

CHAPTER 1

The Ten-Minute Workout

The Revolution of Whole Body Vibration

We are getting older . . . but this doesn't mean we can't still be strong and vital. Whole body vibration is here to help you!

One of the most important cornerstones of good health is exercise. As we get older, exercise is even more critical! We may tire more quickly, and we may not be able to exercise as easily, but exercise remains an essential part of good health. As seniors, more than ever we need the rejuvenation and regeneration that exercise stimulates.

Exercise: The Fountain of Youth

Our bodies are designed for physical activity, and they thrive on it. For example, exercise increases your circulation, bringing essential nutrients and oxygen to every part of your body, including your brain, and removing waste products. Ramping up this process helps every cell and organ in your body to function at a higher level. Just by exercising, you increase your body's ability to drive the circulatory system. Your heart, which pumps your blood through the arteries on its outgoing journey, becomes stronger. Exercising builds

more muscle, which in turn massages the veins in the gentler but essential pumping action that moves the blood on its return trip to the heart. Exercise, whether in a more traditional form or now with whole body vibration, is also critical to maintaining muscle tone, bone density, and a healthy weight.

Exercise and Your Brain

Just as important, exercise helps your mood and brain. If you are so depressed and lethargic that you can barely get out of your chair and exercise, sometimes your whole life can seem like an insurmountable mountain. The good news is that the very act of exercising will increase the levels of natural feel-good chemicals in your brain called neurotransmitters; this will raise your spirits, energize you, and help your brain to function better. Plus, exercise has been shown to increase the number of neurons and neural connections in your brain. These are important components of intelligence, so you will

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actually be getting smarter as you exercise. Chapter 5 will go into much more detail about how whole body vibration (WBV) affects the brain.

The Ten-Minute Workout

Whole body vibration (WBV) is a very effective and quick exercise. In hundreds of research studies, WBV has been shown to result in rapid increases in strength.¹ In

fact, WBV was originally developed because of its intense workout effect over forty years ago in Russia for their Olympic athletes and space program, and it is currently used widely by athletes around the world, from amateur athletes to top athletes and sports franchises and teams. Originally studied primarily with athletes and healthy young people, more recent studies have also shown promising results with older people.²⁻⁶

Ten minutes of WBV provides an intense, full-body workout with the benefits of conventional weightlifting.

At first this may seem impossible, just too good to be true; but it is true—for young athletes. Ten minutes of WBV, however, is not an advisable way for seniors to start a WBV program. Seniors can gain great benefits, including strength, from WBV, but it is wise for seniors to start more slowly, with a gentler machine, less time, and a low speed, gradually increasing both (see chapter 9 for a detailed day-by-day plan). The exact workout effect depends on which machine you use and how you use it, and your workout should be tailored for your body and health. Nevertheless, forty years of research and the devotion of thousands of professional athletes and elite users, attest to WBV's effectiveness.

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How Whole Body Vibration Creates Intensive Exercise

- ◆ Holding weight against vibration increases the effects of gravity. Because of this physical reality (described mathematically as gravity equals mass times acceleration), when vibrating, your muscles must hold up to three times your actual weight, the exact amount depending on the amplitude and frequency of the vibration. If you have any doubt about this, consider the arm and shoulder muscle development of men who operate jackhammers.
- ◆ Every muscle fiber will automatically tense and relax at the same rate that the machine is vibrating, usually twenty to fifty times per second. That adds up to one thousand to three thousand little tiny “reps” per minute—much more work for your muscles than holding a static position (isometric exercise) or typical repetition workouts.
- ◆ One hundred percent of your muscles will be working, while in traditional exercises, only some of your muscles are engaged. For example, in a nonvibrating squat, only about 40 percent of your leg muscles are working, but if you are vibrating, 100 percent of your leg muscles will be firing.

The combination of these three factors results in an intensive workout, in which, by the end of one minute, your muscles may be begging for relief. If the WBV workout is still not hard enough for you, you can also carry weights, which will rapidly increase the

effort as the gravitational increase from the vibration will double or triple any weight increase.

You can also vary the type of exercise position to change which muscle groups must work to hold your weight. For example, you can do push-ups for upper-body strength, or sit on the plate in a V shape (see page 167) to work the abdominal muscles. There are endless variations in position to engage different muscle groups. A typical workout includes one-minute intervals in numerous different positions to achieve the effect of a full-body workout in ten minutes.

While circulation does increase with WBV, this is partly due to the massaging action of the muscle fibers as they tense and relax. WBV does not provide intensive aerobic exercise, so you should also incorporate some type of aerobic exercise into your total fitness plan, such as walking, biking, running, swimming, etc. You will probably find it much easier to do this when you are using WBV because of the powerful energizing and mood-elevating effects of vibration.

And while WBV is an intensive workout for your muscles, most people will not break into a sweat—so you don't even need to change your clothes

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or take a shower! Just hop onto your vibration plate for five to ten minutes, whenever is convenient. Everybody can fit five to ten minutes a day into their life.

TESTIMONIALS

After many years of intense stress, I was so overwhelmed and exhausted that I had to break up my tasks into manageable pieces. Going out of the house was accomplished with great effort. Then I started using Becky's vibrating platforms. These platforms were the key to my building up my strength to do daily tasks. All I did was stand for five minutes, holding on to the curved bar on the gentle one; then later I moved to the Power 1000 platform, sometimes holding the straps for balance and now for strength training. Once, all I could do was my five minutes of vibration in a day; now I find myself working in my garden for short periods of time, going to the grocery, and now able to do more than one thing in the same day. Not exaggerating, I have my "no problem, I can do it" attitude back, with an "edit myself" approach of not trying to do quite as much as I once did. The vibration platform makes the rest of my health routine work.

—Mary, age 69, registered nurse

My back muscles and posture have been uneven for thirty years due to scoliosis. Whole body vibration has helped to even out my upper-body muscle strength and mass, especially on my left side where it was weaker. I am standing straighter now. It also helps my sinuses drain and my lungs feel less congested. I use it especially in the win-

ter to stay more physically active, and it has a nice massage-like affect. I am still working and very active, and I'm determined to stay that way.

—*Bill, age 72*

I was mountain biking in the fall of 2017, hit a root, fell off my bike, hit the ground, and fractured my little finger. In the fall of 2018, after using my WBV machine for about four months, I was mountain biking in the same woods and hit a root. This time, as my bike was falling, I was able to jump off and land on my feet. I felt very strong and in control, increased core strength and balance, quad and calf strength. I felt great! I felt like I was an agile twenty-year-old again. Also, a year after using the Vibrant Health Power 1000 vibration machine, my calves were bigger, evidenced by my ski boot buckles needing to be adjusted!

This past ski season in 2019, I had a serious ski fall that could've been deadly; however, no major injuries, no broken bones, and my body healed quickly from bruises and sore muscles and knee! I was fifty-three at the time but felt like a young athlete.

Additionally, I want to mention that going through menopause is a great time to use the WBV machine as it helps to maintain muscle tone, which in turn helps boost mood and body image as things begin to shift from changes in hormones.

—*Marliana Cataldi, RN, age 54*

Recent research has been less exciting, however, as researchers have tried to pin down exactly how to best use WBV with older people, especially those with health issues. There is no doubt that

WBV is intensive exercise, but research is conflicted, in situations such as arthritis, on whether it is better than conventional exercise.^{7,8}

I believe the problem with research on seniors is that it is not being done properly. Using the knowledge gained from a lifetime of dealing with health issues, with many corollaries to those of seniors, I have great success using WBV for seniors with health issues. In fact, older, ill, and otherwise less fit and strong people are the very people most likely to see dramatic improvements.

TESTIMONIAL

I am sixty-eight years young and have had several chronic diagnoses for over thirty years. After over a year of immobility due to low back stenosis pain and chronic hip issues, my biggest concerns were loss of ability, endurance, and vitality. Conventional treatments were not geared for my age and disability from chronic conditions. In the spring of 2018, I started using Becky's Gentle 500 vibration machine. I felt a boost of confidence in my body and myself as I gained energy and my pain decreased. I consulted with Becky again and upgraded to the Vibrant Health Power 1000 in January 2019. I used to think I was going to end up in a wheelchair; now I am swimming every other day, and I recently added using a light weight-lifting machine routine to my gym workouts. The increased confidence from my growing endurance and strength is priceless.

I am forever grateful to have found my way to whole body vibration and Becky.

—Sandy Gong, age 68

WBV Research with Seniors

While the intense muscle strengthening effect of WBV is clear, recent scientific research with older people with health problems has resulted in confusing and contradictory results. For example, in a 2016 systematic reviewⁱ of four research studies on quadriceps (thigh muscle) strength in older women with knee osteoarthritis, the authors concluded that “only one found significantly greater quadriceps muscle strength gains” from using WBV than from regular exercise.⁹

But, while researchers have adapted WBV programs to seniors to some degree, I do not believe they have gone far enough. Most of the WBV research done with seniors has been done with the same types of machines that have been used with young people and athletes. Less strenuous workout protocols are used, but they are still considerably more intense than my experience and research has shown is best. For older people with stressed bodies and often dealing with health challenges, the best approach is a gentle approach.

Powerful machines delivering high amplitude and high gravitational force (*g*-force) vibration, often at high frequencies, were used in all four of the studies in that 2016 review of strength and knee osteoarthritis. (See chapter 8 for a full explanation of the different types of machines and parameters of vibration.) Combined with greater time spent working out on the vibration plate than I recommend, this kind of a program results in a high intensity workout that is too much for seniors with health issues.

ⁱConsidered the gold standard of research and typically, therefore, given the most attention.

Three of those research studies gave participants ten to thirty minutes of vibration on machines delivering vibration of 2–5 mm amplitude. The fourth study, the one that did report an increase in strength, started with three minutes of WBV and worked up to ten minutes over eight weeks. This fourth study did not specify the amplitude, but I suspect that it was high (as most studies are using high amplitude vibration) and that the results would likely have been better if it had been low. Three studies did not report g-force (a measure of the intensity of the experience, as it combines frequency and amplitude). The lack of amplitude and g-force data is an indication of the lack of understanding regarding the importance of this factor.

In contrast, I recommend that older people (and anyone with health challenges) start with thirty to sixty *seconds*, with vibration at a maximum of 3 mm amplitude, and then slowly build up the time and intensity of their WBV session.ⁱⁱ These differences may not sound large to people who have not been on these machines, but it is the difference between feeling like you are hanging on to a jackhammer and feeling like you are a powerful, purring cheetah.

There are also more factors involved in success with WBV than just a workout for the muscles. Particularly, WBV has a huge effect on the brain (see also chapter 5). It is in large part because of these other factors that it is so critical to go slowly and gently with WBV. Using my methods, I regularly see huge increases in strength for seniors.

ⁱⁱMy recommendations are conservative—they are designed to help everybody succeed. One can always increase the amount of vibration, but too much vibration can make you feel worse instead of better; so a conservative approach is wise, especially in the beginning.

Vibrant Health's WBV Survey Strength Results

In 2019, Vibrant Health conducted a research survey¹⁰ of our customers using Vibrant Health's Power 1000 machine, which comes with a user manual containing the author's recommendations on how to use the machine. (These recommendations are included in this book in chapter 9.) Ninety percent of the respondents to Vibrant Health's survey were over fifty years of age, 62 percent were sixty to eighty years old. The survey included fifty-three respondents.

We asked VH Power 1000 users to rate their strength before and after beginning their WBV program on a scale of 1–5, where 1 equals “Very Weak” and 5 equals “Very Strong.” On average, respondents reported a 25 percent increase in their strength and a 28 percent increase in energy within weeks of beginning their WBV program. Almost 20 percent of respondents reported increased strength within a few days of beginning WBV, 49 percent within one month.

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TESTIMONIALS

When I first started vibration therapy, I was so chronically fatigued that I would get a cart at the supermarket to lean on while I walked around, even if I only needed one item. After every vibration session (two per week), I felt stronger and energized; I was noticeably gaining vigor by the week. Two months into the therapy, there was a snowstorm that dropped a half a foot of snow overnight. I was late to my vibration appointment that day, because first I had to shovel out my driveway, and then I shoveled out my neighbor's driveway, as she is frail and elderly.

—Ellen, age 57

I had been vibrating just a few times when I went home after my three or four minutes of vibration, and I had so much energy I started scrubbing the kitchen floor by hand. When I finished with the floor, I started in on the walls. My husband, who was half asleep on the couch where we would usually both be after a long day at work, said to me, "What has gotten into you?"

—Marianne L., age 54

I have struggled for years with chronic fatigue. The morning after my first one-minute session, I jumped out of bed for the first time in about twenty years, plus my mind is clear and focused.

—Jessica W., age 63

How could so little exercise result in such a dramatic increase in strength? Because vibration is not just about making your muscles work. WBV researchers have approached the issue this way, but

WBV is also affecting every part of your body—cells, organs, nervous system, and brain—all of which affects your strength.

Getting Started with Your Workout

WBV is a quick, highly adaptable workout that can be tailored to any level of fitness: from the couch potato to the occasional jogger, the tennis player to the weekend warrior, or the amateur athlete.

For seniors with any type of health issue, it is best to start with just a very small amount of vibration (thirty seconds to one minute), and there is no need to do anything more than just stand on the gently vibrating plate. This will feel something like a massage, but through the involuntary automatic activation of your nervous system, and thus your muscles, you will still be experiencing a mild workout, and your entire body and nervous system will be stimulated to wake up.

Gradually and slowly, listening to your body as you go, you can increase the intensity of your vibration workouts by increasing the time and frequency settings. You can also add in different exercise positions that will intensify the workout effect. The end result: You will quickly start feeling stronger and better, and soon you will be doing a ten-minute workout that gives you the benefits of an hour of conventional exercise.

Note: See chapter 9 for more details, a daily plan, and photos of different exercises, massage positions, and stretching positions. For videos with exercise types and an exercise poster, see www.BCVibrantHealth.com and Becky's YouTube channel (VibrantHealthBecky).