Bridging Bionics
FOUNDATION

Our Equipment

We offer physical therapy and personal training combined with advanced technologies such as whole-body vibration and exoskeleton suits.

The exoskeletons are intended to assist with augmenting ambulatory functions for individuals with neurological impairments including but not limited to: spinal cord injury, Cerebral Palsy, Multiple Sclerosis, Parkinson's, or stroke.

The essential equipment, which is available for clients to use includes (but is not limited to):

- **A raised physical therapy platform mat** for client evaluations and to make transferring from a wheelchair easier;
- **A Galileo Neuromuscular Tilt Table**

Galileo's side-alternating stimulation systems are a powerful whole-body tool that has shown great results in providing functional neuromuscular training and recovery. In the last 10 years, scientists have also shown that the brain and the spinal cord have the ability to learn and relearn after neural injury with highly repetitive activity–based interventions.

Instead of activating the muscles voluntarily, the principle of Galileo is to evoke involuntary muscle contractions. This happens directly through using the afferent and efferent nervous system to induce thousands of reflexive muscle contractions – all in a matter of minutes.

Clinical Treatment Advantages of the Galileo Tilt Table

- Reduction of spasticity and management
- Optimizes neuromuscular recovery and accelerates early rehabilitation
- Engages afferent and efferent reflex-based muscle stimulation
- Recruits small & large antagonistic muscles in lying to standing position

- Improves muscle balance, function, power, and force
- Provides 4,500 contractions in 3 minutes at 25Hz

Spinal Cord Injury

- Reduction of spasticity and management
- Improvement of neuromuscular recovery and plasticity
- Improvement of balance muscle function, force, and power
- Improvement of blood flow
- Improvement of circulation and the lymphatic system
- Higher bone mass and osteoporosis prevention
- Back pain treatment and prevention
- Whole-body stimulation in a laying, sitting, and standing position

Galileo Mano

The Galileo Mano dumbbell systems are used for the hands, arms, and shoulders to reduce spasticity. They help to invigorate the muscles, alleviate movement restrictions and circulatory disorders, and improve motor function. For more information on the Galileo, please visit the website: https://stimdesigns.com.

EksoGTTM Bionic Exoskeleton Suit

Ekso GT™ is a wearable bionic suit that enables individuals with any amount of lower extremity weakness to stand up and walk over ground with a natural, full weight bearing, reciprocal gait. Walking is achieved by the user's weight shifts to activate sensors in the device, which initiates steps. Battery-powered motors drive the legs, replacing deficient neuromuscular function.

- It provides a means for people with as much as complete paralysis, and minimal forearm strength, to stand and walk
- Helps patients re-learn proper step patterns and weight shifts using a functional-based platform
- Facilitates intensive step dosage over ground

EksoGT is a gait training exoskeleton intended for medically supervised use by individuals with various levels of paralysis or hemiparesis due to neurological conditions such as stroke, spinal cord injury or disease, traumatic brain injury, and more. With medical clearance, it typically facilitates walking for people with a broad range of motor abilities and sizes; which may include up to C7 complete, any level of incomplete SCI, and non-or pre-ambulatory individuals' post-stroke.

- Accommodates an unprecedented spectrum of patients in motor ability

- Everyone who has passed physical examination and is medically cleared has walked in their first session
- Designed for utility and ease of use in a clinical setting

For more information on EksoGT, please visit the Ekso Bionics website at: https://eksobionics.com

Indego® Bionic Exoskeleton Suit

Like the EksoGT, the Indego Therapy Kit enables clinicians to conduct over-ground and task-specific gait training. Indego offers features that set it apart as a tool for therapy for those with spinal cord injuries, including a lightweight modular design (just 26 lbs.), functionality (its versatility allows clients to wear their own shoes for training inside and outside on uneven surfaces), intuitive controls with a wireless operation, fast charging lightweight batteries that allows continuous extended use, and a variable assist mode that offers clinicians innovative gait therapy options. Future advancements will enable our therapists to offer an even more efficient therapy regimen. Parker hopes that Indego will soon be FDA approved to 'turn on' its functional electrical stimulation capabilities, and by early 2018 they hope the device will be FDA approved for individuals with mobility impairments who have sustained a stroke.

For more information on Indego, please visit the website at: https://www.indego.com