

# Resounding Success

Turbosonic shakes up vibration therapy.

BY PAMELA MORTEMORE, PT

**M**ajor cuts in physical therapy reimbursement have put therapists in position to seek alternative therapies to increase patients' outcomes in less time. Four years ago, our facility began researching the effects of vibration therapy to add an edge to our rehabilitation programs and increase patients' function. Our research on whole body vibration exercise convinced us that patients could build strength, balance and coordination with this form of exercise.

This year, we purchased the Turbosonic® by Turbosonic USA and implemented whole body vibration exercise into our treatment programs. Our patients have achieved phenomenal functional outcomes in half the time of traditional protocols.

Turbosonic is a whole body vibration device that replicates natural vertical vibration. It improves slow-twitch and fast-twitch muscle fibers by increasing production of human growth hormones, which increases muscle endurance and strength.

Clinical studies show that whole body vibration therapy improves muscle performance by increasing range of motion, flexibility and relaxation. In addition, the therapy improves bone density and can help treat geriatric diagnoses such as Parkinson's disease and arthritis. Users may also benefit from a shortened recovery period after surgery due to increased circulation, which promotes regeneration of damaged tissue.

We've been using the Turbosonic on patients capable of undergoing this form of treatment. Our physical therapy department reports increased progress treating diagnoses such as chronic joint pain, cervical spine strain and low-back pain.

Patients who are referred to our facility have neurological and orthopedic conditions, such as primary neuropathy, imbalance and migraine

headaches. These conditions have responded the most favorably to the Turbosonic.

Patients with neuropathy and imbalance report a decrease in numbness and tingling in both feet. One patient with severe neuropathy to the bilateral lower extremities reported a significant decrease in numbness and tingling from his knees to his feet. At times, this patient's plantar surface numbness was minimal to none. I was impressed with these results and have explored how the Turbosonic can assist balance therapy secondary to neuropathy.

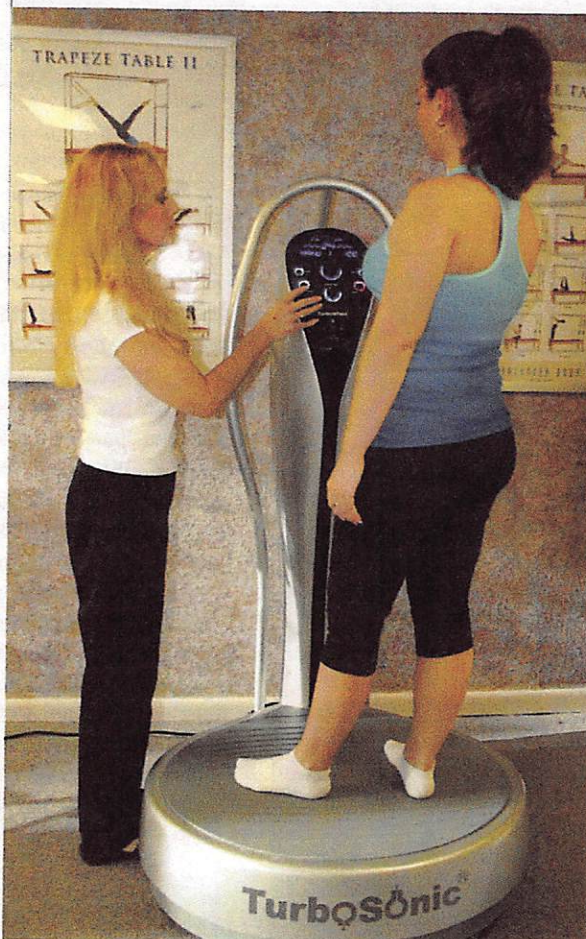
Research supports the Turbosonic's ability to increase balance through whole body vibration exercises. Patients with imbalances during gait and activities of daily living have experienced a 70-percent improvement in core strength stability.

Patients being treated for migraine headaches report a decrease in the frequency, intensity and duration of headaches, as well as positive physiological effects. Current research from Turbosonic documents that whole body vibration increases the release of human growth hormones; serotonin, dopamine and norepinephrine.

Turbosonic also gives an edge to orthopedic healing. A motivating factor for incorporating the Turbosonic into our Gyrotonic® and Pilates physical therapy practice was to assist core and multiplane muscle strengthening. We can increase muscle strength without risking exercise-related injuries or putting additional loads on joints, ligaments and tendons. At a low vibration setting, the Turbosonic increases the tone of tendons and ligaments—areas that are hard to train—and strengthens accessory muscles around stabilizing joints.

Vibration therapy continues to have positive effects on muscle tissue. Studies show increased peripheral circulation to the quadriceps and gastrocnemius muscle after 9 minutes of low-frequency (26 Hz) oscillating mechanical vibration. In addition, research on the physiological effects of muscle tissue show alterations in muscle blood volume. We noted this as a positive outcome with a collegiate athlete who sought physical therapy at our facility after a medial and lateral meniscal repair to the right knee. Within 6 weeks of therapy, which included the Turbosonic, the patient returned to football training camp without deficiencies.

As more research is conducted on sonic vibration therapy, clinicians will understand this modality's power and effects. The future of physical therapy depends on treatment advances. The Turbosonic delivers tomorrow's treatment today. ■



**Pam Mortemore, PT, helps a client experience the benefits of vibration therapy with the Turbosonic.**

Photo courtesy Body Kinetics of Florida Inc.

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