

REHABILITATION TECHNOLOGY

motivates patients at Validia



The patient's left arm is suspended in a harness from a large machine. He moves his arm to control a cursor on a screen in front of him, trying to avoid red flying balls and grab the green ones. The patient sums up his experience succinctly in true Finnish fashion: "It is fun to do and it helps. It's good training."

Here at Validia Rehabilitation Centre patients have a variety of robotic devices which use gaming and virtual reality technology. They have machines for weight training, hand and finger exercises, gait training and upper extremity and postural control.

"Our rehabilitation technology is used to improve motor impairment and motor control after neurological and functional disorders," explains Project Manager **Sarianna Savolainen**. "It increases physical capacity and wellbeing. One of our patients said he loves it because it is the only time he can move his arm without someone touching him."

This rehabilitation technology is in demand because it can be cheaper and more effective. Patients can work independently as the sophisticated software and hardware assesses improvement. They can even perform dual task exercises, such as walking while simultaneously performing other acts in a virtual reality environment.

Savolainen points out the benefits of Validia's merger of machines, virtual reality and gaming with rehabilitation: independent practice, stimulus control and consistency, real-time performance feedback, stimulus and response modifications, a safe environment, the opportunity for graduated exposure to stimuli, the ability to distract or augment attention, and perhaps the most important therapeutic intervention of all. "It's fun and motivating," she explains.

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