



# OmniHi5™

Advanced FES Upper Extremity Treatment System



## Evidence Supporting FES<sup>1</sup>

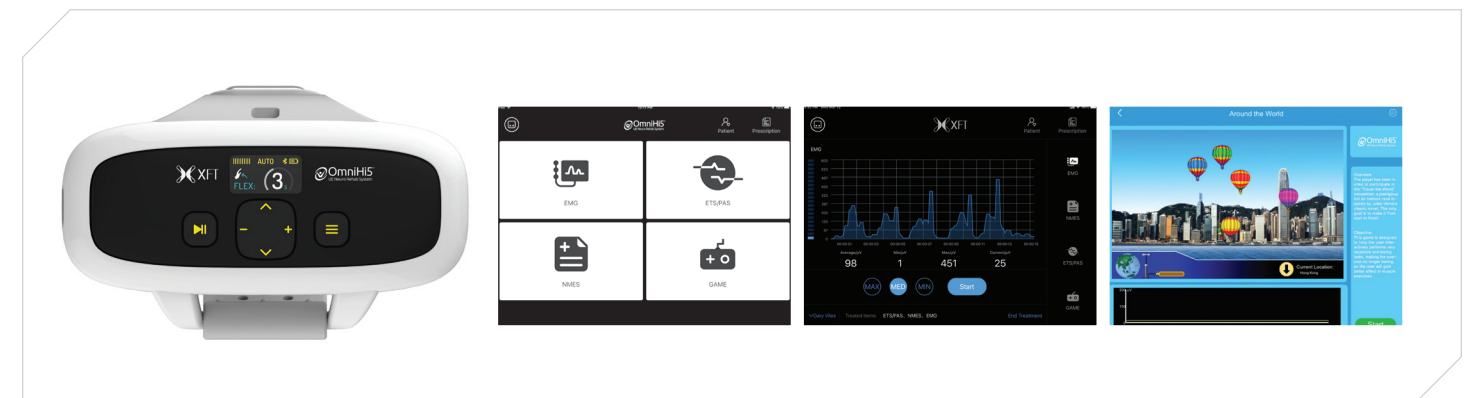
- 5 weeks of daily home training with a task-specific stimulation program improved selective hand functions and upper limb impairments associated with chronic post-stroke paresis;
  - Decreased simulated feeding time
  - Decreased spasticity
  - Decreased pain
- The application of FES to upper limb and interscapular muscles of stroke patients with motor impairment of the upper limb improved reaching movements.
- Severe hand impairment was reduced after a short duration of NMES therapy in a pilot data set for individuals with chronic stroke. NMES-assisted grasping trended towards greater functional benefit than traditional NMES activation of wrist flexors and extensors.
- FES treatment combined with traditional occupational and physical therapy still remains the most promising approach in rehabilitation of SCI patients.
- The interactive training program that included FES enabled patients to reach, grasp, move, place and release objects and resulted in better functional recovery of the upper extremity in ischemic stroke survivors than task related exercise training alone.

ACP FES Patient Solutions is now offering the OmniHi5™ UE Neuro Rehab System globally including Japan and Taiwan, with the exclusion of all other Asian countries.

1. Alon G, et al. Neurorehabilitation 2003; 18:215-225; Alon G, et al. Neurorehabil Neural Repair 2007; 21(3):207-215; Kowalczewski J, et al. Arch Phys Med Rehabil 2007 Jul; 88(7):833-9; Eraifej J, et al. Syst Rev Feb 2017; 6(1):40; 1:8; Cuesta Gomez A, et al. Front Neurol. 2017 May; 8:186; Santos M, et al. J Neurol Phys Ther 2006 Dec 30; 30(4):15-83; Popovic MR, et al. Spinal Cord 2001; 39(8):403-12.



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The **OmniHi5™** is a complete neuro rehab system for the upper extremity, offering a variety of interactive treatment options that promote optimal functional recovery. It adapts to patient-specific needs, incorporates engaging exercise visualizations and enables therapeutic protocols in rehab and functional capabilities outside of rehab to enhance independence and quality of life.

Neuromuscular electrical stimulation (NMES) and functional electrical stimulation (FES) facilitate motor function while individuals use their hand to perform exercises and/or functional tasks. Patient management software makes it easy for clinicians to manage patients, track treatment sessions and document functional progression.

The **OmniHi5™** is a wearable rehabilitation tool to address the fingers, hand, wrist, arm and shoulder by:

- Maintaining or increasing ROM
- Decreasing muscle spasms
- Preventing or retarding disuse atrophy
- Promoting neuromuscular re-education
- Enhancing function

## Dynamic Treatment Options Encourage Optimal Outcomes

- Neuromuscular and Functional Electrical Stimulation (NMES/FES) promote re-education and recovery.
- Surface Electromyography (sEMG) enhances evaluation, exercise progression and participation.
- EMG Triggered Stimulation (ETS) and Power Assistant Stimulation (PAS) support users during exercise and functional activities.
- Gaming features increase participation by making rehabilitation fun and engaging.

### OmniHi5™ Set-up Examples



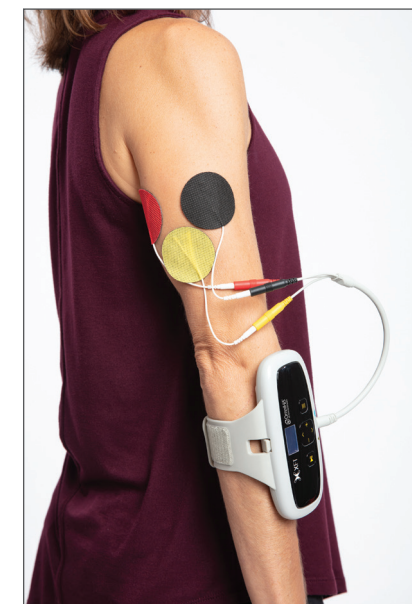
Wrist and Finger Extension



Wrist and Finger Extension



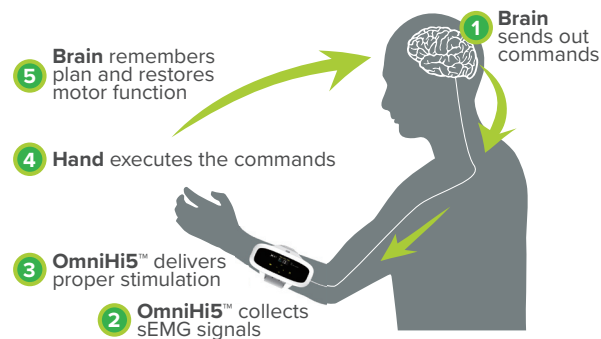
Shoulder and/or Elbow Extension



Shoulder and/or Elbow Extension



Shoulder Extension



The brain tells the hand to move, causing muscles to contract. **OmniHi5™** detects signals from the muscles to use as a guide, delivering the amount of stimulation necessary to assist with moving the wrist, hand and fingers. While completing the task, information about the activity is sent back to the brain. This teaches the brain a new pattern of movement. Consistent practice and repetition of the task may help restore independent function.



Designed to improve upper extremity function and active range of motion in patients with hemiplegia or upper limb paralysis, the **OmniHi5™** uses NMES, sEMG and FES. It may be appropriate for use by individuals with conditions such as:

- Multiple Sclerosis
- Stroke
- Cerebral Palsy
- Traumatic Brain Injury
- Incomplete Spinal Cord Injury
- Familial/Hereditary Spastic Paraparesis

### Key Features

- Programming is quick and easy.
- One piece, one size and a universal fit simplify ordering and cost containment.
- Integrated stainless steel electrodes rid users of costs and challenges tied to disposables.
- Optional cable accessory allows for NMES treatment of elbow and shoulder dysfunction.
- Internal bluetooth connects to an iOS app for gaming, tracking, adjusting and progressing. \*iPad not included.
- Control unit has a 2-year warranty.