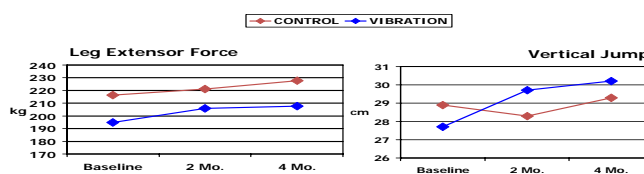


Details of each research article is available on our website

Athletics, Bones & Muscles

- [New Trends in Training Science- The Use of Vibrations for Enhancing Performance](#)
Findings: Vibration treatments complement resistance training in athletes by enhancing neuromuscular performance, power output, strength and hormonal profile.
- [Acute and Residual Effects of Vibratory Stimulation on Explosive Strength in Elite and Amateur Athletes](#)
Findings: Vibratory stimulation increases performance by facilitating explosive strength exertion.
- [Acute Changes in Neuromuscular Excitability After Exhaustive Whole Body Vibration Exercise as Compared to Exhaustion by Squatting Exercise](#)
Findings: Whole body vibration elicits quicker muscle responses than conventional training.
- [Oxygen Uptake in Whole-Body Vibration Exercise- Influence of Vibration Frequency, Amplitude, and External Load](#)
Findings: "Vibration exercise enhances muscular metabolic power, and thus muscle activity."
- [Vibration Exercise and Resistance Training Prevent Bone Mineral Loss](#)
Findings: "The authors conclude that just 12 minutes of resistive vibration exercise per day might completely prevent significant bone loss during prolonged bed rest (or space flight), and said their regimen is the first effective countermeasure for bone loss in patients on strict bed rest found to date."
- [Effect of Acute Exposure to Whole-Body-Vibration on Vertical Jump in Senior Athlete Volleyball Players](#)
Findings: "Two 30-second bouts of vibration exposure facilitates an increase in step-jump height."
- [The Influence of Whole Body Vibration on Jumping Performance](#)
Findings: Whole Body Vibration significantly enhances jumping ability.
- [Adaptive Responses of Human Skeletal Muscle to Vibration Exposure](#)
Findings: 10 minutes of vibration training is equal to 150 leg presses with extra loads of three times the body mass.
- [Effect of a Vibration Exposure on Muscular Performance and Body Balance. Randomized Cross-Over Study](#)
Findings: "In healthy young adults, a single, 4-min vibration-loading induced a significant, transient increase in the isometric extension strength of the lower extremities, jump height, and body balance."
- [Fat Loss in the 21st Century: The New Rules of the Game](#)
Findings: Whole Body Vibration creates an "almost addictive willingness to repeat the treatment session," thereby achieving greater fat loss than most standard forms of exercise for fat loss.

Changes in Muscle Strength



Torvinen et al, *Med Sci Sports Exerc*, 2002,34:1523:1528

Back/Spine

- [Motor Rehabilitation of Spinal Cord Dysfunction by Means of Whole Body Vibration](#)
Findings: Whole Body Vibration is a promising rehab therapy for patients with motor dysfunction of spinal origin.
- [The Effects of Whole Body Vibration on Reflex-Induced Standing in Persons with Chronic and Acute Spinal Cord Injury](#)
Findings: "Whole Body Vibration represents an alternative to fitness effects gained through functional electrical stimulation and/or treadmill induced walking with partial weight support."
- [Treatment of Chronic Lower Back Pain with Lumbar Extension and Whole-Body Vibration Exercise](#)
Findings: "Whole Body Vibration seems to be helpful rather than harmful in non specific lower back pain."
- [Whole Body Vibration- A New Exercise Approach](#)
Findings: Whole Body Vibration reduces back pain and bone loss while improving balance.
- [Acute Effects of Whole-Body Vibration on Lower Body Flexibility and Strength](#)
Findings: "Whole Body Vibration training may elicit acute increases in heart rate response, low back and hip-joint flexibility and peak isokinetic torque."

Cardio

- [Acute Physiological Effects of Exhaustive Whole-Body Vibration Exercise in Man](#)
Findings: Even if performed to exhaustion, cardio vascular Whole Body Vibration is mild, thus providing minimal risk to the elderly.
- [Metabolic and Cardiovascular Responses During Whole Body Vibration \(Whole Body Vibration\) Exercise- A Pilot Study](#)
Findings: Whole Body Vibration causes minimal metabolic and cardiovascular strain.
- [Whole-Body Vibration Exercise Leads to Changes in Muscle Blood Volume](#)
Findings: Whole Body Vibration increases muscle blood volume.

Geriatrics

- [Balance Training and Exercise in Geriatric Patients](#)
Findings: Whole Body Vibration improved chair rising time for 33 of 34 geriatric patients.
- [Controlled Whole Body Vibration to Decrease Fall Risk and Improve Health Related Quality of Life of Nursing Home Residents](#)
Findings: Whole Body Vibration measurably increased muscle strength and balance in 42 participants after 6 weeks.
- [Vibration Exercise and Resistance Training Prevent Bone Mineral Loss](#) Findings: "The authors conclude that just 12 minutes of resistive vibration exercise per day might completely prevent significant bone loss during prolonged bed rest (or space flight), and said their regimen is the first effective countermeasure for bone loss in patients on strict bed rest found to date."
- [Whole-Body Vibration Exercise in the Elderly People](#) Findings: Six months of regular Whole Body Vibration improved standing balance in geriatric patients, reducing risk of falls and femoral/hip fractures.
- [Efficacy of Training Program for Ambulatory Competence in Elderly Women](#)
Findings: Whole Body Vibration helps prevent falls and increase bone density in elderly women, improving their ability to walk and move without assistance.

Menopause

- [High-Frequency Vibration Training Increases Muscle Power in Postmenopausal Women](#)
Findings: Vibration training improves muscle power mainly by enhancing the pattern of recruitment of muscle fibers.
- [Mechanical Stimulation in the Form of Vibration Prevents Post Menopausal Bone Loss in Ovariectomized Rats](#)
Findings: Animal testing suggests that Whole Body Vibration is effective in preventing early postmenopausal bone loss.
- [Effect on Muscles of Mechanical Vibrations in Combination with Physical Therapy in Treating Female Stress Urinary Incontinence- Poster Presentation](#)
Findings: "The combination of vibration training and physical therapy turned out to be highly effective and thus represents a genuine therapeutic option for patients with stress urinary incontinence."

Stress/Hormonal

- [The Effects of Vibration on Human Performance and Hormonal Profile](#)
Findings: Whole Body Vibration significantly decreased the stress hormone Cortisol and increased HGH (Human Growth Hormone) and Testosterone.
- [New Trends in Training Science- The Use of Vibrations for Enhancing Performance](#)
Findings: Vibration treatments complement resistance training in athletes by enhancing neuromuscular performance, power output, strength and hormonal profile.
- [Fat Loss in the 21st Century: The New Rules of the Game](#)
Findings: Whole Body Vibration creates an "almost addictive willingness to repeat the treatment session," thereby achieving greater fat loss than most standard forms of exercise for fat loss

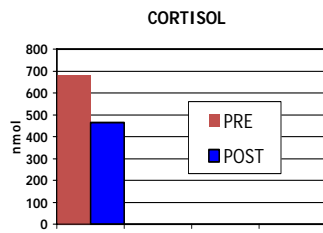
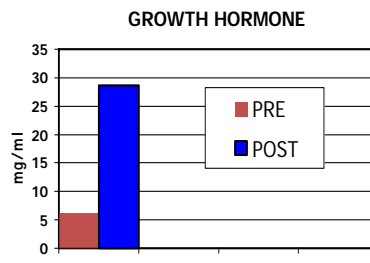
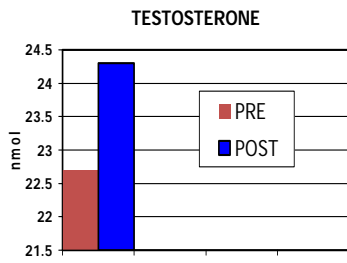
When the body is stressed - not enough exercise or sleep, unhealthy diet, too many toxins, depression, anxiety - the body triggers production of serum cortisol, a stress hormone that gets the body to protect itself by storing energy as body fat.

WBV stimulates muscle-building contractions in muscle fibers throughout the body, causing all the body's organs to contract and relax repeatedly, which stimulates proper organ functioning.

The organs' proper functioning takes the body out of stress mode, which reduces production of cortisol and stimulates the endocrine system to secrete beneficial hormones like:

- Serotonin - provides a sense of happiness and helps combat seasonal affective disorder (SAD)
- HGH - human growth hormone (see below)
- Endorphins - generate an overall sense of well-being
- Epinephrine - helps the brain regulate blood pressure, cardiovascular function, lipolysis (fat breakdown), and other autonomic activities
- Neurotrophins - stimulates neuron functioning in the central nervous system, improving brain function
- Testosterone - stimulates female sex drive

Hormonal Changes after WBV



Bosco et al, *Eur J Appl Physiol*, 2000, 81:449-454