## PhD-thesis:



# Protac Ball Blanket® significantly improves the sleep among patients suffering from depression

Depression affects approximately 5% of the Danish population, and insomnia is often a significant part of the condition. For the individual patient, recurring problems falling asleep not only make the daily life more challenging, but the sleepless hours also give space for depressive thoughts, which become a negative self-reinforcing cycle.

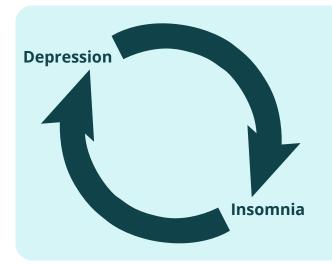
The PhD thesis focuses on the important link between depression and insomnia and concludes that patients using the Protac Ball Blanket® obtain, among other things, significantly extended sleep, reduced anxiety symptoms, and an overall increased sense of well-being.



#### Depression is closely linked to insomnia

For many patients with depression, insomnia is a large part of the disease. Even when depression is treated, insomnia can still be an issue and persist the patient in a state of poor well-being. In many cases, depression is treated with medication, which can cause side effects and lead to drug addiction, but patients are looking for non-pharmacological alternatives. This is why the Protac Ball Blanket®, has been the focal point for psychiatric nurse Sanne Toft Kristiansen, the author of the mentioned PhD-thesis.

The many sleepless hours patients endure become a vicious cycle, not only making room for depressive thoughts and worsening the mental health but also having negative consequences for physical health. Therefore, it is crucial to help patients with depression achieve better sleep for their own well-being, for their families, and for socio-economic reasons.



#### **Side-effects from missing sleep**

- Prevents daily and social activities
- Reinforces negative emotions and negative self-perception
- Confirms the patient in being lonely and isolated
- Even after depression treatment, insomnia can persist and may be the cause of relapse



#### The influence of sleep on the health

It is important that we sleep well. Sleep functions like a shower for the brain, where various physiological processes take place that influence our health and psyche and give us the energy to cope with our everyday lives.

A good and deep night's sleep improves the quality of life and provides energy to cope with everyday challenges.

### Quotes from participating patients:

"I was very sad that I had to return the Protac Ball Blanket® when the test period ended.

I've been better at falling asleep and relaxing."

'I fell asleep faster, and I wasn't as affected by restlessness'

'I feel that I am more than just my own discomfort; it feels different. I can feel myself, and it feels good.

I feel grounded, and it's completely okay that my body is here too'

'I feel that I've slept better and more. I actually don't think, I've been awake at all during the night'

'It feels like a small capsule because it's heavy, and you lie in your own little cave, and it protects you'

'I felt less uncomfortable, and I think it's because the blanket has cocooned me. I don't feel the need to toss and turn to fall asleep.

I calm down and find peace'

'It almost feels like a hug; it's a nice feeling to feel enveloped'

'With the Protac Ball Blanket®, I focus on how my body feels instead of everything else.' 'I felt calm and had more time to fall asleep. Before, I spent time overthinking and being hard on myself. With the blanket on, I know that I need to sleep, and my mind is easily set on sleeping'

#### How can the Protac Ball Blanket® help?

A sensory disturbance can manifest in many different ways, such as insecurity, anxiety, lack of concentration, and restlessness. How adults and children react to sensory stimuli is highly individual, but by becoming aware of one's sensory needs and taking the necessary measures, one can improve both their own and others' well-being.

The Protac Ball Blanket® is designed based on Jean Ayres' theory of sensory integration, which describes the brain's ability to organize and process sensory impressions. The blanket is filled with sensory-stimulating balls that, through dynamic and deep pressure, stimulate both the proprioceptive sense and the sense of touch. Each time the user moves slightly under the blanket, the balls shift, sending new stimuli to the brain, enhancing body awareness and having a calming effect on both body and mind.

The sensory-stimulating aids from Protac naturally alleviate physical and mental unrest, create safe and secure surroundings, and well-being for users.

All Protac aids contain sensory-stimulating balls, which through dynamic and deep pressure stimulate the proprioceptive sense and the sense of touch, thereby lowering the stress level of the brain.

Within the psychiatric field, we particularly recommend:

**Protac SenSit®** – a chair with balls in the seat, back, and wings that provides a comfortable sitting and resting position, giving an enveloping and secure sensation. The chair can be used in common rooms, sensory rooms, and in private homes, helping the user to relax and gain the energy to participate in social activities.

**Protac MyFit®** – a ball vest to be worn during the day, allowing users to receive calming sensory stimulation during activities, transportation, and meals, which may be challenging for them.

**Protac Ball Blanket**® comes in several different models to suit the user's individual challenges and sensory needs. The Flexible-model, used in the PhD thesis, offers the most movement and stimulation. We always recommend testing to determine which blanket and type of stimulation are necessary to create physical calm and better sleep, and we are happy to provide guidance.

**Protac® BallBase** is a sensory-stimulating mattress topper with balls that stimulate the entire body and can be used in both regular beds and hospital or care beds.





