



MAESTRO

Maestro is the hand mobilization device that can be used both in an early phase on bedridden patients, even if the patient has no residual active movement, and subsequently to support the recovery of functional actions with real objects.

INTENSIVE AND
EARLY MOBILIZATION

TRANSPORTABLE
TO BEDSIDE



MAESTRO is easily **transportable**. It may be placed:

- **next to the patient's bed**, allowing rehabilitation treatment to begin already in the acute phase,
- **in the rehabilitation gym**, to carry out treatments with patients in a sitting or standing position,
- **in an occupational therapy room**, to help patients train in activities of daily living (ADL).

The core of Maestro is the **rehabilitation glove**, which can generate both flexion and extension of fingers. Depending on the stage and setting of the treatment, during mobilization, the patient can either watch a 3D simulation of the hand in motion on the screen, designed to stimulate neuroplasticity, or concentrate on his hand and the objects he is invited to interact with.

The patient is **not constrained** to a predefined position: wrist and arm can be moved freely by the patient during therapy.



The **software** offers a wide range of possibilities to customize the therapy.

The clinician can adjust:

- passive ROM for each finger,
- speed (6-20 mm/sec),
- exercise timing,
- audio-video effects,
- all the combinations of finger flexion-extension.



Early and intensive mobilization can prevent dysfunctional reorganization of brain activity, as well as avoid the occurrence of adhesions, contractures, immobilization damages, improve joint metabolism and lymphatic and blood circulation, maintain and increase joint ROM.

The silicone gloves, which are easy to sanitize and available in 6 sizes (XXS, XS, S, M, L, XL), leave **the palm free**, to facilitate fitting even in case of spasticity, avoid grasping reflex, limit sweating and facilitate grasping of objects.

CLINICAL EFFICACY
PROVEN BY SCIENTIFIC
PUBLICATIONS

ON THE MARKET
SINCE 2011

INTERNATIONAL
PARTNERS

MORE THAN 10,000
PATIENTS TREATED
EVERY YEAR

MADE IN ITALY

GLOREHA SOFTWARE

Involves the patient with audio and visual effects, 3D movement simulations, engaging, challenging, and fun serious games



Provides feedback on the patient's performance and stores all therapies



Enables the therapist to upload new videos to be shown as preview and tutorial before the motor exercise



Allows customizing the exercises, adapting to the peculiarities of each patient from time to time



Guides the patient through customizable vocal messages



CLINICAL REFERENCES



Dr. Luciano Bissolotti
Domus Salutis Rehabilitation Center
Italy

“ I had the opportunity to realize how much the robotics, in particular Gloreha, was able to quickly act to the mutual satisfaction of the clinician and the patient. In particular, within a few sessions, it was immediately possible to record a reduction in focal spasticity with a significant reduction in the Ashworth scale values ”



Dr. Franco Molteni
Villa Beretta Rehabilitation Center
Italy

“ The movement is experienced, imagined and perceived by the patient, thanks to the execution of activities the glove makes possible ”



Ulrich Thiel
Hellmuth & Thiel Praxis
Germany

“ Gloreha glove offers the patient the possibility to feel the object, grasp it autonomously and to benefit of a high quality proprioception stimulation ”

Tatiana Jeglic
Center Fizioterapije Ljubljana
Slovenia



“ I chose Gloreha because it allows the patients to really feel and manipulate the objects, and also bimanual or bilateral activities. We can really improve their ability to perform their daily life activities in better quality of movement ”



**MULTIDISCIPLINARY
REHABILITATION
PROJECT**



**GLOREHA DEVICES
FOR ALL PHASES
OF REHABILITATION**



**GLOREHA IS AGELESS:
CHILDREN AND ADULTS**



**COMBINED FUNCTIONAL,
COGNITIVE AND MOTOR
REHABILITATION**

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Clinical indications

Gloreha devices are extensively used on neurologic patients with motor and/or cognitive deficits. They can be effectively applied in sub-acute as well as in chronic phase to support distal, proximal, functional and cognitive recovery.

The most frequent indications are: Stroke, Traumatic Brain Injury, Spinal Cord Injury, Cerebral Palsy, Parkinson's Disease, Peripheral Neuropathies, Neurodevelopmental Disorders.

Gloreha devices can also be useful supports in the treatment of patients with **musculoskeletal disorders** and in the post-operative stage.

“According to recent literature, the hand rehabilitation program with Gloreha provides an intensive, repetitive, functional, task oriented, specific, and customizable treatment. [...]

The exercises with devices work on plasticity in the central nervous system due to the neuromotor, audiovisual feedback: the multisensory action-observation system enables patients to re-learn impaired motor function through the activation of internal action-related representations. [...]

Our results showed a great improvement on the ADL and positively marked functional recovery of motor function. An important aspect of our study was the association of robotic therapy with the traditional rehabilitation-based approach of physiotherapy and OT to provide more full and intensive sessions to improve the outcome.

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Milia P, Peccini MC, De Salvo F, Sfaldaroli A, Grelli C, Lucchesi G, et al. Rehabilitation with robotic glove (Gloreha) in poststroke patients. Digit Med 2019;5:62-7

“

Robot-assisted training using the Gloreha device demonstrated beneficial effects on body structure and function, including upper extremity motor function, brachioradialis muscle recruitment, and coordination, in children with Cerebral Palsy. The beneficial effects were maintained 1 month after training termination.

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Kuo FL, Lee HC, Hsiao HY, Lin JC. Robotic-assisted hand therapy for improvement of hand function in children with cerebral palsy: a case series study. Eur J Phys Rehabil Med. 2020 Apr;56(2):237-242. doi: 10.23736/S1973-9087.20.05926-2. Epub 2020 Jan 14. PMID: 31939267.

“

Gloreha glove is feasible and effective in recovering fine manual dexterity and strength and reducing arm disability in sub-acute hemiplegic patients. [...] Patients in the treatment group significantly improved the motor function of the paretic upper limb (Motricity Index), their coordination and mono-manual dexterity (Nine Hole Peg Test) and strength (Grip and Pinch) in contrast to controls, and the cost savings was considerable.

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Vanoglio F, Bernocchi P, Mulè C, Garofali F, Mora C, Taveggia G, Scalvini S, Luisa A. Feasibility and efficacy of a robotic device for hand rehabilitation in hemiplegic stroke patients: a randomized pilot controlled study. Clin Rehabil. 2017 Mar;31(3):351-360. doi: 10.1177/0269215516642606. Epub 2016 Jul 10. PMID: 27056250.

Clinical benefits

- Maintenance and improvement of the joint range
- Proprioceptive stimulation
- Improvement of visual-spatial and attentive skills
- Increase in functional independence
- Reduction of pain, oedema and hypertonia
- Prevention of adhesions, contractures, and immobilization damages
- Improvement of joint metabolism, lymphatic and blood circulation
- Maintenance of functional skills and body perception
- Increase in coordination and dexterity
- Increase in grip and pinch strength





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