

Whole-Body Vibration: What It Can Do for Your Practice

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My introduction to Whole Body Vibration (WBV) came as a result of a critical personal need. I am a chiropractor and at the time I was suffering with severe low back pain emanating from a damaged L5 disc and the complicating factor of spondylolisthesis. I lived in constant fear. I knew that any little thing I did could put me flat on the floor. In fact, this was happening at an alarming frequency. I was suffering, and my practice was, too.

I trust in the benefits of chiropractic care and knew I just hadn't found "the right treatment plan" for my condition. I also had many patients who came to me after surgery, traditional physical therapy and medication driven pain management, only to find they were no better off (and sometimes far worse off) than when they started. I knew that traditional medical treatments were not an option for me if I wanted to return to living a functional life. For 6 months, I researched every new procedure or treatment option available to me and I kept coming back to WBV. If what the growing number of research articles said about its benefits were accurate, there was a great likelihood WBV would help me, too.

Keeping in mind that WBV units are essentially machines that create vibration, I based my product purchase on the theory that better engines operate more efficiently and more smoothly than cheap engines, so I made sure I purchased the highest quality machine available. Then I started to ask some of the more renowned and respected leaders in our profession what I should do with my new amazing machine. I came up completely empty. The fact is, six years ago no one really knew how to apply WBV in the clinical setting, let alone to address lumbar pain and instability!

Therefore, with the initial aim of personal benefit, I surrendered my body to science by electing to use myself as a "lab rat" and develop a protocol for the treatment of low back pain using WBV. Six months after my real-life experiment began, I realized I had not had a flare up of any kind! I was more stable and balanced than I had been in many years, and I moved better in every way. I knew I was on to something, and that it was time to introduce what I had learned about WBV to my patients. This was a pivotal point in my career as a chiropractor. I had learned invaluable clinical lessons, through personal trial and experimentation that would forever change the manner in which I approach patients. I had discovered a new way to integrate an amazing technology into my existing treatment protocols. The benefits have grown exponentially ever since.

How Does It Work?

The human body has a number of programmed reflexes such as the eye-lid reflex, the touch reflex and the stretch reflex. The deep-tendon stretch reflex occurs when an examiner taps the patellar tendon with a reflex hammer, this action stimulates a reflex through the spinal cord and back to the muscles of the thigh that extend the leg, one tap, one contraction. In contrast, WBV induces a continuous stretch reflex called the Tonic Vibration Reflex (TVR) in all involved muscles exposed to vibration stimulus. The vibrating platform causes minute stretches within the muscles that activate TVR. Because WBV platforms vibrate from 30-50 times per second (30-50 Hz), these involuntary

muscle contractions occur at this accelerated rate as well. In other words, as the WBV platform introduces the controlled and measured force to the tissues, TVR is the result. The muscles are working much harder than normal, however in a safe and controlled manner.

When under TVR, not only will the patients' muscles contract and relax at very high rates, but also the number of muscle fibers in every muscle involved exceeds the number of fibers utilized in traditional training regimens. For most people performing conventional strength training, a maximum of 40% of the muscle fibers per muscle are recruited at any one time. WBV recruits between 95% and 97% of the muscle fibers comprising skeletal muscle when the TVR is at work.

This corresponding body response also means that the deep postural and stabilizing muscles (such as the spinal erector, multifidi and rotatore muscles as well as the pelvic floor muscles) that are typically hard to recruit and contract in order to rehabilitate them can be safely and effectively addressed. WBV changes the frequency of contraction primarily, as opposed to added force applied to the muscle. This approach accordingly produces much less stress and strain on the joints, ligaments and other supportive tissues. Due to greater contraction efficiency, no long exhausting training sessions are required. Therefore, the use of WBV is ideal for both conditioned and de-conditioned individuals.

Care must be taken when applying WBV to any patient base. A thorough understanding how it should be applied to various clinical conditions is key. Patients are often apprehensive about many types of treatments. Most often it is a matter of gaining patients trust before proceeding. WBV is a "feel-good therapy." There is an associated instant gratification that patients can feel, in other words, "immediate results" - they can feel they did something positive and it felt good. WBV is safe for almost all patient conditions when applied correctly. Even patients who can't tolerate massage therapy often respond positively to WBV.

A critical factor of WBV use in the clinical setting is that you receive training from someone experienced using this equipment in a medical and rehabilitation environment. Less is more with WBV and proper postural biomechanics are essential to training each individual body to strengthen and stabilize. A hurdle I often encounter when teaching the merits of WBV is that even doctors have trouble accepting that 5 minutes of training can produce a significant benefit. There is no question that frequent short sessions with adequate recovery time are superior to conventional training methods and schedules. The use of WBV is truly how you strengthen the muscles surrounding the spine in a fast efficient manner. In addition, WBV increases the effectiveness and the long-term impact of your spinal adjustments and other complimentary treatments. The fun factor patients' experience, along with added active rehabilitation performed in-office, adds an important positive element to daily practice. Patients are generally more involved in their care, they are active as opposed to passive, and this quality has significantly improved patient retention and sense of value of service in my clinic.

Six years ago I started with one WBV machine. I soon began to notice that people were standing in line waiting to use it. Six years later I now have 11 WBV machines in my clinic and I acknowledge that WBV, after my adjusting table, is the single most important tool I have to offer patients. Virtually every patient I care for has benefitted from WBV in some way.

My personal experiment has truly paid dividends on many levels. I sincerely encourage you to research WBV yourself, and perhaps build on what I have started. Get informed and keep moving forward. I truly believe the chiropractic profession needs more movers and shakers.

