

BALANCE TRAINING



Tetrax Biofeedback to Improve Balance Abilities

A new balance training module has recently been developed by Sunlight, based on the Tetrax balance assessment device used in rehabilitation, ENT, geriatric and sports medicine centers around the world. This module is designed to help patients regain the functional balance abilities needed for day-to-day activities following an operation or other incident, and improve balance abilities to meet new challenges. With balance serving as a key component in many activities, biofeedback balance training plays an important role in rehabilitation and sports training.

Goals of Balance Training

Tetrax balance training helps patients meet a number of goals that physiotherapists traditionally set for their patients. These goals include:

- Correct distribution and balance of weight during standing and walking
- Bringing a limb to full use following an orthopedic operation (particularly ankle training)
- Shortened reaction time
- Tracking a moving object
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- Correctly and easily transferring weight from one weight-bearing limb to another
- Suppressing synkinetic movements
- Combining correct balance with cognitive tasks
- Attention focus during balance

The system includes exercises that which are planned to help patients meet each of these goals. In addition, the exercises can be used to help patient develop compensatory mechanisms that assist in maintaining balance, including plasticity, internal models, learning of limits, and sensory input decisions. Using the Biofeedback User Guide, the physiotherapist, physician, or sports medicine practitioner can plan exercises to help his patients meet these aims and improve their day-to-day functioning.

Benefits of Balance Training

Balance training can benefit a wide range of patients whose balance results, when tested by Tetrax balance assessment, show room for improvement. In addition, some of the Tetrax biofeedback exercises are designed to provide additional challenges for patients with good balance. These include cognitive challenges as part of a balance exercise, and “blind” options in which the player must follow instructions with an intermittently visible and invisible target.

Balance training can benefit patients recovering from an orthopedic operation or an incident such as a stroke or other neurological event, where balance skills must be re-learned to help a patient regain a former level of competence. Balance training can also benefit elderly patients with gradually weaker balance skills, by teaching them new methods of compensation so that they can maintain their level of independence and limit their risk of falling as they age.