the pressure has to vary. The balls in Protac's products act on the skin by subjecting it to a light pressure distributed across numerous points, helping the brain to register the body to a far greater extent than through uniform contact because the balls move through slight changes in position. The skin is thus continuously stimulated in new ways and 'updates' the brain about the body and the surrounding environment.

Simple stimulation of the skin's tactile sense can arouse the brain, but if there is any disorder in the brain's reception, or in how it processes sensory stimuli, skin contact can be experienced as both painful and very stressful. Distributed pressure combined with the weight of the many balls in Protac's products provides the body with a continual update on the body's surface, which has a very calming effect while also stimulating one's body sense.

Calming movement

Another important sense is the sense of body position and movement, which is also known as the proprioceptive sense. This sense has receptor organs in the joints and muscles which send messages to the brain and calm the nervous system. Intuitively, we often use our sense of movement to create calm. If you are feeling restless, it often helps to go for a walk. If you are feeling impatient, you may fidget on the chair or tap one of your feet – which are both everyday examples that we use our sense of movement to calm ourselves down.

When the weight of the balls in Protac's products offers resistance to the body's joints and muscles, a message is sent to the nervous system, which the brain registers as movement. This is why the balls have a calming effect.
Protac Ball Blanket™
– a calming and sensory-stimulating aid

Calm, a sense of security and better sleep
The Protac Ball Blanket™ is a recognised aid for helping to relieve sleep disorders and mental and motor restlessness among children, adults and the elderly. The blanket has been developed in line with occupational therapy principles regarding sensory processing, and its effect has been scientifically proven.

The Protac Ball Blanket™ is effective at relieving sleep problems of varying degrees. The blanket can be used as an ordinary duvet at night, or during the day when there is a need to calm the body and mind. Mental and motor restlessness makes it hard to relax and impacts how we sense our bodies. Through the balls’ deep touch-pressure, weight and improved awareness of the body, they create calm, grounding and a sense of security, which ensures better and deeper sleep and more energy during the day.

Sleep disorders
Today, the Protac Ball Blanket™ is used by many people suffering from sleep disorders or chronic fatigue. The blanket has a beneficial effect on sleep disorders, whether stemming from day-to-day worries and stress or pain, anxiety, depression, sensory dysfunction, developmental disorders or mental or neurological disorders.

Sleep disorders quickly lead to restlessness, irritation, hyperactivity, reduced stamina, poor concentration and impaired learning capacity. Persistent insomnia can develop into depression, anxiety and a weakened immune system.

Therapy and training
The Protac Ball Blanket™ is used by therapists and professionals as a tool for sensory stimulation in sensory rooms, Snoezelens – or controlled multisensory environments (MSE) – and in therapy and treatment rooms.

Design, size and weight
The Protac Ball Blanket™ is sewn from cotton or flame-retardant Trevira CS, which is OEKO-TEX-certified according to Standard 100, class I. The blanket is divided into pockets, cassettes or channels which are filled with either plastic balls, granulate and/or polystyrene. The blanket is available in four different versions – premature, baby, junior and adult – with the sizes corresponding to ordinary duvets. The correct blanket size depends on the age and size of the user. The weight and filling of the blanket are assessed according to individual user needs for sensory stimulation.

Protac Ball Blanket™
Improves proprioception
Increases body awareness
Relaxing
Improves sleep
Energising
Protac Ball Blanket™
– now in three series: Classic, Flexible and Calm

Protac Ball Blanket™ Classic
Classic is our series of the well-known Protac Ball Blanket™ which have been further developed and improved. A new addition to the series is a special dementia and pain blanket containing granulate divided into 40 pockets, so the blanket sits snugly around the body. The new dementia and pain blanket can be divided in two and washed in a normal washing machine.

Protac Ball Blanket™ Flexible
The Flexible series is similar to Classic, but as a new feature the blanket is divided into pockets with removable ball bags. The new design makes it possible to build a customised blanket according to the individual user’s needs for sensory stimulation. The loose ball bags and cover can be washed in a normal washing machine.

Protac Ball Blanket™ Calm
Calm is a new series of soothing blankets with less movement. The blanket has been sewn in channels, so the balls lie in long rows. Calm therefore provides a different type of sensory stimulation compared to the other ball blankets. When the Protac Ball Blanket™ Calm is rolled up, it is as compact as an overnight bag and is easy to transport. The adult blanket can be divided in two and washed in a normal washing machine.

The new Protac Ball Blanket™ models feature:
- New specially produced plastic balls that reduce noise to a minimum
- The new blankets can be washed in a normal washing machine
- Greater flexibility for the benefit of individual users
**ADHD**

A 10-year-old girl with Attention Deficit Hyperactivity Disorder (ADHD) and Sensory Processing Disorder is extremely physically active. She suffers from tactile defensiveness, which makes her feel very uncomfortable wearing clothes. She also finds it difficult to be in close physical contact with other people, and she sleeps badly at night. She is given a Protac Ball Blanket™ and lies down underneath it when she feels that she needs calming down. She starts sleeping underneath the blanket at night, and now sleeps more soundly, and she has more energy the following day. The blanket has also meant that her tactile defensiveness has diminished, so that she is now able to wear long-sleeved tops without feeling uncomfortable.

**Autism**

A young woman with autism and intellectual impairment is very self-destructive and has difficulties sleeping. The staff wrap her duvet tightly around her and sit with her, holding her hand, until she falls asleep. Nevertheless, her sleep is disturbed and interrupted. After she was given a Protac Ball Blanket™, she is happy to go to bed, and it helps her to stay there. Moreover, she is not as self-destructive as before.

**Dementia**

An elderly man with dementia has become increasingly anxious over the last year, leading to more aggressive behaviour. The man resists being transferred, cared for or bathed. The staff feel they have to overstep the mark in how they handle him whenever he needs to be transferred or bathed. He is given a Protac Ball Blanket™ and immediately enjoys it. He objects when the night nurse tries to replace it with his normal duvet in the early hours of the morning, so he is allowed to sleep through the night with the blanket. After two or three weeks, the staff comment that he has become a completely different person. Transfers and bathing no longer give rise to aggressive behaviour. He has started to sing and take a look at the newspapers, and after two months he stood up from his wheelchair several times and walked, something he had not done for a long time.

**Neurological disorders**

A young man is brain-damaged following a traffic accident. He is restless, and has a very poor sense of his own body and how to use it. The Protac Ball Blanket™ helps him to calm down and get some sleep and sufficient energy to apply himself to his rehabilitation.

**Mental disorders**

A psychiatric department reports: “The Protac Ball Blanket™ is used almost daily in our department. The patients find it easier for them to ‘sense themselves’, they are less anxious, less aggressive, and thus feel a greater sense of security. Using the blanket also means that we use fewer sedatives and less physical restraint. We find that the blanket prevents and limits aggressive and destructive behaviour. Many patients ask for a Protac Ball Blanket™ themselves when they need one, and it thus allows them to help themselves.”

**Pain**

A woman tells her story: “I have been diagnosed with fibromyalgia, and have now borrowed a Protac Ball Blanket™ from the hospital. I use it when I feel my body is almost at breaking point with pain. It is good to have it placed on top of you because it feels as though it holds your body together. It keeps your muscles warm, and has a relaxing effect. I also use it on the floor, where I roll myself up in it or use it as a mattress for lying on. When I’m sitting in a chair with the blanket wrapped tightly around me, it is a good position for reading as I’m able to rest my arms on the blanket.”

**Developmental disorders**

A woman with a developmental disorder has great difficulties talking and has only limited sign language. Her mental state fluctuates greatly. On bad days, she reacts very aggressively to both co-residents and staff if she is not understood or does not receive enough attention. She finds it difficult to ‘calm down’ again after such violent reactions, and has previously been given strong sedatives. She is introduced to the Protac Ball Blanket™ in connection with ‘play and cosy sessions’ in her bed, which is a favourite place for her to be. Now, in most cases, it is possible to offer her the blanket instead of medicine, and she becomes quiescent. After a time, she started sleeping with the blanket every night, and asked for it if it was not already on her bed.

**Sleep disorders**

A 38-year-old man with sleep disorders: “I have always slept very lightly – I usually wake up immediately if one of our three children even thinks about sticking their toes out from under the duvet at night. However, with the Protac Ball Blanket™, I wake up no more than once or twice and can easily get back to sleep. Previously, it could easily take me up to half an hour to an hour going back to sleep. But that’s no longer the case. I snuggle under the blanket and I’m out like a light. My wife says that I’m definitely more lively and cheerful, and that’s even though I spend at least an hour less in bed every night. After the first few nights under the blanket, I was actually quite alarmed by how soundly and well I had slept. I had never thought that it was possible. During periods when I have a lot going on and I’m walking a fine line between healthy and unhealthy stress, I still sleep far better with my ball blanket. In the past, it would have meant more disturbed and very little sleep. I find it all rather inexplicable, but I’m incredibly happy that I had the opportunity to try the Protac Ball Blanket™.”

A 31-year-old woman: “After a period of almost two years with very little sleep, I was desperate to find a remedy. I had tried sleeping on the floor in the bathroom, on the sofa, facing the opposite direction in bed, with and without pillows, not to mention meditation, listening to hypnotherapy for insomnia CDs, going to bed early, eating valeriana and drinking soothing teas. But to no avail. I was unable to settle at night, both in my body and mind. Then, I tried a Protac Ball Blanket, and that helped! The blanket sat heavily on my body, and made me calm down. It was a step in the right direction. Now I sleep again at night. Sometimes with the blanket. And sometimes without.”
Children with ADHD sleep better and find it easier to concentrate when they sleep with a Protac Ball Blanket™. Those were the findings of a research project in 2011 conducted by the University of Southern Denmark.

According to the research project from the University of Southern Denmark, children with ADHD fall asleep faster and enjoy less interrupted sleep when they are lying under a Protac Ball Blanket™. Moreover, the study showed that, according to their parents and teachers, the children were able to concentrate more during the day.

Improved sleep with ball blanket
During the research project, children with ADHD and a control group of non-ADHD children were followed for 28 days. First, the researchers measured the children’s normal sleep patterns, after which the children slept with the Protac Ball Blanket™ for a period of 14 days. At the end of the 14 days, the children returned to sleeping under their usual duvets for a week. Throughout the entire period, the children slept with advanced measuring equipment, while their parents kept a sleep diary. The researchers subsequently concluded that the period of sleep onset latency (SOL) for children with ADHD was reduced by almost 40 per cent and corresponded to that of children in the control group who did not suffer from ADHD. At the same time, the children with ADHD were less likely to wake up during the night.

Previous studies have shown that there is a close connection between poor sleep patterns and learning difficulties. The children’s teachers also experienced an improvement of 10 per cent in terms of the ADHD children’s hyperactivity and inattentiveness, while their parents observed a 6 per cent improvement. The effect proved to be lasting, and continued even when the children returned to sleeping with their normal duvets.

Good supplement to medication
The researchers thus concluded that the Protac Ball Blanket™ is a good alternative to treating sleeping disorders in children with ADHD, and that the blanket can supplement treating ADHD symptoms in children with medication.

The research project was conducted by Niels Bilenberg, professor in child psychiatry at Odense University Hospital, and Allan Hvolby, child psychiatrist at the Region of Southern Denmark’s child and adolescent psychiatry department in Esbjerg. The results of the research project were published in the international Nordic Journal of Psychiatry in April 2011. The project is now being followed by a new and longer-lasting research project financed by the Region of Southern Denmark.

Read more: informahealthcare.com/toc/psc/65/2
A special print of the original article is available on request from Protac A/S
**Protac SenSit®**

**ADHD**
A 13-year-old boy with ADHD: I can clearly see an improvement in all forms of contact and communication with the boy, and in his physical harmony, while he is undergoing occupational therapy in the chair, and afterwards. He spontaneously seeks out the chair, and he often pretends to have fallen asleep so he can stay in the chair when training is over. He is noticeably more tranquil and more cooperative, and is happier after having used the SenSit ball chair. And he often winks at me and says: “I’ll take this chair home with me one day, when you’re not looking.”

**Anxiety**
A client at a day centre: “I was taking part in a group activity when suddenly I had a serious panic attack. I paced the floor restlessly and was afraid that I would fall. The chair feels like a ‘cosy nest’ to me. The physical agitation gradually disappears, and the chair is comfortably warm. After about 10-15 minutes, my panic eased. After about half an hour in the chair, I could rejoin the group. The wings of the chair are designed in such a way that it feels as if they are almost hugging you.”

**Neurological disorders**
A 64-year-old man suffering from multi-infarct dementia: It has proven virtually impossible to convince the patient that he needs rest. The team has tried a variety of strategies, mostly resulting in the patient protesting and not wanting to cooperate. Protac SenSit turned out to be a satisfactory solution – for him and for the staff. He found that the chair was good for resting in, because he did not have to lie down. The staff helped to make him comfortable, drew the curtains and made sure the room was quiet. Usually he has fallen asleep in the chair, and on a couple of occasions he slept for up to two hours. He has also sat down of his own accord in the chair when he needed a rest. The chair stood in his room for three weeks as part of his rehabilitation programme. Having a good long rest meant that he was more relaxed and coherent, which had a positive effect on his rehabilitation process.

**Motor and mental restlessness**
A four-year-old emotionally-challenged girl: The girl has severe physical and emotional anxiety problems that affect her daily life, but her agitation diminishes markedly when she has been sitting in the chair. She makes a beeline for the chair in the motor skills training room. After four to six minutes of sitting in silence and completely wrapped up in the chair, she will start to communicate. Her speech becomes significantly more coherent. Then, when we do the sensory motor activities, the girl is far more relaxed than she was before we introduced her to the chair. She often remains seated in the chair while doing activities that require eye-hand coordination – and the result is an improved quality in the training.

A six-year-old boy with an attention deficiency and physical agitation: After having used the chair a few times, he says: “Please tell my Mum where she can buy a chair like this.” He enjoys burying himself completely underneath the neck cushions and wings, and asks to have a ball blanket over him too. Seeing how much he enjoys the chair, his parents have tried to make similar seating for him, but as his mother says: “Eventually we will have to buy one of these chairs. It is the only thing that can make our son so calm.”

“Please tell my Mum where she can buy a chair like this.” Seeing how much he enjoys the chair, his parents have tried to make similar seating for him, but as his mother says: “Eventually we will have to buy one of these chairs. It is the only thing that can make our son so calm.”

**Mental disorders**
Psychiatric department. A 20-year-old woman with mental issues and a history of attempted suicide is now hospitalised in a psychiatric department. During her hospital stay, she is prone to serious self-harm. Initially, this patient used the chair with the hospital staff’s encouragement, but gradually she has developed a strategy of her own for using the chair. She feels that she regains control of her body and mind and is better able to resist the temptation to self-harm. The chair is placed in her room so that she can use it as and when the need arises. The chair gives her a feeling of well-being and physical relaxation.

**Developmental disorders**
A 38-year-old man with an intellectual disability: The man lives in a residential unit with other people with intellectual disabilities and has his own room. He uses the Protac SenSit both in his room and in the communal areas. He prefers being in his room. He never stays in a communal area for more than half an hour at a time, and is generally considered restless. He has a ball blanket with large plastic balls and he loves using it every day. He has full mobility. Staff at the unit have observed that he enjoys using the chair. He sits in the chair for a longer time than he would previously have sat in any other piece of furniture. He sits in the chair for half an hour to an hour and a half at a time. Staff have observed that he is less physically agitated, that he does not pace the floor as restlessly, nor as frequently, as he used to. He also spends more time sitting in the communal area. The biggest advantage with the chair is that he does not have to sleep in order to achieve the relaxation that the ball filling can give. Whenever he uses his ball blanket during the day, he always lies down with it and gets sleepy, and usually dozes off. He sleeps more than enough at night, so he has no need for a nap during the day. The chair makes it possible for him to withdraw into himself and to receive stimulation without falling asleep. In other words, he is progressing towards active participation in communal activities. He is more awake and ready to take part in activities than if he had lain down with the ball blanket.
Protac SenSit® and Protac SenSit® Puff
– envelops and calms the body

Calm and concentration
Protac SenSit is a sensory-stimulating chair that provides a sense of security and calm and increased levels of concentration among users. Children, adults and the elderly suffering from mental and physical restlessness can benefit from Protac SenSit. The chair is filled with balls in the seat and back and in the special neck and side wings. These wings can be placed around the body as required, enveloping and calming the user.

Applications in practice
Protac SenSit has countless applications, and is today found in many kindergartens, at schools, psychiatric departments, somatic hospitals, in ordinary homes, waiting rooms, sensory rooms (Snoezelens) and treatment and therapy rooms.

Protac SenSit can be used for ordinary relaxation when the user is watching TV or sitting with a computer. For restless children, the chair helps them to concentrate when doing their homework or playing games which demand their full attention. In kindergartens and schools, Protac SenSit can be a time-out for children during a busy school day, while chairs placed in psychiatric departments and day care facilities for adults with developmental disorders provide a ‘safe refuge’ in communal areas for patients and users who find it difficult to be surrounded by lots of people.

Therapy and training
The Protac SenSit chair is used by therapists and professionals as a tool for sensory stimulation in sensory rooms, Snoezelens – or controlled multisensory environments (MSE) – and in therapy and treatment rooms. The chair strengthens the user’s sense of his or her own body and has a calming effect. The chair can also be used in connection with preliminary treatment so that the user’s muscles are relaxed and he or she feels calm and collected and ready to commence motor-skill training.

Alternative sitting position
Protac SenSit is a good alternative for wheelchair users and bedridden patients who need to change position during the day. The chair’s stable shape supports the neck, head and body, and the flexibility of the balls in the seat and back makes it easy to adjust the chair and create a comfortable sitting and resting position.

Design and colours
Protac SenSit has a modern design and is available in eight colours. The chair is also available in a high and a low version to match the height of the user. The cover has a zip so that it can be removed and washed in a normal washing machine. The cover can also be wiped with a damp cloth and disinfectant.

Protac SenSit Puff
The Protac SenSit Puff can be used as a footstool for the Protac SenSit or separately as a stool. The balls in the upper part of the footstool stimulate the senses, while it is also comfortable to sit on. In some schools, the footstool is used as a chair in the lower grades.
**Protac MyFit®**

**ADHD**
Specialist teacher, MDe says: “I had a fantastic experience with a 10-year-old boy with ADHD and attachment disorder who came to me for a social-cognitive interview. He was extremely restless and disturbed, and his defence strategy was to play the fool. I have never before experienced such a marked change – both with his motor skills and emotionally – as happened to the boy after putting on the ball vest. He sat on his chair and became completely quiet. He was actually capable of staying concentrated for 20 minutes, which was fantastic!”

A 24-year-old student diagnosed with ADHD comments on using the vest: “I think the vest is a very successful product, both in appearance and effect. Not only do I calm down, I have better posture when I’m wearing it. When I am sitting with it on, it has a massage effect which is very nice, especially after hard training. It has had a good calming effect on me at school, and both my classmates and teachers have noticed this. The vest is usually compared to a bullet-proof vest, and I think it has a certain resemblance. My friends who have tried it out also react very positively, and I could see how they calmed down significantly after a short time (10-15 min.).”

**Autism**
A teacher comments on using the vest with an 11-year-old boy with infantile autism and learning difficulties who craves sensory input: “He has used the vest several times a day while at school. He participates better in class activities and is more calm and collected.”

**Deaf and/or blind**
An occupational therapist from a school for the deaf and blind comments on using the vest with two to five-year-old children with visual impairment: “We use the vest in connection with sensory motor tests, and several children are reluctant to take the vest off afterwards. They look blissful and feel very comfortable wearing it.”

**Motor and mental restlessness**
Parents comment on using the vest with a seven-year-old boy: “When we were given the opportunity to borrow the vest for a weekend, the whole weekend was far more peaceful for everyone, and the vest was clearly the reason for this.”

A child therapist comments on using the vest with a seven-year-old boy with severe motor restlessness and delayed motor development who is easily distracted: “For example, he has learnt to ride a bicycle, because, as he says while putting the vest on: I can better control my body when I’m wearing the Batman vest.”

A 52-year-old woman who has difficulty concentrating when doing seated work comments on using the vest: “I can concentrate for longer periods of time than is usually the case. I also notice that my breathing becomes deeper!”

**Neurological disorders**
A 45-year-old woman who has suffered a stroke, with paralysis on her left side, comments on using the vest: “It makes it much easier to get my left foot to connect with the floor and avoid the foot twisting as it usually does. It must be because the vest has a good effect on my spasticity. I can feel my body much better when I sit and work. It is as if it helps me to sit more upright. It is good strength training for me to walk around wearing the vest, and it feels comfortable once you get used to it.”

**Neurological condition**
A 73-year-old man with Parkinson’s disease comments on using the vest: “I use the vest throughout the day when I play the piano, write by hand, and do practical things around the house. The vest gives me a sense of greater inner calm during these activities, and of being better able to master them. It gives me a sense of security, grounding, deeper relaxed breathing and a more upright posture.”

**Mental disorders**
An occupational therapist at a psychiatric ward comments on using the vest with patients with ADHD problems: “Patients here on the ward have started to put on the vest on their own initiative if they feel restless or have to attend an important meeting.”

**Pain**
A 37-year-old woman with back problems comments on using the vest: “I feel very relaxed in my body when I’m wearing the vest, and the pain goes away. It generates warmth, but not too much. It gives some form of weight sensation/grounding, so I can better collect my thoughts. And it has a very comfortable fit.”
Protac MyFit®
– improves body awareness and has a calming effect

**Concentration and learning**
Protac MyFit is a calming vest that has a grounding effect on children, adults and the elderly suffering from mental and motor restlessness in stressed situations, hyperactivity and anxiety. The pleasant weight and touch-pressure from the tight-fitting vest clearly delimits the body and strengthens the sense of body awareness, which has a calming effect.

**School and work**
Children and adults with concentration and learning difficulties can benefit from using Protac MyFit at school or work. Schoolchildren, for example, can also wear the vest during breaks if they find it difficult to play with other children without being directed by an adult. Preschool children can use the vest during group activities, when eating, or when playing inside or outside. For adults who have difficulties concentrating, Protac MyFit can help in educational contexts, when working at a computer or when reading.

**Daily activities**
For adults suffering from anxiety and restlessness, Protac MyFit is a great help when they need to do the shopping, do some gardening, go into the workshop or do some cooking. In the case of clients at sheltered workshops, the increased body awareness which comes from wearing the vest has a calming effect while improving attention spans.

**Violent behaviour**
Protac MyFit can be an effective help to alleviate aggression, anxiety and self-harming behaviour for the benefit of the persons in question and their surroundings.

**Therapy and training**
Protac MyFit is used by therapists and professionals in connection with sensory processing treatment and motor training in balance and coordination. The vest is also used for children and adults who find it difficult to cooperate, collect their thoughts and concentrate, for example during cognitive training, speech therapy, ADL training or treatment according to the principles of Affolter, Bobath and Coombes (ABC concept). The vest is used to treat the effects of cerebral haemorrhage in adults to strengthen their sense of balance, reduce spasticity and counter sensory disturbances. Protac MyFit can also be helpful in relation to working with pain patients, as it increases focus on the body, encourages an upright posture and relaxes tense muscles.

**Design and sizes**
Protac MyFit is made of an elastic material so that it sits close to the body. The balls are distributed in channels on the front and back of the vest. A simple lace system in the back and sides makes it possible to adapt the vest according to individual need and ensure the greatest possible sensory stimulation. The fashionably designed vest is available in three children’s sizes and five adult sizes. The sizes are specified as chest measurements in centimetres.
Protac Ball Cushion™

ADHD
A 10-year-old boy has been diagnosed with ADHD; he suffers from mental and motor restlessness as well as difficulties concentrating. The boy is very disruptive in class as he is restless on his chair and makes a lot of noise. He now uses the ball cushion, which helps him to sit quietly for longer periods of time than before. He seems more focused and less noisy. The boy uses the ball cushion for all activities that require him to sit quietly and concentrate.

A mother and occupational therapist talks about her eight-year-old son: “He now feels so much cleverer after he has been given the ball cushion to sit on at school.” “Mummy – it used to take me an hour to do four sums, but now I can do six.”

Poor concentration
A four-year-old boy finds it hard to pay attention and concentrate when he has to sit and eat; this is a problem in kindergarten in relation to the other children, but also at home. He tries sitting on a ball cushion on the Trip Trap high chair, and it helps him sit without being so agitated. A ball cushion is also placed under his feet, which has the effect of making him considerably more attentive, calmer and more able to follow what is happening around the table.

A six-year-old girl who goes to speech therapy has low muscle tone in her postural muscles. As a result, she finds it difficult to sit upright on a chair for any length of time, often collapsing and sliding down onto the floor. She tries the ball cushion, and is now able to sit and concentrate for the 30 minutes that the training lasts without feeling tired or collapsing.

A reception class pupil has difficulty concentrating and sitting still on a chair. She sits on her knees on the chair, lies across the table, and turns round and round. Now she sits on a ball cushion, and is immediately much calmer. After a couple of days she was able to concentrate for longer – and is now sitting completely quietly on her chair. She is well aware that the cushion is good for her. When she arrives in the morning, she is usually the first to find her place, and if she wants to play on the computer or sit somewhere else, she pulls her chair with her.

“I thought it would be a problem to get him to sit on the ball cushion. I thought he wouldn’t want to stand out by having a different seat in class. But it is quite the opposite – he loves his ball cushion, and is only prepared to part with it for short periods of time, only lending it to his friends. And the entire class is much calmer now that he is more balanced within himself.”

Hypotonia and hypermobile joints
A girl in the preschool class who has hypermobile joints, joint problems as well as moderate Sensory Processing Disorder, has difficulties sitting upright for longer periods of time. She grows tired and inattentive, and slouches in her chair. The girl tries sitting on a ball cushion, and is now better able to sit up during the lessons. The ball cushion also helps the girl’s balance problems.

An eight-year-old boy has low muscle tone in his postural muscles as well as very hypermobile joints. Consequently, he finds it hard to sit still and upright on a chair during classes at school and during mealtimes at home. The boy collapses and looks for support by resting on his desk – and that of his classmate. He is restless and sits in awkward positions. The boy tries sitting on a ball cushion, and a change is immediately observed in his posture and his ability to sit up and quietly. The boy quickly becomes attached to his ball cushion. The school purchases a cushion for the boy. He is also given a cushion to use at home during mealtimes and when he is doing his homework (written by the children’s occupational therapist).

Two boys at the special school where I teach have extreme hypermobility as well as being very restless. The children’s paediatric therapist placed the ball cushion on the seats of the chairs as well as under the boys’ feet, and it had a surprisingly positive effect on the boys’ sitting position, their ability to sit still and their concentration. The school now uses the cushions in class, when the children are eating as well as for activities where the children are expected to sit still and focus on what they are doing.

Motor and mental restlessness
A young boy suffers from extreme akathisia (a condition marked by motor restlessness, ranging from anxiety to inability to lie or sit quietly or to sleep) and the occupational therapist therefore suggests a ball cushion. The preschool class teacher is sceptical, and says: “I thought it would be a problem to get him to sit on the ball cushion. I thought he wouldn’t want to stand out by having a different seat in class. But it is quite the opposite – he loves his ball cushion, and is only prepared to part with it for short periods of time, only lending it to his friends. And the entire class is much calmer now that he is more balanced within himself.”

Balance problems
A 45-year-old woman with multiple sclerosis goes to treatment because of the problems she is facing with her balance and fine motor skills. She also has severe pains in the small of her back. She tries sitting on a ball cushion for the 20 minutes that her hand training lasts. She notices that the pain in her back eases, while the cushion also trains her balance because of the balls’ flexibility.
Protac Ball Cushion™
– stimulates and encourages a good sitting posture

**Concentration and learning**
The Protac Ball Cushion helps to ensure a dynamic sitting posture and is suitable for both children and adults who, due to mental and motor restlessness, find it hard to sit still and concentrate.

The Protac Ball Cushion attaches to the seat of an ordinary shell chair. When the user moves, the balls roll so that the user moves beyond his or her centre of gravity. The body will automatically shift its weight to maintain balance, which stimulates the back and abdominal muscles, which in turn prompts users to correct their posture. For an optimum sitting posture, it is important that the user’s feet are well supported. The Protac Ball Cushion is therefore recommended for use with the Protac GroundMe foot and sitting cushion.

**School/seated activities**
The Protac Ball Cushion provides a helping hand for restless kindergarten children and schoolchildren. The ball cushion is easy to fit, takes up little space in a child’s school bag, and can accompany the child during the day’s activities. Hyperactive children and children with weak muscle tone benefit from the ball cushion’s dynamic and continual stimulation; this encourages a good and varied sitting posture while promoting concentration and learning. Moreover, many adults like being able to use the ball cushion at home and at work.

**Therapy and training**
Professionals are positive about using the Protac Ball Cushion when teaching children and adults how to train their balance skills. The dynamic seated position means that users are constantly training their sitting balance while stabilising the muscles around their stomach and upper and lower back. The pressure of the balls means that users are more aware of their seat area. This tones up the postural muscles and provides a more correct sitting position, which relieves the back.

**Types of ball cushion**
The Protac Ball Cushion is available in various sizes and is designed to fit school chairs/ordinary shell chairs, height-adjustable school chairs, high chairs, kindergarten chairs and stools. To achieve the optimum effect of the ball cushion, the chair must not be upholstered.

The ball cushion for school chairs/ordinary shell chairs is available with a single compartment or four sub-compartments, which limits the movement of the balls and helps users with balance problems or an overreactive sensory system.

All the cushions are available with either 38 mm or 25 mm plastic balls, where the 38 mm balls provide the greatest point stimulation and thus the strongest sensory stimulation. The smaller 25 mm balls provide a greater seating surface area, which is a good idea if the user is thin or particularly sensitive.

**Protac Ball Cushion™**
Relieves restlessness
Strengthens balance and sensibility
Trains the back and abdominal muscles
Promotes a good sitting posture
Promotes concentration and learning
**Protac GroundMe®**

**ADHD**
Girl, aged 9, with developmental disorders and ADHD: GroundMe is used at mealtimes and when doing her homework, as she finds it difficult to sit still and be in the present. Therapist: “I notice that she is calmer and more attentive when she is using the footstool. For once, she sits properly on a chair; normally, she is extremely restless and sometimes even has to stop eating and leave the table as she is unable to remain seated. The footstool gives her the peace to finish what she is doing.”

**Autism**
Autistic boy, aged 8: “I use it every day and I think that I work better when I’m using it. I feel more relaxed and I also remember to go and get it,” (which is not something he would usually do – normally he would just make do with the things around him).

Specialist teacher says: “We are training a five-year-old girl at home who has infantile autism as well as such severe sensory disorders that she is not able to be in an institution. She always wears a ball vest outside, sits on a ball cushion, and she has now tried a GroundMe (the low model) with good effect.”

**Concentration**
Social educator in a mainstream school: “We have two boys in particular for whom GroundMe is hugely beneficial. They concentrate better, and can even fill a whole pegboard with beads now. We also use GroundMe when we come together as a group, which we always do on the floor. When they use GroundMe to sit on, they manage to remain seated without running around, and they also participate more in what is happening.”

**Motor and mental restlessness**
A 10-year-old-girl finds it hard to sit still, and has poor concentration and poor body image. Therapist: “She finds the peace to engage in activities at the table when she is able to place her feet on the footstool. Much of her physical restlessness has been moved down there, which helps her and is also far less disturbing for the children around her. Also, she remembers to take the footstool with her from chair to chair – which is not something she would normally do with things which weren’t important for her.”
Protac GroundMe®
– provides calm and a sense of connection

Concentration and learning
Protac GroundMe is a dynamic footstool and cushion for children, adults and the elderly who, due to mental and motor restlessness, find it difficult to sit still and concentrate for longer periods of time. Like both the footstool and the cushion, Protac GroundMe stimulates the sense of touch and the muscle-joint sense, and contributes to calm, concentration and improved learning for the user. Protac GroundMe also ensures a more optimal sitting posture and helps restless feet. Protac GroundMe works well with the Protac Ball Cushion.

Seated activities
At school and when seated, Protac GroundMe acts as a stabilising cushion that supports the feet and ensures a good starting point for a good sitting posture. Thanks to its sensory-stimulating effect, Protac GroundMe also helps children who are restless when sitting, either because they find it difficult to touch the floor or because they are constantly seeking sensory input through their feet. Adults and the elderly with restless legs can benefit from Protac GroundMe when, for example, they are working, eating or relaxing on the sofa. As a cushion for sitting on, Protac GroundMe is also frequently used, for example when groups of children in kindergartens come together in a circle on the floor.

Therapy and training
Protac GroundMe is used by therapists and professionals as a tool for motor training children. The cushions can, for example, be placed on the floor as part of a treatment session for training and exercising the children’s balance and coordination skills.

Design and sizes
Protac GroundMe has a foam base, above which there is a layer of loose plastic balls enclosed in an elastic outer cover. The practical straps on each side of the cushion make it easy to carry around and hang up on a hook when not in use. Protac GroundMe is available in two sizes, 10 cm high and 20 cm high, to match the individual user.
Dementia
A 62-year-old woman with Alzheimer’s dementia, serious physical, mental and cognitive deterioration as well as depression: She experiences much discomfort due to physical and mental restlessness. She has found it increasingly difficult to handle sensory input and becomes easily overstimulated. This is manifested in violent physical movements and a loud, angry voice. The woman spends a lot of time in her room now because she needs to be separated from other people.

The woman finds it difficult to accept being handled and being turned in bed in connection with personal care. She has the Protac KneedMe blanket drawn over her straight after her morning care routine. She is given the choice of staying in bed with the knee blanket over her or being transferred to an armchair, again with the blanket, after which she feels safe and secure. If she is restless from the early morning, she has the knee blanket put over her and her morning care routine is delayed until she is calm and more amenable.

The woman has a chair for Huntington’s Chorea patients, which she uses each day with the knee blanket over her. Seated here, she is often smiling, relaxed and at ease. When you walk into the room, she often turns her head and greets you with a smile or a quiet greeting and pleasant ‘chat’. Meal times go more smoothly than before, now that she has the knee blanket.

Woman in her mid-70s with Lewy Body dementia: She is in a wheelchair and needs full help and support for all daily activities. She has Parkinson’s-like jerky movements, fluctuating attentiveness and sometimes suffers from hallucinations. When she becomes psychologically upset, she sometimes shouts loudly with a sustained monotonous sound.

She has used the Protac KneedMe for several months. The aim was to enable her to engage in social interaction and participate in musical activities. It was already clear on the first occasion that the knee blanket had a good effect. She became more attentive and focused on the music, and the monotonous sounds were replaced by occasionally humming along to the songs.

The knee blanket is now used in different ways, both preventively and to induce calm. The result is a general reduction in mental and motor restlessness. It leads to improved well-being, her facial expression relaxes, she makes less self-stimulating noises and she sometimes makes eye contact, smiles and says a few words. The knee blanket is usually removed after a couple of hours, as the effect otherwise seems to be reduced.

Woman in her mid-80s diagnosed with Alzheimer’s: The woman has a tendency towards verbal self-stimulating behaviour and is very persistent in her noises. She sings insistently and speaks loudly to herself. The woman has the Protac KneedMe blanket put on her straight after her morning care routine in an attempt to prevent the noises and self-stimulation from escalating.

It was evident from the first trial that the knee blanket induces calm in the woman; her voice is quieter and she responds to speech in a more responsive way. After using the knee blanket, her facial expressions are gentler than usual. The woman now sits with it every day, and ideally several times throughout the day. Initially, the knee blanket often fell down onto the floor. The straps on the knee blanket were therefore tied around the woman’s waist so that it remained lying on her lap. This has not caused the woman any irritation or discomfort.
Protac KneedMe®
– promotes peace and a sense of security

Peace and a sense of security
Protac KneedMe is a sensory stimulating knee blanket which helps young people, adults and the elderly suffering from mental and motor restlessness. When Protac KneedMe is placed on your lap, the weight and touch-pressure of the balls helps to clearly delimit the body and lead to feelings of peace and security. For people with restless legs and feet, which often affects people suffering from hyperactivity or ‘restless legs syndrome’, the blanket can often help to calm them down. For example, the knee blanket can be used in armchairs, in wheelchairs or for seated activities during the day.

Applications in practice
Today, Protac KneedMe is an integral part of everyday life in many nursing homes, psychiatric wards, residential facilities, hospital rehabilitation departments, drop-ins, day care institutions, sensory rooms, Snoezelens or in the ‘clients’ own homes.

Therapy and training
Protac KneedMe is used by therapists and professionals when providing therapy and motor training for patients and clients who find it difficult to cooperate, stay focused and concentrate. Protac KneedMe has, for example, proved beneficial in connection with cognitive training, speech therapy, hand therapy, personal care, ADL training or treatment according to the principles of Affolter, Bobath and Coombes (ABC concept).

Design
Protac KneedMe consists of a removable outer cover and a bag with heavy plastic balls sewn in channels. The knee blanket is fitted with a belt with two straps which can be attached around the user’s waist to prevent the blanket from sliding off their lap. When the belt is not used, it folds away into the cover. The knee blanket’s outer cover can be washed separately.

There is a large pocket on the top side of the Protac KneedMe which can be used for keeping objects that the user likes to hold and touch. The pocket has a strap which can be used for attaching tactile items such as keys.

Protac KneedMe®
Improves proprioception
Promotes calm and a sense of security
Increases focus and concentration
Promotes cooperation
Deafblindness
Aalborg School: A young, 17-year-old deaf-blind boy is wheelchair-bound and depends on help with everything, but he can make small movements with his arm and leg. He really enjoys coming out of his wheelchair and lying down on MyBaSe, as he receives both tactile and vestibular stimulation when he moves. He does not have to move very much for the mattress to give him input. When he lies on the mattress, he always lies on his active side so he can get it to rock with his own movements. It is very clear to see that it gives him great joy to feel his own body when he is lying on the balls.

A 28-year-old deaf-blind man can discern contrasts and who can hear with the help of a hearing aid. He is in a wheelchair and very dependent on help. He reacts very positively to touch and passive movement. One day, when he was in a bad mood and complaining and making loud noises, we used the mattress to give him input and a sense of his own body. After a short time he calmed down and became very aware of what was happening around him. When we began to rock the mattress, he reacted by smiling, he made appreciative noises, he relaxed and his mood markedly improved.

Mental disorders
Male resident with an early childhood injury and schizophrenia: “He uses the mattress to find a base where he can relax. He has many obsessive thoughts throughout the day and poor posture. The mattress makes him calm enough to unwind and relax his muscles, and it is great that this effect lasts for some time after he has left the mattress.”

Therapy
Occupational therapist who uses it in a Snoezelen context: “I use the stable side of the mattress, where the client can sink down into the balls and virtually float on the mattress. I generally use it along with a projector/film and peaceful music. One client immediately stopped chattering when she got down on the mattress, which I see as a sign of feeling secure. I generally find that users relax completely.”

Developmental disorders
Carers report that a severely intellectually impaired nine-year-old girl is often agitated and takes hold of and bites anything within reach. Moreover, she frequently tests boundaries with her body – hitting her head, arms and legs against everything around her. After using the mattress each day for the past two weeks, carers have found her to be calm and more reachable, and she enjoys being herself and being able to sense her body. She bites less frequently and exhibits significantly less motor restlessness during the day.

Sheltered housing for people with developmental disorders: Therapists use the stable side of the mattress, often in combination with a ball blanket. Therapists report: Woman with anxiety and brain damage: “When helping her to calm down, MyBaSe is the only place we can get her to relax and get into physical contact with herself, without constantly focusing on her anxiety.”
Protac MyBaSe®
– strengthens balance and body awareness

Calmness and a sense of security
Protac MyBaSe is a specially designed air mattress with balls which is designed to promote sensory stimulation, calmness and a sense of security for children, adults and the elderly with sensory disorders or mental and motor restlessness. Protac MyBaSe provides a secure base where the senses are stimulated whether the user is standing, walking, crawling, rolling or lying. Protac MyBaSe has two sides: an active side and a stable side. The active side is for when the user needs to exercise his or her sense of balance, while the stable side is for when the user needs to relax and be calm.

Applications in practice
Today, Protac MyBaSe is used in kindergartens, day care institutions, sensory rooms, Snoezelens, treatment and therapy rooms, schools, sheltered housing, hospital rehabilitation departments and drop-ins.

Alternative support
Protac MyBaSe is a good alternative for wheelchair users, who need to change position during the day. The loose balls cause the body to sink slightly into the mattress, so the body is supported, enveloped and stimulated. The deep pressure of the balls highlights the body’s boundaries for greater body awareness and peace.

Therapy and training
Protac MyBaSe is used by therapists and professionals for sensory stimulation and sensory processing treatment for children, adults and the elderly. Protac MyBaSe is also used for motor training as it challenges and trains the sense of balance when the user rolls, crawls or walks on the mattress. The mattress is easy to move around, and the active and passive sides make it possible to adapt treatment to the user’s individual needs.

Design
Protac MyBaSe can be pumped up in two to three minutes using the accompanying pump. The balls in the mattress are distributed between four compartments, which together form a large ball bag which is contained by the elasticated cover. The cover has a zip, so it is easy to remove and wash in a normal washing machine. Protac MyBaSe has four strap handles on each side of the mattress which can be zipped away. The handles facilitate moving and turning the mattress. When Protac MyBaSe is not in use, it can be placed vertically up against a wall so that it does not take up floor space.
Protac A/S
Protac is an innovative and socially responsible company, which was established in 1994. The basic idea behind Protac’s products comes from theories about sensory processing, theories which are based on what we know about the interaction between bodily sensation and the way sensation affects behaviour and participation in daily life activities. Protac’s products contain plastic balls which stimulate the sense of touch and the muscle-joint sense through their weight and deep, evenly distributed pressure, increasing body awareness and calming the user.

Research and documentation
Protac is continually working to document and research the use of its products. Thus, in 2010 it conducted a research project at the University of Southern Denmark on how using the Protac Ball Blanket™ affected sleep in children with ADHD. The findings were published in the Nordic Journal of Psychiatry in April 2011.

Innovation and product development
Protac’s products are thoroughly tested by consumers, are based on consumers’ needs and are developed in cooperation with professional experts such as occupational therapists and physiotherapists.

Protac always follows a structured innovation process which draws on the latest research within sensory processing.

Protac’s products are CE-labelled and distinguished by their high quality and user-friendly and modern design which is developed in collaboration with professional designers.

Protac continually carries out stringent checks of all its subcontractors to ensure that they always meet Protac’s high quality and environmental standards.

Expertise and consultancy
Protac provides expert advice which is rooted in the professional backgrounds of the sales staff as occupational therapists or physiotherapists as well as their continuing education through participation in courses and conferences. Protac’s administrative personnel are also kept up to date with developments.

Protac International
Through its distributors, Protac exports to a large number of countries, mainly within Europe. Our products are sold in Norway, Sweden, Germany, Austria, Switzerland, the Netherlands, Belgium, Luxembourg, the UK, Ireland, Italy, Spain and Australia.