



Innovative ceiling lift function helps recovering patients to their feet

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Thanks to a bright idea from the Physical Therapy Department at Horsens Hospital in Denmark, a ceiling lift is no longer just a tool used to move patients, but a piece of training equipment that helps patients who have been confined to bed back on their feet.



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Originally, a lift is developed to help move people who cannot do so on their own. Now, it is possible to use a ceiling lift as a piece of training equipment to increase its usefulness still more. It is already apparent that the new development offers pain relief and promotes treatment for bedridden patients, and the hope is that the solution can reduce hospitalisation times.

The official name of the innovative solution is the GH Positioning Lock, which provides an additional function for the ceiling lift that can lock the lift in fixed positions to allow its use in elastic band training and other exercises.

Flexible training with ceiling lift

An employee of the Physical Therapy Department at Horsens Hospital came up with the idea after noticing that the ceiling lift could be used as a rehabilitation tool for patients who were not yet able to get out of bed and down to the Physical Therapy Department to train.

The idea germinated in the hospital's innovation department and grew in

collaboration with the lift manufacturer, V. Guldmann A/S. After a comprehensive development project, the idea is now coming to fruition as the new training function for the ceiling lift which is launching this month for the first time ever at Horsens Hospital.

Thomas Detlefsen, a therapist who works in Horsens Hospital's Physical Therapy Department has been present throughout the process, from idea to finished product. As he recalls, it was the lift's potential as a flexible piece of training equipment that prompted the innovation department to proceed with the idea.

“By basing our training regimen on the ceiling lift hanging in several of our hospital rooms, the patients themselves can do their training assigned by the therapists. The staff can also motivate the patients to do their exercises outside of the allotted time when the therapists are there standing at the bedside,” Thomas explains.



Out of bed more quickly

The original idea of the Physical Therapy Department in Horsens entailed mounting elastic exercise bands to a fixed ceiling lift, so that they could be pulled in all directions to enable patients to rebuild strength in their arms, shoulders and legs while lying or sitting in bed. While this remains the basis of the idea, several other benefits have also become apparent in the development process.

"A 42-year-old man who served as test subject during the process suffered from constipation and severe knee pain, and his spirits had hit rock bottom. During his last two weeks in the hospital, he did various exercises in bed on a daily basis. The staff noted that his use of medication for pain and constipation went down, while his appetite returned and his sleeping improved. On the whole, the training programme using the ceiling lift reduced the patient's discomfort relatively quickly, and the experience lifted his spirits and motivated him to undertake further rehabilitation," Dr. Detlefsen recounts.

Episodes like this prompted Dr. Detlefsen to speculate that the ceiling lift's new functionality could have a positive effect on hospitalisation times. "We know that one week in bed requires up to three months of rehabilitation before a person is back to the physical shape he or she was in prior to hospitalisation, so there's good reason to believe that patients who undergo early rehab training have a better hospitalisation experience, but also, hopefully, a shorter rehab cycle after being discharged. With early training, if we can reduce the costs of home care and long rehabilitation cycles, then both patients and society come out ahead," Detlefsen asserts.

He emphasises the fact that the GH Positioning Lock is so new that no further evidence-based testing has been performed to scientifically prove that patients who train while confined in bed can be discharged earlier than those who do not. However, he does expect scientific testing to become part of the next phase, in which the functionality of the ceiling lift will be expanded both in Denmark and beyond.

Dr. Detlefsen looks back on the innovation project as a learning process. "We've had a fruitful partnership with the talented people at Guldmann, and it was instructional for us professionally to help assess precisely what the new product should be able to do," he says. Although the GH Positioning Lock is designed primarily for bedridden patients, Detlefsen has no doubts that the solution will open up even more opportunities.

"In operating theatres, the lift will be able to hold an arm or leg in a fully stable position, and the new functionality may also prove useful in gait training for neurological patients," he predicts.



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