

## Fall Prevention Awareness Week, Sep. 23-29, Spotlight: Exercising on Power Plate® Helps Seniors Improve Balance, Reduce Fall Risk

### Summary

For Fall Prevention Awareness Week, Sep. 23-29, Performance Health System's Director of Medical Specialties and Education outlines best exercises for enhancing balance and reducing fall risk with Power Plate whole-body vibration equipment.

### Article

Fall Prevention Awareness Week, Sep. 23-29, reminds us of the seriousness of falls among elderly adults. According to the Centers for Disease Control and Prevention, one out of every three adults age 65 and older experiences a fall each year. The effects of a serious osteoporotic fracture resulting from a fall are well documented, taking a severe toll on older adults' quality of life, independence, and in too many instances, proving fatal.

While much of the discussion around the debilitating consequences of bone fractures among seniors has historically centered on reversing the effects of osteoporosis, increasingly that dialogue is focusing on fall prevention. In highlighting health problems caused by the over-prescribing of osteoporosis drugs, a recent study in the *British Medical Journal* asserted that preventing falls in the first place is a stronger, and less risk-laden, deterrent to osteoporotic fractures than re-building bone mass pharmaceutically.

Among the tools to which practitioners are turning to enhance balance and reduce the risk of falls among older patients is a popular piece of functional equipment. Power Plate whole-body vibration technology is increasingly being embraced by geriatric health professionals, and others in the medical field, for its unique ability to train and stimulate the neurological and musculoskeletal systems – a significant breakthrough for individuals with chronic debilitating conditions, and elderly individuals who are prone to falls because of instability.

“Anyone who has ever exercised, or just tried to walk, on uneven terrain knows that it's much more challenging than doing the same movement on a flat surface and requires more coordinated muscle engagement,” explains Rich Colosi, DPT, Senior Director of Medical Specialties and Education for Performance Health Systems. “That's the science behind Power Plate's advanced, multi-directional vibration technology. Performing any movement on the vibrating platform can engage a larger percentage of muscle fibers, retraining motor patterns resulting in profound improvements in overall balance.”

Colosi recommends the following basic exercises for seniors starting a balance improvement regimen on Power Plate:

**Knee Flex (Warm Up)** – Begin by waking up nerves and muscles and improving circulation. Set the machine for 30 seconds then stand on one side of the Power Plate facing the platform. Holding the handle, place one foot on top of the platform and press the start button. Keeping the entire foot (heel to toe) in contact with the surface, gently push the knee forwards driving weight through the foot, return to the start position, and then repeat again. Repeat this exercise on the opposite leg.

**Fixed Mini-Squat with Hip Movement** – Set the machine for 30 – 60 seconds, standing on the platform of the Power Plate facing the column. Bend hips and knees, while lightly holding the handles, squatting into a comfortable position (as if sitting into a chair). Press the start button, holding the squat position. Once comfortable begin moving hips and body forward and backwards 5x. Begin the second movement by shifting hips side-to-side 5x each. Finish with the third movement, by moving hips into a hula-hoop circular motion to the right, pause in the middle, and reverse circle to the left. Repeat this pattern until time expires.

**Dynamic Mini Squats with Foot Positions** – First, position feet shoulder width apart, toes facing forwards, center weight equally between the ball of the feet and heels, with knees and hips bent (“athletic ready position”). Set machine for 30 – 60 seconds, standing on the platform of the Power Plate facing the column. Perform five squats, while lightly holding the

handles (do not hang back from the handles), squatting into a comfortable position. Return from squat into comfortable “athletic ready position” avoiding locking knees and hips. Repeat the same steps with right foot slightly in a forward, or in a staggered position, performing five squats. Repeat the same sequence with left foot slightly in a forward, or in a staggered position, performing five squats.

**Dynamic Stepping with Foot Positions** – Set machine for 30 – 60 seconds, standing on the platform of the Power Plate facing the column, lightly holding the handles. Bend at hips and knees, while lightly holding the handles, squatting into a comfortable initial position (think about sitting onto a high stool). Press the start button, holding the initial squat position. Begin stepping, or marching, in place with feet positioned shoulder width apart, toes facing forwards 5x. Continue marching and bring feet closer together, or into a narrow stance and repeat 5x. Continue marching and widen stance, bringing feet further apart and repeat 5x. If time allows, repeat the entire sequence.

**Single Leg Stance with Head Movement** – Set machine for 30 – 45 seconds, standing on the platform of the Power Plate facing the column, lightly hold the handles. Bend at hips and knees, while lightly holding the handles, squatting into a comfortable initial position (think about sitting onto a high stool). From this position, lift one leg slightly off the platform, or into a slight toe touch for added safety and stability. Press the start button, holding the initial single leg balance (athletic position) for ten seconds. Add movement: Once stability and comfort is established, begin gently turning the head side to side. Gradually increase the distance the head is turned, if comfortable. Repeat 5-10x.

Power Plate is owned, manufactured and distributed by Performance Health Systems LLC, a global company, headquartered in Northbrook, Ill., that delivers advanced technology solutions through its health and wellness equipment. In addition to its category-defining Power Plate line, the company has attracted international attention for bioDensity™, a breakthrough osteogenic loading system that has been scientifically linked to dramatic bone growth among populations ranging from high-performance athletes to health-compromised seniors.

For additional information on Power Plate whole-body vibration equipment, visit [www.powerplate.com](http://www.powerplate.com).