Interactive Weight Bearing Exrcise Plateform Improves Muscle Function and Reduces Bone Weakness

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Technology description

Interactive Weight Bearing Exercise is a kind of mechanical stimulation to induce musculoskeletal system to respond actively and has been proven as a treatment and prevention of some age-related problems of bone and muscle weakness. Clinical trials have shown a potential advantage for preventing falls and patients' recovery from fractures, as well as the improvement in balancing ability and bone quality of postmenopausal women. The novel design of a magnetic levitation system and actuator support the platform and generate the specific vibrations. The vibration setting is monitored in a realtime by a built-in microprocessor and sensor. The platform is equipped with Liquid Crystal Display (LCD) readout.

This innovative design features high energy efficiency, low noise, low friction and easy maintenance. The exercise program requires the user to stand upright on the platform for 20 minutes a day only, which most people including the elderly may well achieve.

Elderly at Risk:

Osteoporosis is a deterioration of bone quality and structure that leads to an increased risk of fracture. It is very common among the elderly, especially postmenopausal women. The fractures often occur in hips and wrists, as a result of fall. Spine fracture may result in some cases. These fractures may affect mobility or even cause mortality. Weakening of the bones is not the only factor that increases the risk of fracture in elderly. Muscle weakness and slow response time also contribute to balance difficulties and increase the risk of falls. Widespread inactivity and lack of weight-bearing exercise among the elderly is a major cause of such muscle-related degeneration.

Advantages

•Increase muscle functions and reduce falls
•Improve bone mineral density
•Enhance blood flow
•Accelerate tissue repair

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