



Why Galileo is an Essential Rehab Training Tool? Versatile, Easy set-up, Better Outcomes in Shorter Time

Unlike any other muscle training – endurance, resistance, coordination, functional, electrical stimulation

Patients

- Easy, fun, short training, feel better, quicker results
- ~~AM~~ Mechano-stimulation of the neuromuscular system (afferent & efferent) & muscles
- Thousands of repetitions in minutes activating small and large muscle groups (4500 muscle contractions in 3 minutes at 25Hz)
- Induces involuntary muscle contractions through the stretch reflex
- Combines voluntary movements with involuntary muscle contraction leads to much higher muscle activation
- Intramuscular coordination & neurological communication optimizes plasticity
- Efficiently stimulates many muscle groups at the same time
- Improves mobility in shorter time with better outcomes in walking distance
- Improves blood flow, circulation and lymphatic system
- Low influence on the cardiovascular system
- Reduces spasticity in minutes

Therapists

- Versatile, easy to use and fast set-up – no electrodes
- Universal tool serving 90% of your patients
 - High muscle power over 20Hz with small loads protecting ligaments & joints
 - Muscle function over 12Hz for flexibility
 - Balance & Mobilization over 5 Hz for fall prevention
- Saves time with better patient outcomes preparing patients for functional activities
- Single person operation
- Staff training to prevent injuries

Hospitals

- One tool for many populations – neurological, diseases, orthopedic, heart/lung deconditioned with aging and staff muscle bone health
 - TiltTable - for non-standing
 - Platforms - with force sensors to measure body position and extra loads
 - Dumbbell - for specific hand, arm and shoulder exercises
 - Chair – for core training
- Short training saves time and makes therapy more efficient
- Facilitates mobilization for early discharge
- Economically priced
- Most cost effective intervention per outcome
- 200 peer-reviewed research studies showing safety & efficacy for a wide population



Galileo Effects

Galileo high-repetition neuromuscular training helps patients learn & relearn movement patterns in patients with many conditions:

- **Neurological** – like Stroke, SCI, Brain Injury, etc
- **Diseases** – like MS, MD, Parkinson's, etc
- **Orthopedic** – before & after surgery for preparation & recovery
- **Deconditioned muscles** - from Aging, Cancers, Cardio events, Heart & Lung
- **Back Pain** – for prevention and improvement
- **Fall Prevention** – for balance and power training
- **Blood Flow & Microcirculation** – for improved circulation & lymphatic system
- **Osteoporosis** - to prevent/improve muscle bone health by training muscle power which indirectly improves bone health
- **Bowel conditions** – for improved function

Cardiac / Heart / Lung

- Improvement of muscle power, force, and performance
- Improvement of postural control, balance & fall prevention
- Improvement of timed up and go test
- Higher gait speed and walking distance
- Improved exercise capacity related to increase in neuromuscular activation
- Elicits a myostatic stretch reflex mediated by the muscle spindle and Ia-afferents
- Improved quality of inter-muscular coordination often disabled in patients w/ COPD

Stroke

- Reduction of spasticity and management
- Improvement of neuromuscular recovery and plasticity
- Improvement of chair rising test
- Higher muscle power and coordination
- Longer walking distance

Aging Adult

- Maintain muscle mass and performance
- Improvement of timed up and go test
- Improvement of balance and fall prevention
- Higher gait speed and walking distance

Parkinson and Multiple Sclerosis

- Reduction of tone and management
- Improvement of timed up and go test
- Improvement of balance
- Higher gait speed and walking distance

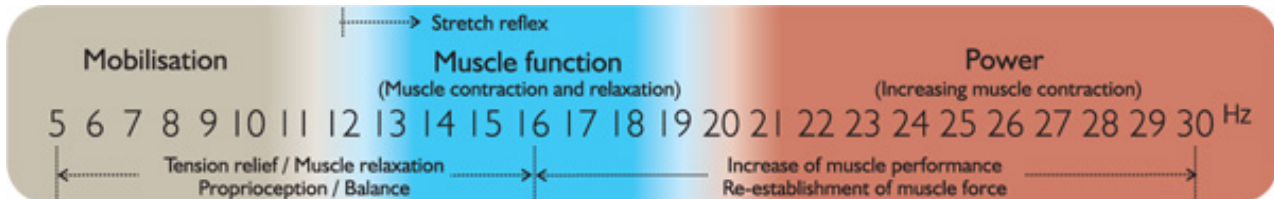
Spinal Cord Injury

- 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 Frequencies

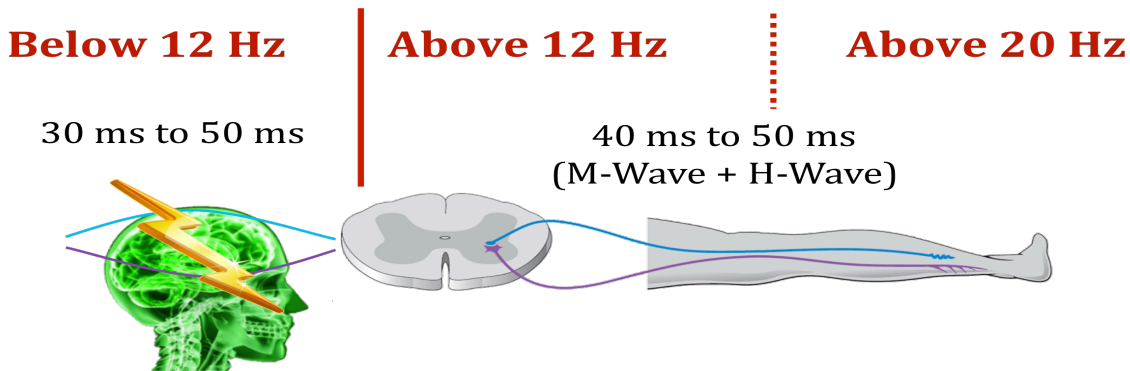
The **frequency** is measured in hertz (Hz) and refers to the number of vibrations per second ranging from 5-40 Hz. For example, at 25 Hz, the targeted muscles will receive 25 repetitions of vibration per second, which means they'll contract and relax 25 times each second generating 4,500 muscle contractions in three minutes.



According to muscle physiology and the transmission speed of the nerve there are three frequency ranges. Once you determine the users training objective i.e. mobilization, muscle function or power then you choose frequencies within that range to train. The training frequency selected has direct impact on the effect of Galileo results. It should be noted that the ranges might vary by a few Hz individually, depending on the fitness level of the user.

Regardless of the training frequency, microcirculation and blood flow are significantly improved within the trained body parts. Flexibility and thus the energy storage capacity in the muscle-tendon complex are increased.

Physiological reaction to different frequencies



Below 12 Hz – Central system dominate

Within this range training is focused on proprioception, balance and mobilization.

Between 12 Hz and 20 Hz – Spinal cord dominate

This range focuses on inter and intra muscular coordination, stretching and relaxation.

Above 20 Hz – Increased to maximum – co contraction

This frequency range targets decreasing spasticity and training of muscle power and muscle mass of the fast twitch fibers.