H200® Wireless

HELP YOUR PATIENTS GRASP LIFE

Functional Electrical Stimulation (FES) Can Restore Upper Extremity Function

Bioness®

Technology That Enhances Therapy and Maximizes Function

The H200 Wireless System is used by patients to perform therapeutic and task specific activities to improve lost hand function as a result of:[1,2]

- Stroke
- Spinal Cord Injury

Benefits of Functional Electrical Stimulation (FES) in Upper Extremity Rehabilitation

- Improved ability to perform activities of daily living[3]
- Reduced muscle spasticity[1]
- Improved volitional movement of the hand and wrist
- Re-education of muscles over time

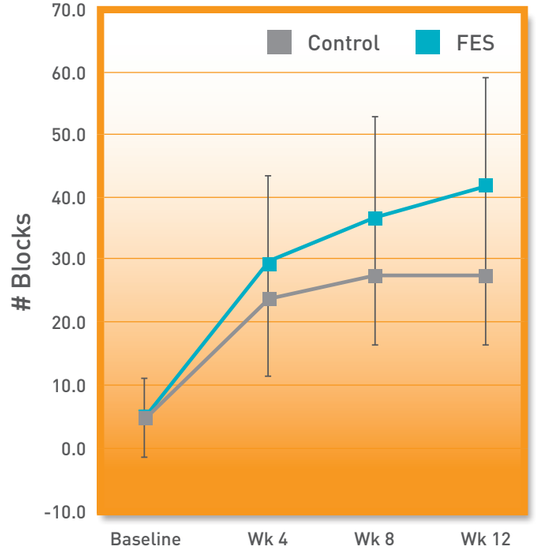
FES may also reduce or prevent secondary complications in patients and help maintain or increase range of motion, increase local blood circulation and prevent or retard muscle disuse atrophy.

START REHABILITATION EARLY

Clinical evidence shows use of the H200 benefits patients 0-3 months post injury

Alon showed that a 12- week task-specific training protocol incorporating FES resulted in better functional recovery of the upper extremity in stroke survivors with little to no hand movement than task-specific training alone.[3] (n=15)

- Subjects practiced one hour per day, 5 days/week as inpatients and after discharge continued with one hour per day, 5 days/week at home, unsupervised
- All patients demonstrated improvement in hand function at 12 weeks with significant differences between the control (non-H200) and H200 groups (p=0.049)



(Pre and post testing was done without the device)

INCREASE DOSAGE TO MAXIMIZE FUNCTIONAL OUTCOMES

Longer repetitive practice produces significant benefits

A duration based study of electrical stimulation by Page concluded that with 120 minutes per day of repetitive task-specific practice augmented with electrical stimulation, patients exhibited large, consistent upper extremity motor changes even years after their strokes.[4]

Percent Improvement (Pretest: Post-test)

Measure	Average of HEP*, 30 & 60 minute programs	2 Hours Use of H200
Fugl-Meyer	6.3%	15.5% (P<0.0007)
Arm Mobility Test	7.5%	14.9% (P<0.0002)

(Pre and post testing was done without the device)

*Home Exercise Program

Patients 3-6 months post injury see compelling benefits with home use

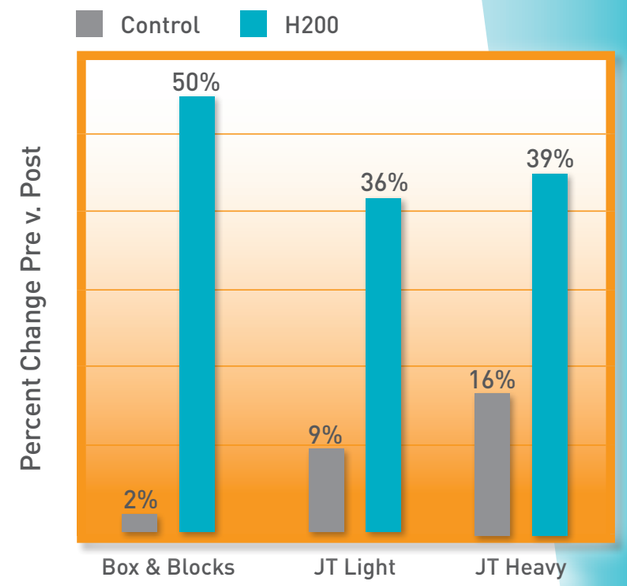
A sub-acute study by Ring assessed daily use of the H200 System and showed significantly improved outcomes vs. a control group.[1] (n=22)

- Six-week home-based program resulted in significant reduction in spasticity throughout the upper extremity and active range of motion in the shoulder and wrist. (p<0.05)
- In individuals with partial active motion of the hand, greater functional recovery of the upper extremity was demonstrated by statistically significant differences in 4* functional hand tests

Type I: Patients with no active voluntary motion at the fingers and wrist. (n=10)

Type II: Patients with partial active voluntary range of motion. (n=12)

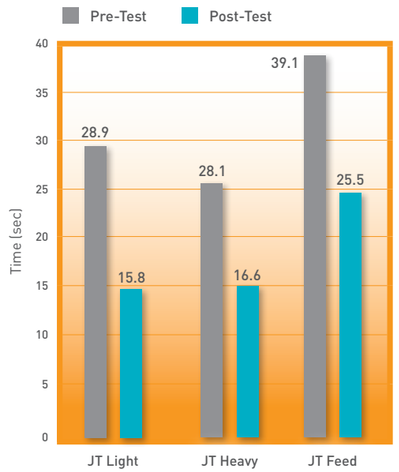
Type II Patient Outcomes

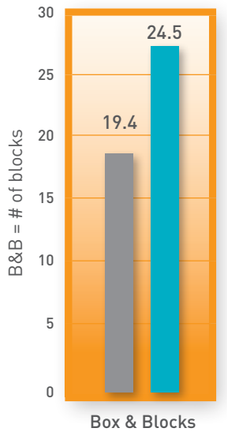


*JT Simulated Eating hand test data not available from manuscript

(Pre and post testing was done without the device)

SIGNIFICANT FUNCTIONAL GAINS CAN BE MADE IN PEOPLE WITH OLDER CNS INJURIES





(Pre and post testing was done without the device)

Daily home use improves hand function in the chronic patient population

A study by Alon tested the efficacy of a home-based H200 program in chronic stroke subjects and showed statistically significant improvements in functional outcomes.[5] (n=77)

- A five-week home-based training program that combined H200 use with exercise ~90 minutes/day showed significant improvements in functional outcomes post-test versus baseline (p<0.01)
- Mean time since stroke = 3.3 years

H200® Wireless

Advanced Technology from Bioness Motivates Your Patients and Maximizes Outcomes

- Clinical evidence suggests that the H200 System may significantly improve hand function
- Integrates easily into your patient's daily life allowing for increased therapy time in and out of the clinic
- Integration into daily life increases patient compliance and improves patient outcomes

H200 Wireless Hand Rehabilitation System Components

1. H200 Orthosis

- Wireless, lightweight and comfortable, providing consistent electrode contact over desired muscles
- Provides reproducible electrode placement for ease of use
- Incorporates flexion, extension and opposition of the thumb allowing for true function training and use

2. Small Hand-held Control Unit

- Communicates wirelessly with the system and the Clinician's Programmer

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1. Ring H, et al. 2005. *J Rehab Med*. 37:32-36.
2. Alon G, et al. 2002. *J Stroke Cereb Dis*. 11(2):99-106.
3. Alon G, et al. 2007. *Neurorehabil Neur Repair*. 21(3)207-215
4. Page, S, et al. 2012. *Arch Phys Med Rehabil*. 93:200-206
5. Alon G, et al. 2003. *NeuroRehabil*. 18(3):215-225.

Individual results vary. Patients are advised to consult with a qualified physician to determine if this product is right for them.

Important Safety Information and Risks: For Indications for Use, Contraindications, Warnings, Adverse Reactions, Precautions, and other safety information please refer to www.bioness.com/Safety_and_Risk_Information.php (also available in the H200 Wireless Clinician's Guide).

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