

# Whole Body Vibration

<http://performancelife.org/vibration-therapy>

## What Is Whole Body Vibration?

As a therapy, whole body vibration was explored by Russian scientist Vladimir Nazarov, who tested it on astronauts in an effort to decrease the loss of muscle and bone mass in space. Over the years, the astronauts were subjected to whole body vibration therapy prior to their departures into space in order to increase the density of their bones and raise muscular strength. Today, this therapy is increasing in popularity as research continues to reveal an ever increasing list of health and rehabilitative benefits.

Whole body vibration (WBV) or vibration therapy is a form of muscle strengthening used by personal trainers and doctors for a variety of clinical situations and by small portions of the public for training, weight loss, and more. Typically WBV involves the use of a platform that vibrates at specific frequencies. The user simply stands on the platform in a static position or does dynamic movements.

Most exercises that you can perform on the ground or at the gym can also be done on the vibration platform, but because the vibrations are activating more muscle fibers, your workout is intensified. In fact, some research has shown that as little as 12 minutes of working out on the vibration platform can give you the results of up to 90 minutes at the gym.

## What Are the Benefits?

A shorter workout time is just one of the many ways that research is proving we can benefit from WBV. Vibration therapy has also been proven effective in the following:

- Strengthening muscles
- Enhancing range of motion
- Increasing flexibility
- Pain relief
- Relaxing muscle spasms
- Improving balance and proprioception
- Weight loss
- Improved bone density

- Cellulite reduction
- Rehabilitation (decreased recovery time)
- Injury prevention
- Increased circulation
- Increased lymphatic drainage
- Decreased levels of cortisol
- Increased levels of serotonin & norepinephrine

## How Does It Work?

To achieve optimal results with vibration therapy, two variables must be considered: amplitude and frequency.

1) Amplitude. While all vibration devices produce vibration in three different planes (front and back, sideways and up and down), the most safe and effective platforms (such as the V-force by Dynatronics found at Performance Life) produce sufficient vertical vibration while limiting vibration in the horizontal plane. Research has shown that significant vertical amplitude (2-6 mm) is required to generate adequate "loading" on both the muscular and skeletal systems.

2) Frequency (Hz). Frequency is equally important. Research shows that the body responds positively to vibration in the 25-50 Hz range. The acceleration forces resulting from vibration activates alpha motor neurons and muscle spindles within the muscle fibers, causing the muscles to contract. Due to this involuntary contraction of the muscles, many more muscle fibers are recruited than in the voluntary movement in typical workouts (Issurin & Tenenbaum 1999). This is confirmed by heightened EMG activity (Bosco et al. 1999, Delecluse et al. 2003). This rapid contraction and relaxation of the muscles at 25-50 times per second works as a pump on both the circulatory and lymphatic systems, increasing the speed of blood flow and lymphatic drainage throughout the body (Kerschman-Schindl et al. 2001; Lohman et al. 2007).



## Who would benefit from Vibration Therapy?

Most people can benefit from the use of whole body vibration, but specifically the following:

- Those who don't have time to do typical weight workouts
- Those with osteopenia/osteoporosis
- Those who need to improve balance and stability
- Those who are injured or are interested in injury prevention
- The elderly or those who are unable to use heavy weights

At Performance Life, we use the vibration platform for active rehabilitation of our patients, but also offer monthly packages including a consultation, use of the platform, as well as two individualized training sessions. Call today for details!



Dr. Kent Carlomagno  
**Summit Chiropractic**  
710 C Street Suite 12  
San Rafael, CA 94901  
415.721.7520 Phone  
415.721.7535 Fax

<http://www.summitchiro.net>  
[carlomagno@earthlink.net](mailto:carlomagno@earthlink.net)

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