



NESS  
**L300<sup>®</sup>Plus**

**Speed, Stability and Confidence**

*Functional Electrical Stimulation to restore function and mobility.*





Technology That Transforms Lives

The NESS L300® Plus System uses adaptive and customized technology to help your patients with neurological conditions regain natural function and mobility as a result of:

- Stroke (CVA)
- Multiple Sclerosis (MS)
- Traumatic Brain Injury (TBI)
- Incomplete Spinal Cord Injury (SCI)

Benefits of Functional Electrical Stimulation (FES) in Neurorehabilitation

Studies show that FES improves performance in completing activities of daily living (ADLs) such as:

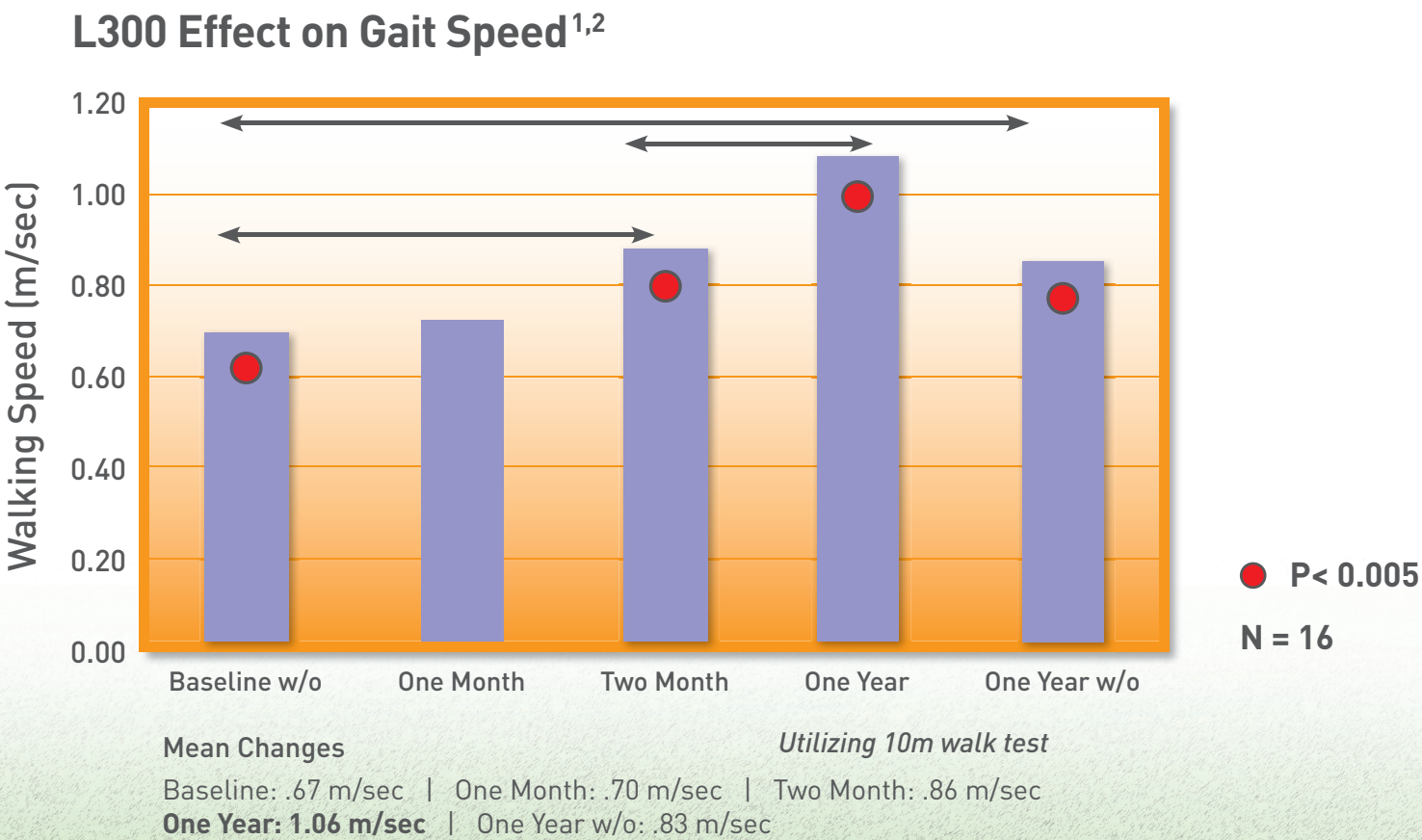
- Improved Gait Speed
- Improved Stability
- Prevention or Reduction of Falls

Additionally, electrical stimulation may reduce or prevent secondary complications by maintaining or increasing joint range of motion, preventing muscle disuse atrophy and increasing local blood circulation.



Clinical Evidence Strongly Supports the NESS L300 Foot Drop System

A clinical study by Laufer measured the effects of the L300 System in correcting functional abilities in the daily life of 16 patients with chronic hemiparesis.<sup>1</sup> A one-year follow-up study by Alon of the same 16 patients with chronic hemiparsis and foot drop found a 71% increase in walking speed using the L300.<sup>2</sup>



Alon and Colleagues Findings<sup>2</sup>:

- Significant increases of 71% in walking speed from 0.67 m/sec to 1.06 m/sec
- Gait asymmetry improved 96% from 0.51 to 0.26
- Gait stride time variability decreased 29% from 5.32 to 3.79

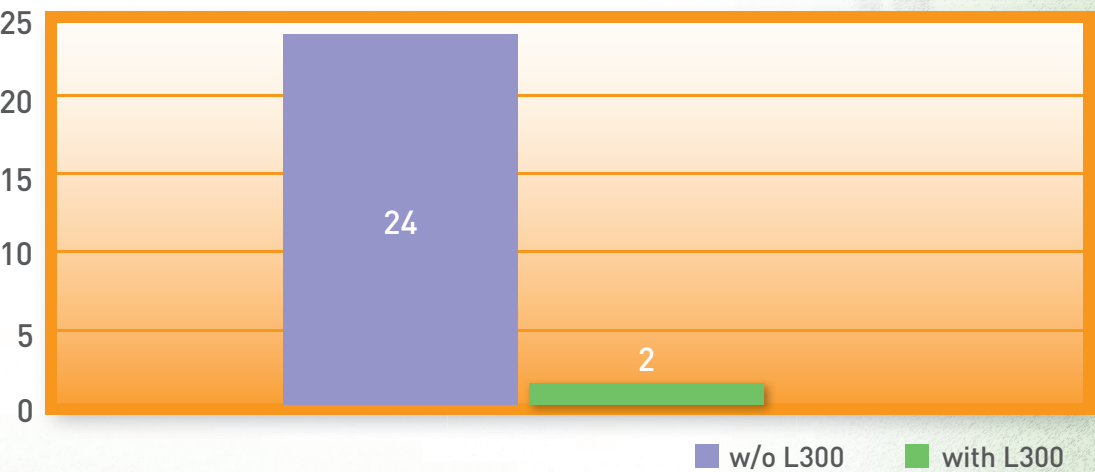
The one-year follow-up study found significant improvement in ambulation status in study subjects from a lower-level “limited community ambulatory” to a higher-level “full community ambulatory”.<sup>2</sup>

Significance of Walking Speed Associated with Changes in Quality of Life<sup>3</sup>

Significance of Gait Speed <sup>3</sup>	
Associated Changes in Function & Quality of Life	
Gait Speed	Ambulation Status
< .4 meters/second	Household
.4 - .8 meters/second	Limited Community
> .8 meters/second	Full Community

A clinical study by Hausdorff *et al* of 24 patients with chronic hemiparesis found a significant (92%) reduction in falls of the study participants using the L300 System over a 8-week period.<sup>4</sup>

Total Number of Falls



The L300 System is not a replacement for therapy, but is clinically proven to enhance your therapy practice, to support your therapy goals and to maximize your patient outcomes.



## Advanced Technology from Bioness Enhances Your Practice and Maximizes Patient Outcomes

- + Clinical Based Evidence: Clinical evidence suggests the L300 system may significantly improve gait speed, symmetry and stride
- + Increased Productivity: Studies show increased outcomes in patients using the L300 System and FES
- + Increased Safety and Fall Prevention: Stroke survivors are 3.7 times more likely to experience a fall vs. average adults 65 yrs or older<sup>5</sup>
- + Reduce Costs: The average costs for falls requiring hospitalization are estimated at over €15.000 per incident

### L300 Plus System Components

#### 1. Leg Cuff

- + Easy to use and anatomical landmarks ensure accurate, reproducible electrode placement.

#### 2. Intelli-Sense Gait Sensor™

- + Detects “heel on” and “heel off” positions and adapts to uneven terrain and walking speeds.

#### 3. Control Unit

- + Communicates wirelessly with the rest of the system and interfaces with the Clinician’s Programmer.

#### 4. Thigh Cuff

- + Interchangeable thigh cuff for the hamstrings or quadriceps and knee flexion and extension.

## Bioness

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1. Laufer Y, et al. 2009. *Am J Phys Med Rehabil*. 88:14-20
2. Alon G, et al. 2008. *Stroke*. Feb; 39(2):88.
3. Schmid A, et al. 2007. *J Stroke*. 38(7): p. 2096-100.
4. Hausdorff JM, et al. 2006. *J Neurol Phys Ther*. 30(4):207
5. Kerse N, *J Stroke*: 2008;39:1890-1893

Individual results vary.

Contraindications, Adverse Reactions and Precautions are available on-line at [www.bioness.com](http://www.bioness.com) (also available in the NESS L300 and NESS L300 Plus Clinician's Guides).

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