New RCT study shows: CUREO® is an effective VR-based therapy for patients with Parkinson's disease

Randomized controlled trial demonstrates significant improvements in motor function and patient-reported outcomes through virtual reality–based therapy with CUREO®.

Düsseldorf, February 25, 2026. A newly published randomized controlled trial confirms the efficacy of virtual reality–based therapy with CUREO® in patients with Parkinson's disease. The study, published in the renowned Journal of NeuroEngineering and Rehabilitation, demonstrates that CUREO® leads to significant improvements in motor function while also showing positive effects on key patient-reported outcomes, including activities of daily living, emotional well-being, and cognition.

"This represents the first gold-standard scientific proof of efficacy for the use of CUREO® in Parkinson's rehabilitation," says Caesar van Heyningen, CEO of CUREosity GmbH.

The study highlights that CUREO® specifically addresses the areas where patients with Parkinson's disease are most affected in their daily lives. Impairments in arm and hand function make activities such as grasping, writing, dressing, or eating more difficult and have a direct impact on independence and quality of life. CUREO® targets these deficits through structured, intensive, and motivating virtual reality–based training of the upper extremities.

Study design and scientific background

The multicenter, blinded randomized controlled trial was conducted at the REHA Zentrum Münster in Tyrol and at Klinikum Bad Hall in Austria. The study was led by the Department of Rehabilitation Research under the scientific supervision of Associate Professor Dr. Barbara Seebacher.

A total of 58 patients with Parkinson's disease participated in the study. The participants were randomly assigned to two groups. One group received virtual reality–based therapy with CUREO®, while the control group underwent conventional upper extremity therapy. Both groups trained over a period of four weeks with identical intensity. The intervention consisted of four therapy sessions per week, each lasting 30 minutes.

Key study results

The results show that both virtual reality–based therapy with CUREO® and conventional therapy led to significant improvements in arm and hand function. In addition, CUREO® therapy demonstrated significant improvements in motor function as measured by the UPDRS Part III score. In contrast, the conventional therapy group showed a significant improvement in the UPDRS Part II score.

In addition, patients who trained with CUREO® showed significant improvements in three patient-reported outcomes measured using the PDQ-39. These included activities of daily living, emotional well-being, and cognitive function.

The conventional therapy group showed improvements in the domains of stigma and emotional well-being. Overall, the findings indicate that both therapeutic approaches are effective and can complement each other in clinical practice, while CUREO® demonstrates distinct, clinically relevant strengths.

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Implications for Parkinson's rehabilitation

"VR-based training approaches proved to be a well-accepted and effective complement to conventional therapy. Their particular potential lies in making therapeutic training more varied and in supporting long-term adherence," says Dr. Barbara Seebacher, REHA Zentrum Münster.

The study results clearly demonstrate that CUREO® is more than a technological innovation – it is an evidence-based therapeutic option that opens new perspectives for people with Parkinson's disease. For hospitals, rehabilitation centers, and therapeutic facilities, this represents a modern and scientifically grounded extension of their therapy portfolio.

In addition to measurable motor improvements, CUREO® stands out for one key aspect: genuine patient engagement. The immersive virtual reality environment enhances motivation, encourages active participation, and supports high therapy adherence – because therapy is not only effective, but also an engaging and meaningful experience.

The study results indicate that CUREO® enables intensive, repetitive, and motivating training for patients with Parkinson's disease. Virtual reality–based therapy allows targeted practice of movement patterns and can meaningfully complement existing therapeutic approaches.

About **CURE**OSITY

CUREosity GmbH, headquartered in Düsseldorf, Germany, and employing more than 50 people across three locations, develops therapy concepts based on virtual reality and gamification. The idea for CUREO® originated from a personal need identified by the company's three founders. Today, the system is used in more than 300 hospitals and therapy practices across 24 countries worldwide. CUREO® combines neuroscientific insights, particularly the potential of neuroplasticity, with many years of therapeutic experience as well as technical and creative expertise. The training can be applied across different phases of rehabilitation and independent of location in physiotherapy, occupational therapy, and neuropsychology. It addresses sensorimotor, cognitive, and perceptual impairments in patients.

Further information
The full scientific article is available at:

Heinzle, K., Habig, J., Pröglhöf, M. et al. Immersive virtual reality upper-limb exercises in people with Parkinson's disease: an observer-blinded randomised controlled trial. J NeuroEngineering Rehabil 23, 9 (2026). https://doi.org/10.1186/s12984-025-01851-1

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