

## Possible Parkinson's Improvement with Whole Body Vibration

Whole body vibration appears to be as effective as conventional physical therapy for treating gait and improving balance in patients with Parkinson's disease. Parkinson's disease is a movement disorder that is chronic and progressive; symptoms continue and worsen over time. It affects nerve cells in a part of the brain that controls muscle movement. Parkinson's disease occurs when a group of cells in an area of the brain called the substantia nigra begin to malfunction and die. The cells in the substantia nigra produce a chemical called dopamine. Dopamine is a neurotransmitter, or chemical messenger, which sends information to the parts of the brain that control movement and coordination. When an individual has Parkinson's disease, his/her dopamine-producing cells begin to die and the amount of dopamine produced in the brain decreases. Messages from the brain telling the body how and when to move are therefore delivered more slowly, leaving a person incapable of initiating and controlling movements in a normal way.

The four primary symptoms of Parkinson's disease are tremor, or trembling in hands, arms, legs, jaw and face; rigidity, or stiffness of the limbs and trunk; bradykinesia, or slowness of movement; and postural instability, or impaired balance and coordination (parkinsonian gait). As these symptoms become more severe, patients may have difficulty walking, talking or completing other simple tasks. Parkinson's disease usually affects people over the age of 50. There are 1-1.5 million people in the United States living with Parkinson's. The disorder occurs in all races but is somewhat more prevalent among Caucasians. Men are affected slightly more often than women.

[Researchers from Germany](#) compared the effects of whole body vibration and conventional physiotherapy on levodopa-resistant disturbances of balance and gait in idiopathic Parkinson's disease. In the study, 27 patients with Parkinson's disease and dopa-resistant imbalance on stable dopamine replacement medication were randomized (intent-to-treat population) to receive whole body vibration (13 patients) or conventional physical therapy (14 patients). The subjects received 30 sessions (two 15-min sessions a day, 5 days a week) of either whole body vibration on an oscillating platform or conventional balance training including exercises on a tilt board. Twenty-one patients (per protocol population) completed follow-up (14 men, 7 women; 10 from the whole body vibration group and 11 controls). The primary measure was the Tinetti Balance Scale score. Secondary clinical ratings included stand-walk-sit test, walking velocity, Unified Parkinson's Disease Rating Scale (section III motor examination) score, performance in the pull test and dynamic posturography.

The study found that the Tinetti score improved from 9.3 to 12.8 points in the whole body vibration group and from 8.3 to 11.7 in the controls. All secondary measures, except posturography, likewise improved at follow-up compared with baseline in both groups.

Quantitative dynamic posturography only improved in patients with whole body vibration and there was no significant change in controls.

The study authors concluded that equilibrium and gait improved in patients with Parkinson's disease receiving both conventional whole body vibration and conventional physical therapy in the setting of a comprehensive rehabilitation program. There was no conclusive evidence for the superior efficacy of whole body vibration compared with conventional balance training. Integrative therapies with good scientific evidence in the treatment of Parkinson's disease include 5-HTP and music therapy.

5-HTP has been observed to have benefits in some people who have difficulty standing or walking because of cerebral ataxia (failure of part of the brain to regulate body posture and limb movements). Some research shows that 5-HTP may allow individuals with unsteady movements to stand alone without assistance, walk without aid or have improved coordination. Other research shows no benefit. Further research is needed before a conclusion can be drawn.

Music therapy has been reported to improve symptoms in people with Parkinson's disease. Modest improvement in symptoms including motor coordination, speech intelligibility and vocal intensity, bradykinesia (slow movement), emotional functions, activities of daily living and quality of life were seen.