For adults with gait deficit due to mild-to-moderate symptoms of multiple sclerosis (MS)

# Proudly Serving Our Veterans

PoNS®

PoNS<sup>®</sup>, short for Portable Neuromodulation Stimulator, is an innovative and non-implantable 14-week therapy delivered by neurostimulation through a mouthpiece connected to a portable controller. It's primarily used at home with physical rehabilitation exercise to improve walking for people with MS. Combined with physical rehabilitation exercise, PoNS Therapy<sup>®</sup> can significantly improve gait—to help keep people with MS active and independent.

### **How PoNS Works**

Tongue Stimulation: When the PoNS device is on, the electrodes on Dorsal anterior cingulate the mouthpiece send mild electrical impulses to the surface of the cortex Left primary tongue, which stimulates two cranial nerves connected to the notor corte> Right dorsolateral tongue. This process is called translingual neurostimulation, or TLNS. prefrontal cortex Left premotor Right premoto cortex Cranial Nerves: The electrical stimulation of these cranial nerves Left dorsolateral prefrontal cortex creates a flow of neural impulses that Facial nerve are delivered directly into the Trigemnial (CN VII) nerve (CN V) brainstem and cerebellum-the body's movement control center. Chorda Brainstem: From the brainstem, tympan these impulses travel throughout Lingual the brain and activate neurons and Trigeminal sensory Facial nerve CN VII nucle pathways involved in regulating (CN VII) Medulla Facial nucleus human function. Cerebellun Vestibular nucleus Nucleus tractus solitarius Trigeminal spinal nuclei

**Neuroplasticity:** The PoNS device, along with physical therapy, initiates a cascade of changes in multiple brain regions. Consistent application of PoNS Therapy provides a sustained neuromodulatory effect resulting in neuroplastic changes.

#### "

After living with MS since 1999, gait difficulties took away my most valued treasure: quality adventures with my 13-year-old daughter. My focused **PoNS Therapy helped me improve my walking**, and as a result... I experienced freedoms such as increased walking speed, endurance, and distance. As a reward for her support and motivation, Rogue and I will vacation in New York City to walk the streets of Manhattan and enjoy our favorite Broadway musicals! **Thank you for the experiences I thought were lost forever.** 



-Kevin Byrne, retired US Veteran

Individual results may vary. Speak to your physician to see if PoNS is right for you.

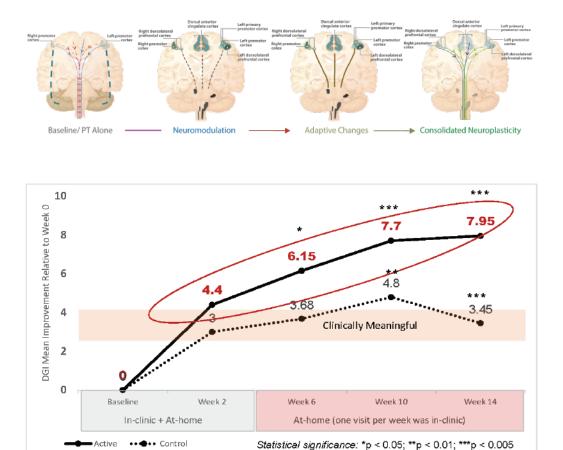
# Significant Outcomes Supported by Clinical and Real-World Studies

100% of clinical trial participants saw at least a 4-point improvement in their Dynamic Gait Index (DGI) scores, 50% achieving 8+ points, after using PoNS<sup>®</sup> + physical therapy for 14 weeks.

In a real-world analysis, **almost 60% of people with MS using PoNS had at least a 4 point improvement** in their Functional Gait Assessment.



### References and Functional Outcomes



No serious adverse events related to the PoNS device were reported in the MS RCTs or in use in clinical rehabilitation settings to treat balance and gait disorders. Some individuals have reported headaches, fatigue, and excess salivation. Excess salivation during training sessions often occurs but generally improves as patients get used to wearing the mouthpiece.

## Get Back In Step With Life. Speak to your neurologist about PoNS!

**Indications:** The PoNS<sup>®</sup> device is indicated for use as a short term treatment of gait deficit due to mild to moderate symptoms from multiple sclerosis and is to be used as an adjunct to a supervised therapeutic exercise program for adults 22 years of age and over by prescription only.

**Contraindications:** The PoNS<sup>®</sup> device delivers electrical stimulation directly to the surface of the tongue. Precautions for use are similar to those for transcutaneous electrical nerve stimulation (TENS). Electrical stimulation should not be used: • If there is an active or suspected malignant tumor • In areas of recent bleeding or open wounds • In areas that lack normal sensation. The PoNS<sup>®</sup> has not been tested on, and thus should not be used by individuals who are pregnant. Do not use the PoNS<sup>®</sup> if you are sensitive to nickel, gold or copper.

**DNS**<sup>®</sup>

IN PARTNERSHIP WITH

Government Services

Learn more about PoNS!

- \$ 877.564.0008
- ∑ inquiries@heliusmedical.com
- 🗰 www.ponstherapy.com