## VIBEPLATE

# Engaging every tendon, muscle and cell in building bone density

Research shows that, when performed using proper techniques, whole body vibration can reduce pain, improve strength and balance, and reduce bone loss. VibePlate™ uses vertical vibration, the most proven and natural form of vibration, to deliver benefits for medical and rehabilitation, aging, health and fitness, and athletic performance.

At OsteoStrong, we use the VibePlate<sup>™</sup> both before and after an osteogenic loading session to maximize our members' experience. Before osteogenic loading, a VibePlate<sup>™</sup> session activates muscular tissue, increases circulation and up-regulates the Human Growth Hormone. This helps members to get the most out of their Spectrum circuit. After a session, VibePlate<sup>™</sup> enhances the benefits of osteogenic loading on balance.

During a VibePlate<sup>™</sup> session, 30Hz of pressure is applied to the body, which becomes unstable on the device's vibrating platform. At this exact frequency, spinal reflexes begin to fire without causing tenatus, or muscle spasms. The spinal reflexes switch "on" the body's stabilizing muscles. This vibration impacts every tendon, ligament, muscle and cell, and every joint becomes engaged in an effort to stabilize the body. Regular exercise works 40% of your muscle fibers with one or two contractions per minute. VibePlate<sup>™</sup> engages up to 90% of your muscle fibers, with contractions 10 to 60 times per second. The result is increased muscle density, strength, coordination and bone density.

#### **BONE DENSITY BENEFITS**

- Increases bone mineral density and mass: Significantly boosts both bone mineral contents and bone density by accelerating bone formation and metabolism<sup>1</sup>; protects against bone loss in older patients and increases bone and muscle mass in younger patients<sup>2</sup>
- Complements or supplements: Promotes bone and muscle strength as a primary treatment as well as an adjunct to both physical and pharmacological treatments<sup>3</sup>
- Augments healing: Accelerates the healing and repair of endochondral bone<sup>4</sup>

## **HEALTH AND WELLNESS BENEFITS**

- Boosts circulation: Shown to increase skin blood flow in people with healthy microcirculation<sup>5</sup> and stimulate overall limb blood circulation<sup>6</sup>
- Enhances muscle strength and balance: Shown to increase muscle strength and, conversely, reduce the aging-related loss of muscle and strength<sup>7</sup>
- Strengthens immune system: Stimulates lymph glands, contributing to immune system health<sup>8</sup>
- Reduces chronic pain: Decreases chronic back pain, with potential as a preventative therapy<sup>9</sup>

### **CONTRAINDICATIONS**

If these conditions exist, please consult with your physician before using vibration therapy, including the VibePlate $^{\text{TM}}$ :

- · Recovering from surgery
- · Serious cardiovascular disease
- Pregnancy
- Thrombosis
- Joint implants
- Pulmonary embolism
- Known retinal conditions
- Severe diabetes
- A pacemaker
- Implantable cardioverter defibrillators
- · Hip or knee replacement
- Epilepsy
- Tumors
- Acute hernia
- · Recently replaced pins or plates
- · Severe migraine

For more information on the risk associated with this modality, please visit the VibePlate website (vibeplate.com).

 $<sup>^{1}\ \</sup>mathrm{https://journals.physiology.org/doi/full/10.1152/japplphysiol.00118.2005}$ 

<sup>&</sup>lt;sup>2</sup> https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3586310/

<sup>3</sup> https://www.ncbi.nlm.nih.gov/pubmed/25354044

<sup>4</sup> https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2929925/

<sup>5</sup> https://www.ncbi.nlm.nih.gov/pubmed/17261985

 $<sup>^{6} \ \</sup>text{https://www.ncbi.nlm.nih.gov/pubmed?Db=pubmed\&Cmd=ShowDetailView\&TermToSearch=21165804}$ 

https://www.ncbi.nlm.nih.gov/pubmed?Db=pubmed&Cmd=ShowDetailView&TermToSearch=19422657 https://www.tandfonline.com/doi/full/10.3109/09638288.2011.626486 https://www.ncbi.nlm.nih.gov/pubmed?Db=pubmed&Cmd=ShowDetailView&TermToSearch=12165890

<sup>8</sup> https://www.frontiersin.org/articles/10.3389/fbioe.2019.00377/full#B8

 $<sup>9\</sup> https://www.ncbi.nlm.nih.gov/pubmed?Db=pubmed\&Cmd=ShowDetailView\&TermToSearch=12221343$