

Strength, Balance, Bone Health and Fall Prevention in a Clinical Environment

By Jeff Gerlomes

Adding strength, balance, bone health and fall prevention solutions to an already successful practice is a natural fit for chiropractic, both clinically and economically. New technologies, initially developed for the high performance athlete have created the ability to perform very high intensity exercises that can achieve superior results in the general population. By increasing the level of training intensity, the time commitment required to create the desired adaptive response can be brief. In fact, excellent outcomes are being achieved in as little as 15 minutes per week with the patient/client often dressed in street clothes.¹ This type of high intensity, wellness training is very attractive to a large segment of our older population. This more mature group is living longer and in great need of an efficient and sustainable method for maintaining strength and function over their lifetime.

These advanced solutions do not come without some risk. As we begin to target an aging and potentially deconditioned population, the risk of injury from vigorous training obviously increases. Enter the chiropractor, an expert in bone, muscle and connective tissue, as well as the biomechanics of the human body. Perhaps no other clinician is more uniquely qualified to assess the human structure through advanced diagnostics such as a weight bearing X-ray coupled with a detailed postural assessment. Further, the forward thinking chiropractor has the ability to transition patients out of active condition care and into a supportive strength program that has the potential to dramatically improve quality of life. Perhaps most impressive is that these results can be achieved in a footprint of less than 200 square feet with the BStrong4Life® system.

For the past four years, Dr. Perry Cammisa and Dr. Scott Heun, co-founders of BStrong4Life®, have been hard at work refining a series of protocols based around this high intensity, short duration, clinically supervised wellness system. To date, over 20 offices throughout the country have signed on and the benefits to the end user have been nothing short of amazing. Not only are patients getting stronger and gaining proficiency in activities of daily living, but increases in bone mineral density have been documented as well as decreases in postural sway, one of the leading causes of falls. The concept of “Prehabilitation” is gaining momentum, as the idea of getting out in front of the human body’s aging cycle becomes more understood.

Concentric, Isometric and Eccentric Force Production

At the core of the system is the critical need to safely stress muscle and bone at very intense levels. The BStrong4Life®



protocols focus on three modalities all designed to accelerate the pace of training and provide a hyper-efficient session that can be measured, replicated and improved upon from week to week. The protocols operate in all three methods of force production – concentric, isometric and perhaps the least understood, eccentric training.

Concentric force through Whole Body Vibration (WBV) is one element of the BStrong4Life® system. The benefits of high intensity, clean vibration include increased blood flow, rapid muscle development and improved balance.² WBV coupled with Posture Rack therapy allows for significant load production all under vibration leading to additional benefits, but WBV under load as a high intensity warm-up is just part of this innovative system.

Osteogenic Loading, a term that describes isolating optimal ranges of motion to generate and measure force in Multiples-of-Bodyweight (MOB), is the second component of the system. bioDensity™, a product developed by Performance Health Systems Inc., facilitates four biomechanically efficient exercises that allow an individual to generate very high, self induced loads. The equipment is designed to accurately measure force production and encourages individuals to achieve momentary muscular failure in as little as 5 seconds per exercise. This “single rep” stimulation when measured, monitored and applied regularly achieves many benefits. Not only is rapid strength

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“ Motion is a key component of balance training and combining motion with eccentric force is very effective. ”

gain possible, but bone mineral density has also been shown to increase over time, in some cases dramatically.³ BStrong4Life® has commissioned studies that have not only shown increases in bone density, but also very promising postural change that can be measured accurately by assessment tools available and in wide use by Chiropractors.

Finally, eccentric core training rounds out the base protocol. Motion is a key component of balance training and combining motion with eccentric force is very effective. By adapting equipment originally developed for the US Ski Team, BStrong4Life® guides clients through a progressive program that takes measured, incremental steps based on the individual's capacity for training. The reACT Trainer™ allows the trainee to replicate the motion of jumping and absorbing a landing over and over without skeletal loading - dramatically reducing the inherent risk of bone or joint injury. The result is not only an increase in balance, but also improved confidence in many individuals as they gain proficiency in this seldom used training method of force absorption.

Counter Intuitive and Misunderstood

Skepticism abounds as the traditional systems and methods of fitness and weight training are turned upside down. How

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can a single 5-second repetition rival multiple sets of multiple repetitions? How can a 15-minute session followed by a full week recovery period compete with three days a week in the gym? The facts are clear. If we can safely and adequately stimulate muscle and bone in a biomechanically efficient position and give the body ample time to recover before reapplying the stimulus, the results are often superior to more traditional, low intensity training.⁴ More importantly, an individual's likelihood of sustaining a program over their lifetime increases dramatically if the workload is realistic and manageable. BStrong4Life® focuses on consistency as the single biggest factor leading to success and opposes the "binge and purge" mentality that is prevalent for many as they jump in and out of unrealistic exercise commitments.

For this very reason, BStrong4Life® needs to operate as a community of like minded practitioners who constantly reinforce these basic principles – high intensity, short duration exercise in a clinical environment IS a viable, easily approachable and sustainable alternative for a large segment of the population. Outcomes must be measured and based on science and BStrong4Life® is finalizing development of a software interface that will gather session detail in a composite index that is tracked against accepted quality of life standards. Not only does this documentation keep the user engaged from week to week, but the ability to document and track progress on a geographically dispersed network creates greater validity. The software interface also has a scheduling module with appoint-

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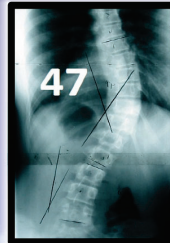


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ment reminders and the ability to facilitate social networking, marketing and promotion.

Personal Training in a Private Setting

The company believes that the BStrong4Life® system can represent the only retail fitness dollars an individual needs spend. Everything else – jogging, walking, swimming or carrying your golf bag - exists in nature. Money spent on fitness should be science based, effective, measurable and clinically supervised. This is a hands-on, risk-mitigated system that allows the individual to master techniques that have, until now, been unapproachable to the mainstream. Having a chiropractor supervise the program adds a clinical understanding and degree of safety unavailable in traditional fitness.

Consistency is the key and detailed hands-on guidance ensures that the protocols are followed from office to office. Each doctor is responsible for ensuring a proper screening and developing a personalized program, but to the extent possible, the company provides the baseline that has been proven to be effective.

While the system is beneficial for people of all ages and activity levels, BStrong4Life® targets it's consumer messaging at individuals 50 years and up with a special emphasis on women dealing with bone density issues. The company uses aspirational messaging to attract users who see themselves as fit but in need of a fitness program. Words like Confidence, Control, Freedom and Balance dominate the consumer brand. But make no mistake; the program benefits younger athletes as well and many centers offer golf, ski and other sport specific regimens.

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