# Whole Body Vibration:

## An Alternative Treatment for Chronic Low-Back Pain

by Perry Cammisa, DC


"Structural problems require a structural solution": This statement makes perfect sense for musculoskeletal conditions. If you break your arm, a structural problem, it is resolved by a structural solution: Reset the bone and cast it. It would seem almost barbaric to take medication for a broken arm. I have been using this analogy for years with my patients when it comes to chronic lower-back pain.

Whole Body Vibration (WBV) technology is extremely efficient and has so many benefits to treating and managing chronic lower-back pain that it should be part of every chiropractor's practice. It is an integral part of the "structural solution" to the "structural problem."

I have been educating physicians for years on WBV protocols, benefits and how to incorporate WBV into their practice for better patient outcomes and long-term care. It provides patients the fast results they want to achieve. Yet, I am still amazed when I talk to a chiropractor that has little or no knowledge of this form of therapy. To me, this is like a patient who has never been exposed to chiropractic. After having chiropractic and all its benefits explained, the patient feels relieved that they have finally found the right care. Having physicians learn how to utilize WBV technology and apply it to their patients for better outcomes is one of my passions in practice.

Chronic lower-back pain is a complex condition that involves a multitude of problems, including weak, tight and unstable muscles, degenerative structural changes, segmental fixations, poor posture, unstable feet—the list is sometimes endless. Outside the chiropractic world, patients with lower-back pain deal with traditional medicine, such as a series of injections, prescriptions, PT and multiple MRIs; this sounds all too familiar. Patients who suffer from non-surgical, complicated, chronic lower-back pain are the most frustrated with traditional medicine because they have exhausted all avenues with little or no success. This is where WBV and chiropractic can change the game.

Chiropractic approaches chronic lower-back conditions by looking at the entire musculoskeletal structure and determining where the breakdown is taking place. By assessing posture, spinal alignment and palpation, range of motion, dynamic-muscle testing such as a squat analysis, and a thorough foot exam, patients can be reassured that their chiropractor is truly the expert when it comes to finding a structural solution to structural problems, and patients can then understand why traditional medicine failed.

My introduction to WBV came as a result of a critical personal need. I had spent years 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 with alarming frequency. I was suffering, and my practice was, too.

I trust in the benefits of chiropractic care and knew that I had just not found the right structural solution 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 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, very little was known at the time about the application of WBV to a chronic low-back patient. Searching for protocols on how to use WBV for low-back pain, I came up completely empty-handed. The fact is, six years ago no one really knew how to apply WBV in the clinical setting, let alone how 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 developed 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 onto 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 eyelid 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 to 50 times per second (30 to 50 Hz), these involuntary muscle contractions occur at this accelerated rate as well. In other words, as the WBV platform introduces a controlled and measured force to the tissues, TVR is the result. The muscles are working much harder than normal but in a safe and controlled manner.

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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 TVR is at work.

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

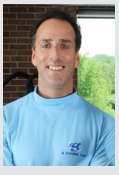
Care must be taken when applying WBV to any patient base. A thorough understanding of how it should be applied to various clinical conditions is key. Also, patients are often apprehensive about many types of treatments, but most often it is a matter of gaining patients' trust before proceeding. Fortunately,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

A critical factor of WBV-use in the clinical setting is receiving 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 five 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 the way to strengthen the muscles surrounding the spine in a fast, efficient manner. In addition, WBV increases the effectiveness and the long-term impact of spinal adjustments and other complementary treatments.

The fun factor that 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. 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 12 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 benefited from WBV in some way.

My personal experiment has truly paid dividends on many levels. I sincerely encourage other chiropractors to research WBV themselves 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.



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