

"The Clinical Advantage"™

VibroTactile™ System

NEW

Enhanced Biofeedback for Biodex Balance Technology



Biodex adds vibrotactile cueing to postural sway feedback

Vibrotactile feedback is especially suited for
evaluation and treatment of vestibular disorders

www.biodex.com/vibrotactile



Balance training with vibrotactile feedback

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www.biodex.com

1-800-224-6339

Int'l 631-924-9000

VibroTactile System™



You are expecting a call. You're in a place where a ringing cell phone is bad form so you put your phone on vibrate. When the phone "rings" – you don't see it or hear it – but you know exactly where it is – that is vibrotactile cueing.

NEW VibroTactile™ System

Providing real-time biofeedback during rehabilitation is essential for patients and clinicians. While audio and visual biofeedback are inherent to the Biodex Balance System™ SD and portable BioSway™, the optional VibroTactile System offers an additional form of sensory feedback to help detect changes in postural sway. Using wireless technology, the tactile belt responds with a vibrating sensation when the patient sways outside the therapist-set parameters.

“Finally, a means to provide balance feedback with eyes closed.”



Vibrotactile cueing allows patients to get positional feedback with their eyes closed.

Vibrotactile cueing adds sensory enrichment to therapy tasks

Real-time biofeedback is an important component of balance rehabilitation. Typically therapists cue patients with a tap or verbal command. Vibrotactile cueing enhances the therapy process by adding a mechanized, reproducible sense and objective feedback.

Vibrotactile feedback directly engages the motor learning system, reinforcing brain plasticity aiding to improve postural control, essentially reducing falls.

Vestibular Therapy

Especially suited for evaluation and treatment of vestibular disorders, vibrotactile cueing allows patients to safely receive positional feedback with their eyes closed.

Patients with vestibular challenges are overly dependent on visual and somatosensory systems. To bring a greater focus to the vestibular system during balance training, the visual sense needs to be eliminated. The VibroTactile System is an ideal means to provide balance feedback with eyes closed.



Vibrotactile cueing technology is rehabilitative, not prosthetic.

APPLICATIONS

- Vestibular therapies
- Balance anxieties from TBI
- Stroke
- Peripheral neuropathies
- Amputation

Vestibular therapy includes balance retraining exercises which, when coupled with vibrotactile feedback as one of the interventions provided by physical therapists, has been shown to improve postural control.¹

The principle behind the technology

Research and clinical experience demonstrate that the vibrotactile cues correcting postural sway in one situation can be transferred to other types of situations. Vibrotactile cueing fosters adaptation to new, correct information.

The origin for this specific technology is from the military, to enhance spatial awareness for jet pilots, with sensors embedded into their flight suits. Since then, the technology has been adapted to balance rehabilitation with excellent results.

SPECIFICATIONS:

Belt

- Dimensions:
 - Small/Medium: 28"-36" (71-91 cm)
 - Large/Extra Large: 36"-48" (91-122 cm)

Transmitter

- Voltage: 5v DC
- Current: 50 mA
- Auxiliary Ports: RS-232; USB

Receiver Box

- Voltage: 5v DC
- Current: 250 mA (when charging)
- Auxiliary Ports: USB (wired); LR-WPAN (wireless)
- Total Shipping Weight: 5 lb (12.7 kg)

For Windows CE only
Field upgrades available

950-430 Vibrotactile System
Includes transmitter, two tactile belts (S/M and L/XL), each with wireless receiver and connection cables.

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Biodex Medical Systems, Inc.

1. Whitney SL, Alghwiri A, Alghadir A. (2015). Physical therapy for persons with vestibular disorders. Pubmed.gov, 61-8. doi: 10.1097/WCO.0000000000000162.