

# Galileo excites the nervous system and prepares clients for dynamic movements



## Spinal Cord Injury Functional Integrated Therapy (SCI-FIT)

Pleasanton, California  
SCI and Neuro Exercise Based Therapy Center

**Training Product:** Galileo Med L

**Training Since:** January 2014



### The Facility

SCI-FIT specializes in non-traditional, exercise-based therapy for people with neurological conditions ranging from spinal cord injury to stroke, multiple sclerosis, cerebral palsy and traumatic brain injury.

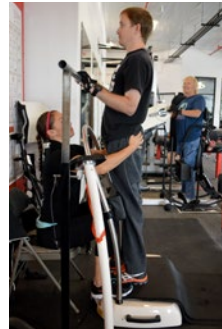
Based on principles of neuroplasticity, SCI-FIT uses a combination of therapeutic techniques, exercises and modalities to maximize clients' potential for functional recovery. Since adding the Galileo Training platform to their facility, clients have been able to connect to their nervous system in a way that was previously inaccessible.

### The User Advantages

At SCI-FIT, co-owner and COO Jerry Rainey has added Galileo Training to the routines of clients. When used during the warm-up session, he has found that the Galileo excites the nervous system and prepares clients for dynamic movements such as over-ground walking or treadmill training. "I use Galileo Training as a movement-preparation tool to get a better connection to their core and extremities. It allows the client to be more connected mentally and physically, which leads to greater functional output while doing other exercises."

Galileo's side-alternating vibration positively impacts clients' spasticity level and functional training during and after their sessions. "In some clients, it makes their legs more excited and in others it fatigues their muscles so they have less tone in their legs," explains Jerry. At all frequencies Galileo provides biofeedback

stimulating the neuromuscular system to connect and communicate. At lower frequencies, from 5 Hz to 12 Hz, the client's brain is involved in communicating. On



the other end, with 3 bouts of 2 to 3 minutes at stretch reflex frequencies, clients are able to relax over-active and spastic muscles to access underdeveloped or disconnected muscles.

SCI-FIT clients have also benefitted from Galileo's strength training component, as well. Clients are able to exhaust their neuromuscular system and train power in a short time at 20 Hz to 30 Hz, making greater use of their remaining time.

"The Galileo has been a great tool for providing outcomes we weren't able to get with other devices we have," reports Jerry.

### The Operational Advantages

"Easy" is the word Jerry uses most to describe use of the Galileo. "It's easy to set up, it's easy to get a client on it and it's easy to make adjustments to the frequency and training options. It's a very user-friendly device that works really effectively."

"After trying Galileo, clients gave us feedback that this was a device we should have permanently in the facility. We have been very happy about the progress our clients have made with the help of Galileo Training."

*"It's definitely one of the best products we've added to our company in the last five years. It's a great tool for providing outcomes we weren't able to get with other devices."*

**Jerry Rainey**  
SCI-FIT Co-owner and COO



(831) 222-0330  
GalileoUSA.com

## Galileo Training Gains

### Client 1: Kevin

**Age:** 14

**Dx:** Cerebral Palsy

#### **Training & positions:**

Stands with balance assistance at the beginning of every therapy

session, 2 times per week for 1-2, 5 minute sessions at 16 Hz, depending on level of spasticity.

#### **Outcomes:**

- When used as a preparatory modality, Kevin has decreased full-body spasticity, decreased co-contraction and increased body awareness for a more successful overall session.
- Requires less balance assistance; can stand unassisted for a few seconds at a time while using the Galileo platform.
- Decreased or lack of muscle soreness when the Galileo is used at lower frequencies at the end of therapy sessions.



### Client 2: Augustina

**Age:** 78

**Dx:** Spinal Cord Stroke

**Training & positions:** Standing while holding bar and with knee lockout support. Does 3, 3 minute bouts at 16 Hz, 2 times per week, doing core and upper body movements to challenge balance.

#### **Outcomes:**

- Increased connection to core and lower extremities during and after Galileo Training.
- Increased leg strength demonstrated by a decrease in assistance needed during over-ground walking and standing exercises.
- Stabilization of severe osteoporosis.

### Client 3: Julia

**Age:** 25

**Dx:** C 4/5 ASIA B Incomplete Spinal Cord Injury

**Training & positions:** Standing with assistance for hip stabilization and knee lockouts. Does 3, 2 minute bouts at 18 Hz, twice weekly, doing pelvic tilts, holding pelvic neutral and mini-squats.

#### **Outcomes:**

- Increased connection to core and lower extremities during and after Galileo Training.
- Stabilized blood pressure in standing positions.
- Able to hold pelvic neutral for longer period of time for stronger steps during assisted over-ground walking in a platform walker.
- Decreased low back pain while lying down or in wheelchair.

### Client 4: Lance

**Age:** 32

**Dx:** T 4/5 ASIA B Incomplete Spinal Cord Injury

#### **Training & positions:**

Standing and sit-to-stand exercises, focusing on postural alignment and muscular strength for 3, 3 minute sessions at higher frequencies (24 Hz), 3-4 times per week, to decrease tone and spasticity at the beginning of sessions. Uses Galileo Training at mid-range frequencies (14-18 Hz) to increase connection and core strength.

#### **Outcomes:**

- Decreased tone after standing on the platform at higher frequencies for better connection, range of motion and function of muscles in lower extremities during standing and gait exercises.



- Aids full-body strengthening, including his weakest areas: gluteals and back extensors.
- Decrease in neuropathic pain.
- Stands in parallel bars with no hip support and minimal knee support. Takes a few unassisted steps using a platform walker during over-ground walking exercises.
- Increased sensation and proprioception during and after use.
- Lance reports, "I almost feel back to normal because my body is so relaxed" after Galileo training.

### Client 5: Karen

**Age:** 33

**Dx:** T10 ASIA A Complete Spinal Cord Injury.

Now: L1 ASIA C Incomplete

**Training & positions:** Standing and sit-to-stand exercises focusing on hip stabilization, neutral pelvis positioning, balance and muscular strength in gluteals and quadriceps. Performs 3, 2- 3 minute sessions at various frequencies once or twice weekly.

#### **Outcomes:**

- Increased sensation, feeling of warmth and itching in lower extremities - a sensation she previously experienced when running prior to her accident. Galileo is the only device to elicit this sensation.
- Increased connection and proprioception of lower extremities in preparation for walking.
- Significant increase in core stability and pelvic control. Has enough strength to pull both legs into lockout and hold for more than 30 seconds in parallel bars.

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