



Dr. Sara's  
**EXERCISE  
REPORT  
CARDS**

SARA GOTTFRIED, MD

# Ballerina in Sticky Socks: Why I Recommend Barre Fitness

I'm at an age—perimenopausal—where it can seem like no amount of exercise makes a difference. Like you, I don't have a lot of time. I need efficiency. So you can trust me when I tell you the punishing barre fitness classes that are all the rage right now actually work.

Barre 3, Physique 57, The Bar Method, Pure Barre, The Daily Method, Barre Fusion, and Bar-bie Barre (ok, I made that one up!) are just a few of the many trademarked classes that offer a total body workout combining elements of ballet, pilates, and strength training in a single class. Grounded in kinesiology, the work of dancer Lotte Berk, and core alignment principles, most barre classes strive to offer a workout that combines ballet barre work, core conditioning, yoga, and weights designed to strengthen, tone, and lengthen the entire body to produce quick physical results and balance in the body. There's a heavy focus on the legs, gluteals, and core. Be prepared to make tiny movements with tiny weights, repeated over and over. And over.

The butt (whoops, sorry, newbie mistake... "seat") work will make you understand why some call barre the "Ass Class." You will tuck until tuckered out.



### My First Foray

When I first started at [The Dailey Method in Piedmont](#), it felt a bit *Stepford Wives*. That is, I was surrounded by blindly conforming women who were subservient to the teacher and seemed zombie-like. Then I realized I was making excuses that would result in my kimono arms staying the same. So I dove in with both sticky feet, and *rather loved it*.



BARRE  
HAIR  
DON'T  
CARE.

Fortunately, I found hysterically funny teachers (Susan Willrich, owner of Piedmont Dailey Method and co-owner of [Berkeley Dailey Method](#)). I found smart teachers who knew anatomy and the female body (Kerry Corcoran, co-owner of [Berkeley Dailey Method](#)). I discovered that I love the irreverent and diverse crowd who attends the [Bar Method in Berkeley](#)!

### Why I Became a Believer

I've been a barre-ista for a while now. I love it. It's burst training, or high-intensity interval training but using your own body for resistance and light weights, not huge medicine balls or tires. My arms are noticeably more awesome. (Note: there's a weird puffy thing that happens in the area of your triceps after 40, and you want to prevent or reverse it as soon as possible). Some describe the thigh chiseling as miraculous, and I can't quite say I've noticed miracles. There's the promise, repeated often, of developing a "dancer's dent." Mine is curiously missing despite hours of dedicated practice. Perhaps it's my endless daydreaming during class of why it feels so wickedly good, and why it's uniquely good for the female form?

I love barre fitness so much that it takes up heavy real estate in my brand new book, [The Hormone Reset Diet](#), now available for pre-order. Please do me a favor, and buy a copy for yourself and a few girlfriends. For a limited time only, I've got seven awesome bonuses by way of thanks. [Click here](#) to see how to submit your receipt and get immediate access to your seven bonuses.

My posture, compromised by the last three years sitting at my computer and writing in praying mantis position, has been vastly improved. I'm taller, less inflamed, and my pelvic floor is happy.

### The Travesties of the Aging Female Form

As an OB/GYN and a mother of two, I am board certified in everything that can go wrong with the female body. The decline of the butt muscles with age. The fallout after carrying a small basketball in your uterus for nine months. The core that never quite gets reclaimed. Barre method exercises address these travesties and more.

If you're like me and have a well-developed inner saboteur that's coming up with multiple reasons why you don't need to try barre fitness, I get it. Make it easy. Download a video onto your laptop or iPad, and try it at home. And don't forget to [pre-order my book!](#)

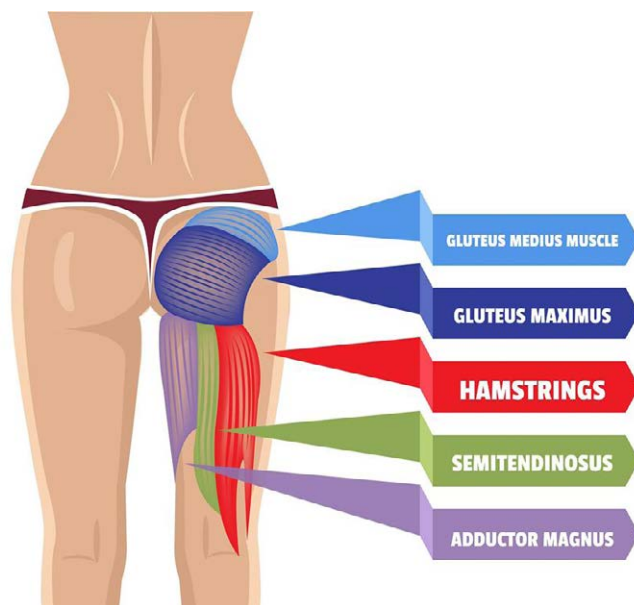
I appreciate seeing pregnant women in class, many of whom sport better arms than me. Many of the instructors know about things that can happen during pregnancy and can help prep or heal those particular muscles.

My favorite part of barre class is the heightened, precise focus. It reminds me of Transcendental Meditation classes that I took in college. There's so much attention paid to the corset of your abdominal muscles and whether to use a "neutral" or "tucked" position for the low back, that you can't perform the usual multitasking. There's no remaining bandwidth for grocery lists or schedule rumination. You focus so hard on your micro movements of the arms, or your plank pose, or reverse pushups, that you emerge, one hour later, as if you've been on a silent meditation retreat.



### Important facts no one else might tell you:

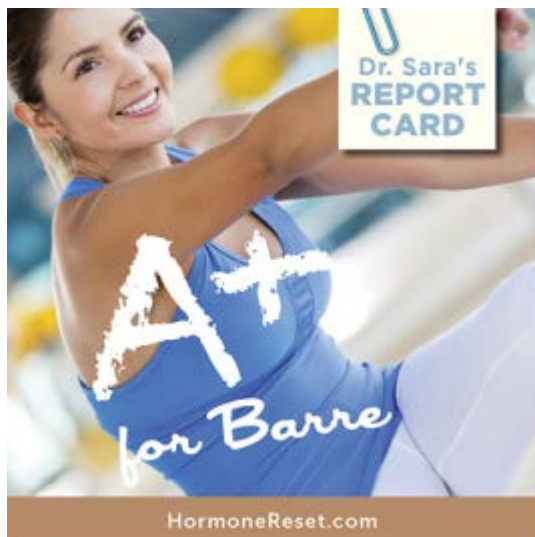
- Take a girlfriend. You will need her as an accountability partner so that you go back after your first session, when your muscles are tight as hell. Even better, sign up together for the new student, one-month unlimited with your girlfriend. Most affordable and you're more likely to become part of the cult-like following.
- Everyone will be dressed head-to-toe in Lululemon. Buy a size that fits. You will be in funny positions and do not want your girlie parts exposed to the world. (Word to the Lycra: Check yourself before you moon everyone else. Or ask a trusted girlfriend for an honest evaluation.)
- Make sure the sticky socks you are wearing are from the studio where you are taking the class, not a competitor. Trust me on this. Barre classes are as



competitive as *The Hunger Games*.

- Don't look at your thighs during the marching warm-up. The mirrors lie. (This may be another rationalization, but my home mirror looks way different.)
- You want long, lean lines? As RuPaul says, *you better work*. Like a dancer. Barre workouts focus lifting and lengthening. If you want to be leaner, yes, you will need to follow my nutritional protocol so you lose body fat, but there is no doubt that barre class can help you get results. There may not be a unicorn at the end of that seat work, but you'll see and feel what the fuss is all about.
- Try not to make eye contact during "Back Dancing." Awkward. The rule is: stare at the ceiling.
- Surrender yet paradoxically *pay attention to alignment*. It's all about the form. You will be placed in contorted positions that have more in common with a game of Twister than ballet.

Spoiler alert: My favorite part is the shaking leg muscles. Yes, you CAN always go lower! Want to hear more about why that's good for you? Watch for part 2 of my barre fitness series. See you in class.



### Dr. Sara Grades Different Forms of Exercise for Women: Barre Fitness Gets an "A+"

As an OB/GYN, hormone expert, and specialist in women's health, I receive a lot of questions from my patients about their bodies. While many of the questions involve hormones and reproductive health, I am also asked a lot about physical activity. Specifically, which exercise is the best for weight loss? How do I build strength without bulking up? Is CrossFit too dangerous for a woman my age? And what the heck is all this buzz about barre fitness?

Many women remain confused about which exercise is best for them. While there is no single or "correct" answer, I have a few strong opinions about which exercise is most likely to reduce inflammation, least likely to cause injury, and overall, get you lean. Since it's close to impossible to prescribe a "one size fits all" approach, I started thinking: how could I best give safe and appropriate guidance for a wide range of female fitness needs?

It is with this question in mind that I came up with the idea of providing a grading scale (more of a review) of the various popular (and not so popular) exercise trends being offered today. Because there is so much to cover, I thought it would be best to tackle exercises—in the form of classes or individual efforts—one at a time. This way I have enough room to go over the basics, such as what it is, and how it works, and also

provide feedback on concerns such risk of injury, weight loss maximization, best strength building methods, or which exercises are best for flexibility.

In order to help women choose, I've decided to include a section that matches personality types (for example the "free spirit" vs. the "Type A") with the exercise type (for example yoga vs. CrossFit). By no means is this strict criterion that you *must* abide by (yes, I'm talking to you, Type A's), but can instead be a guide to help you in your own exploration, based on your fitness and health goals.

### **"A" Is for Alignment**

I thought I would start this first series of "exercise grades" with an exercise trend that has turned females into fanatics (and which also happens to be one of my favorites): barre fitness. If you've read my blog entitled [Ballerina in Sticky Socks: Why I Recommend Barre Fitness](#), you will know that I have become a true barre-liever. This total body workout focuses on simultaneously lengthening and strengthening muscles, while providing a high intensity (but low impact) workout has served many of my fitness needs to strengthen (without bulking), build cardiovascular endurance, improve posture and lose weight. But I am getting a little ahead of myself. Let me get back to the basics.

### **What's the Story?**

The concept of barre fitness first evolved in 1940 when a German dancer named Lotte Berk developed a bar-conditioning routine to address a back injury. The idea was to incorporate rehabilitation therapies with her dance practice to help build strength while restoring her health. Eventually Ms. Berk developed a series of exercises that she later created as the Lotte Berk Method born in 1959 in London England. The Lotte Berk Method then migrated to the United States in 1971 when Lydia Bach (a student of Lotte Berk Method) opens up a studio in New York. This Method was later adapted and spread across the country by Americans Burr and (former) husband Carl Diehl who turned the Lotte Berk Method into "The Bar Method" with their first studio opening in 2000. Between 2001 and 2013, the "movement" exploded and subsequently 75 Bar Methods opened up around the United States, enticing female fanatics country wide.<sup>1</sup>

### **How Does It Work?**

While there have been several variations on the theme (The Dailey Method, Purre Bar, Physique 57, Barre Fitness 3, and Barre Fitness Fusion) the general idea is the same; that is to draw on the knowledge of physical therapists and the modalities of dance to lengthen and strengthen muscles in a low impact manner that maximizes muscle endurance and strength while minimizing injury. Exercises are placed in a specific order alternating between the front and back sides of the body which aim to elongate one side while strengthening the other - improving posture and alignment to boot! Once the body is warmed up, the intensity is increased to optimize aerobic and fat burning capacity, followed by floor work to cool down while focusing on core strengthening.

### **Why Should You Care?**

Whether you are a barre-believer or a babe to barre, my message is the same: barre fitness is one of the best ways to get yourself that lean, toned body while minimizing your risk of injury. Yes, barre fitness is my star student and gets 100 out of 100 on my grading scale. And it's not just the outward appearance (can you say body-by-barre?) that puts barre fitness heads above the rest (although better posture-which makes you taller-is definitely a benefit), it's actually good for you too! You see, we are a culture of sitters. We spend hours sitting at our computers, sitting in our cars and sitting at home watching TV, reading or eating. Our bodies are not meant for all of this sitting. It creates poor posture caused by underused and weak core muscles, which can lead to muscle tightness, imbalances and injury. Additionally, sitting decreases blood and oxygen flow to your brain and muscles which makes us deconditioned, tired and lethargic. If this isn't bad enough, prolonged sitting can increase the risk of diabetes, heart disease and obesity too. <sup>2</sup>

The good news is: barre fitness, and exercise in general, can help to reverse all of this. The lengthening and strengthening of your body helps to build your core muscles, improve your posture and increase your flexibility, thereby reducing tightness and risk for injury. The thousands of squats, lunges, leg extensions and bouncing raises your heart rate and improves your cardiovascular capacity which, decreases your risk of heart disease and delivers more oxygen to your brain and muscles so you feel alert, productive and energetic. Barre fitness also increases your metabolism, which helps burn calories and lose weight, all of which helps with decreasing your risk of obesity and diabetes. <sup>3</sup> Need I say more?

### **A Trembling Trend**

While almost perfect, there is something you should know about barre fitness. If you are a barre veteran, you probably know this already but for you barre babes just starting out, shaky leg syndrome is normal. Many newbies who first begin barre fitness are surprised (and often alarmed) to find their legs shaking uncontrollably as they perform their fiftieth plié. While potentially embarrassing, there is a very good explanation for why your legs tremble so ferociously and moreover, it's a good thing. Muscle trembling is essentially muscle fatigue. When a muscle is contracted for long periods of time, it begins to tire. You've heard personal trainers and coaches scream "feel the muscle burn!?" That burning is the beginning of muscle fatigue. Muscle fatigue occurs after you power through that burn and your muscle can no longer fight the plié.

### **Please "Barre" with Me through a Science Moment**

There are two factors that play a role in causing your muscles to tire and tremble. The first has to do with nerve conduction. In most healthy people, the brain will signal the nervous system to tell a muscle (made up of many muscle fibers) to contract. In most cases the muscle will contract only for short periods of time (seconds to a few minutes) before it returns to a resting state (at which point it re-energizes) but if you continuously hold a muscle in contraction or repeat contractions over and over (and over) again the nervous system begins to fire less efficiently. This means that fewer muscle fibers are being activated leaving the few remaining fibers to do all of the work (you lazy seats!).

The second reason muscles reach a state of fatigue is because the muscle fibers run out of fuel. All muscles are fed by certain chemicals from within the muscle cells, which allow the muscle to move. With prolonged periods of contraction, however, the muscle depletes these fuel stores and contracts less efficiently, causing it to shake. So essentially your muscles become hungry and tired, which makes them cranky and anxious (sound familiar?).<sup>4, 5</sup>

With time and practice (yes, that means more barre, more often), your body adapts to the challenges. Your muscles fibers become larger and stronger, and your nervous system more efficient. You will begin to notice less burning and trembling and will instead power through with no problems, and need a further challenge to reach the state of fatigue. So the next time you find yourself in a barre fitness class barely able to stand, remember that this too shall pass, and you soon become one of those laughing, joyous barre-lievers who are trembling for more.<sup>6</sup>

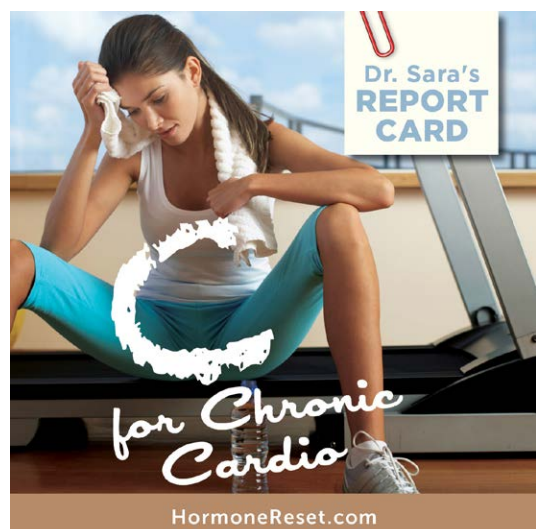
### **Final Grade: A+**

Barre is one of my favorite forms of movement for women. The benefits far outweigh the drawbacks which, from my point of view, are limited to trembling legs and... well, OK, if I have to make one up-feeling pressured to wear those cute Lululemon pants that make your seat look nice (twisted my arm on that one!). I've gone to many styles of barre classes over the years, and some are wiser than others at when to use a neutral spine versus a tucked pelvis, but I trust that you'll find the teachers that make your low back feel best. Perhaps best of all, barre is suitable for all personality types. This is the closest to "one size fits all" as far as I'm concerned. For the bendy yoga types, barre fitness offers lengthening and stability, for the power lifter types, barre fitness offers strengthening and for those Type A's that never feel satisfied unless they are crawling out the door at the end of a workout, barre fitness offers high intensity too with its hoards of bending, plié-ing, bouncing and pulsing. While nothing is perfect, + fitness certainly comes close. Join the hoards and become a barre-liever too!

Join me for my next in the series of exercise report cards: the CrossFit Craze. To learn more about my 21-day plan to reset your hormones and get lean, go to [hormonerest.com](http://hormonerest.com).

### **Dr. Sara's Report Card: Chronic Cardio Gets a "C"**

It is no mystery that working out is vital to a healthy, happy body and mind. However, when it comes to physical activity, it's possible to have too much of a good thing. Recent data shows





not only do you *not* have to spend countless hours at the gym to benefit from exercise, but also that may be counterproductive to your hormones.

If you have ever trained for a marathon or triathlon, you know that the traditional training schedule requires an amount of time that rivals that of a part-time job. Additionally, chronic and excessive long-duration training (over an hour) can actually have a negative impact on your health and hormones. I call long-duration cardio training by a specific name: *chronic cardio*. Even if you aren't training for a specific event or sport, racking up countless hours on the road or treadmill will likely trigger an undesired hormonal response, which is not helpful if you are already trying to manage chronic stress or adrenal fatigue. You are also at risk for overtraining and injury.

Previously, I addressed how an imbalance of the stress hormone cortisol can lead to fatigue, moodiness, muffin tops, and poor memory. It is important to remember that cortisol increases in response to an elevation in stress, both emotional and physical. The longer your workout, even at a moderate intensity, the more cortisol your body is releasing. The cardinal rule of hormone balance is to banish stress, not add more to your plate. When applied to your exercise regime, the idea is to be adaptive and resilient, and not to feel like your exercise is another source of stress.

For some people, including me, chronic cardio raises cortisol too high and leads to an overactive stress response system. It's like overstepping your fitness boundaries, and causing more harm than good. Here are a few signs that chronic cardio is not for you:

- You feel depleted after exercising
- Your muscles are sore, and taking a rest day doesn't resolve the discomfort
- You're exhausted and can't sleep it off
- You feel you are aging too fast—wrinkles, memory, and stiff joints
- You feel like you need a massage every week
- You experience injury or can't bounce back from recent injury

Beyond the emotional and mental havoc a cortisol imbalance can cause, constantly elevated cortisol can lead to muscle break down, suppression of the immune system, bone loss, and stubborn belly fat.<sup>7,8</sup> Studies of marathon and half-marathon runners measuring salivary cortisol levels show a dramatic increase in cortisol not only during the race but for hours to days after they had finished.<sup>9</sup> Have you ever been in an argument and spent an hour fuming over the interaction? That's what's happening in your body after you have completed a long, exhaustive workout. Instead of shaking it off or imagining witty comebacks, your body is dealing with the physical stress by breaking down muscle, connective tissue, and interfering with bone development—essentially undoing everything you were trying to accomplish by working out in the first place!

Elite athletes fare better, but that means those of us who are lesser trained are more likely to show signs of excess stress with chronic cardio.<sup>10</sup> Several studies have looked at how

to attenuate the damage of high cortisol with chronic cardio in men. Vitamin C, at 1500 mg per day, seems to help.<sup>11</sup> Phosphatidylserine, an extract of plant membrane known to lower cortisol, does not.<sup>12</sup>

The good news is that you can still get your sweat on, build muscle, or just work out some stress without all of the negative side effects of long-duration exercise. The emerging trend of high intensity interval training (HIIT) incorporates intervals of fast-paced movement with rest periods or lower intensity activity.

One of the best examples of this form of training is the "Tabata Protocol" of an all-out effort for 20 seconds, followed by 10 seconds of rest, repeated for 8 intervals. This works out to 4 minutes of exercise-- I know that doesn't seem like *nearly* enough time to experience any benefits, but hear me out. The Tabata protocol was developed by professor Izumi Tabata, who discovered that this 20-second on/10 seconds off work-to-rest ratio yielded the best improvement in subjects' anaerobic capacity (think short duration/sprints) and aerobic capacity (long distance events). I know it seems counter intuitive that small, intense bursts of work would improve your mile time or help you train for a marathon, but there is a pretty hefty mountain of evidence to support the merits of HIIT training like the Tabata Protocol in improving long-distance capacity but with the fraction of the amount of training time required.<sup>13,14</sup>

Not only are your workouts more time-efficient, they also yield a better metabolic response than longer, low intensity exercise. Yes, there is still going to be an increase in cortisol, but it is going to be lower and last a fraction of the amount of time as compared to long bouts of exercise. Countless studies over the last two decades have demonstrated the benefits of HIIT training in improving fat oxidization (fat burning), blood sugar control and muscle cell activity.<sup>15,16</sup> What is even more interesting and important is that this boost in metabolism has been demonstrated in women of all levels of physical activity, weight and health-- everyone can benefit from HIIT training.<sup>17</sup>

### HIIT Examples

- Tabata squats: Do as many squats as you can for 20 seconds, that number of squats is your score. Rest for 10 seconds. Repeat for 8 rounds. Your final score is the *lowest* number of squats you completed in any round. So if in round 1 you completed 17 squats, but in round 2 you only did 10 squats, 10 is your new score. This can be done with push-ups, sit-ups, you name it! If you squat, be sure to use good form as women seem to be at greater risk of hemorrhoids from squatting, especially if you've had full-term pregnancies.
- Sprint intervals: Run 400m hard! Then rest and repeat for at least 4 rounds, keeping track of your time each effort. You can rest as needed; until you feel ready to hit the run hard again. Or you can shorten the rest to a specific amount of time. The distance can vary, 100m, 200, etc. Just keep it short enough to keep intensity high, so nothing over 800m.

- Weightlifting: There is a difference between lifting weights or sitting on a weight machine, and the sport of weightlifting. Weightlifting as a sport includes several different moves including the deadlift (it sounds kind of scary, but think picking up something off of the floor), presses (lifting things over head), and weighted squats. Check out a gym in your area for guidance on proper lifting technique.

HIIT and Tabata are better choices when your hormones are out of whack, and you want to get them back on track. They improve stress resilience, and help you boost lean body mass, and by extension, your metabolism. They improve insulin sensitivity. They raise testosterone and growth hormone. They are far better than chronic cardio for the enlightened female body.

### Dr. Sara Grades Different Forms of Exercise for Women: Tabata Gets an "A-"



You may think that you can't get something for nothing, but when it comes to exercise, that may not be entirely true. Imagine an exercise routine that could give you that toned, lean body you always wanted, but in less than a quarter of the time. That's the promise of the Tabata Protocol, a form of High Intensity Interval Training (HIIT) that can give you the benefits of weight loss, muscle strength, and cardiorespiratory health and endurance in.... *just 4 minutes?!*

If you haven't tuned in until now, I promised to rate some of the popular exercises currently trending and give you my overall grade based on safety, accessibility, do-ability, cost, hormone benefits, as well as health advantages and risks. So far, I have covered barre fitness and "chronic cardio." For this article, I will be talking about the Tabata Protocol, not to be confused with The Gottfried Protocol (that's mine). Future blogs will feature running, ChiWalking, ChiRunning, CrossFit, and TRX.

Named after researcher and Professor Izumi Tabata, the Tabata protocol involves 20 seconds of high intensity exercises (think jump squats) followed by 10 seconds of "rest" (if you consider gasping for air as "rest"), which is then repeated 8 times for a total of 4 minutes. Of course, if you have more time, you can repeat the Tabata Protocol as much as your heart desires (and is capable of enduring) so that you perform 8, 12, or 16 minutes of Tabata. But I warn you, the end of those 4 minutes can't come soon enough!

Now, for those type A's that balk at the short exercise duration, this is NO joke. While the first one or two "30-second sets" may feel like a cinch, you will be watching that timer very closely come set five and six. And believe me, by the time you get to that eighth set,

you will be ready to stop. This Tabata thing works! In fact 1 to 3 days of training with an HIIT protocol such as Tabata will improve aerobic and anaerobic endurance, increase fat burning, increase metabolic rate post exercise (continue fat burning after exercise), improve blood pressure, cholesterol, and insulin sensitivity as well as increase muscular strength and endurance. In 4 minutes 1 to 3 times a week<sup>18</sup>

### **Sound Too Good to Be True?**

Four minutes to fitness? Is this some kind of infomercial? It's not. The science even proves it. Professor Izumo, former researcher at the National Institute for Health and Nutrition, found this protocol when serving as the Training Coach for Japanese speed skating. Asked to analyze effectiveness of high intensity interval workouts for the team, Professor Izumo found that 20 second bursts of high intensity exercise followed 10 seconds of rest (and repeated 8 times) can increase the anaerobic capacity by 28 percent in athletes.<sup>19,20</sup>

What's more, Tabata has been shown to higher caloric expenditure up to 13.5 calories per minute and increase metabolic rate (fat burning) for 30 minutes after the workout ends.<sup>21</sup> One study found marked increases in fatty acid oxidation after just two weeks!<sup>22</sup> The American College of Sports Medicine also confirms that Tabata increases your caloric expenditure and meets the requirements for improving cardiorespiratory endurance.<sup>23</sup>

### **How Does It Work?**

Essentially you can create a Tabata workout with any single or combination of exercises. You may choose to download a Tabata Timer on your smart phone (I use the one by Garaio Technology Lab) or use a stop watch. You can do a single exercise set where, for example, you perform jump squats for 8 "30 second" sets or a combination of exercises such as jump squats with push ups—every other set. You can also apply it to your workouts in the pool, running, weight lifting, cycling, and walking. Just make sure that during your 20 seconds of high intensity that your heart rate at 75 to 80 percent minimum. If you type "target heart rate calculator" into your search engine you will find several options for calculating your heart rate at different intensity levels (or percentages).

### **What About Equipment?**

That's the best part. You don't need any equipment. Of course, if you wanted to do a Tabata workout with some dumbbells or jump rope, you would need to have them available but you can get a great workout just using your body weight too. You can literally do this at home between your baby's naps, on one of your 15-minute work breaks, or on the sidelines of your kid's soccer game (of course they'll be mortified). My point is . . . *it's quick!*

### **Is Tabata for Everyone?**

While this Tabata may indeed feel like you are getting something for nothing, you must put in the work to reap the reward. When you work at 75 to 80 percent (and upwards) of

your maximal heart rate, you are working out your hard. It is always best to have a solid base of fitness before you begin any HIIT exercise programs. The American College of Sports Medicine describes a baseline as performing physical activity 3 to 5 days a week for 20 to 60 seconds at moderate to high intensity, consistently.<sup>24</sup>

While most people can exercise safely without incident, some people must take a more precautionary approach. And with HIIT, such as Tabata, it's always best to be safe. To find out if you are ready to get jumpin', check out the American College of Sports Medicine's (ACSM), Physical Activity Readiness Questionnaire or PAR-Q.<sup>25</sup> This is a very short questionnaire that will help you determine whether you have any risk factors. If you have diabetes, hypertension, joint problems, or other medical conditions it is best to check with your physician before starting any exercise program.

What I like most about Tabata is that I believe it's more physiologic. It's what our ancestors did in their daily movement. They would walk a lot, but then increase the intensity for a short duration, then recover back to baseline. That's much better for your hormonal control system, your Hypothalamic-Pituitary-Adrenal axis, than chronic cardio, where you raise your heartrate to your maximal zone and keep it there for an hour, running or cycling or on the elliptical machine. That tends to cause more stress in your body, and most women that I work with need less stress.

As always, make sure that you spend at least 10 minutes warming up before you jump to it. Decide which exercises you are going to do and mimic these movements in a modified way (for example; if you are going to jump squats, do 10 to 12 regular squats first, and be sure to use good form with squats to avoid hemorrhoids and other untoward effects). If you have been sitting all day, make sure you stretch since your muscles have likely frozen in fetal mode from staring at the computer. Give yourself at least 2 days between your Tabata trainings. Even though it's quick, it can be intense for your body, and you will need a few days to recover.

### **In Aggregate, I Give Tabata an A-**

While the Tabata Protocol seems to offer the best bang for your buck, its super high intensity limits the number of people who can do it effectively, with pristine form and without injury. While I love the fact that it can be done in just 4 minutes, most people should get in the habit of exercising at least 20 to 60 minutes, 3 to 5 times a week. That being said, for those up for the challenge, mixing Tabata in with your regular aerobic and strength routine could be just what you are looking for to bring you to the next level of fitness.

To learn more about forms of fitness that work best for the female body, grab a copy of my new book, *[The Hormone Reset Diet](#)*. It will help you discern the types of exercise that reset your hormones for the better.

### ChiWalking and ChiRunning Earn an "A"

Do you remember when all you had to do was grab your running shoes and head out the door you went for a four-mile run? Does just the thought of this make your knees hurt? Maybe you used to look forward to your regular runs, but now you either struggle through them (watching the clock constantly, eager for it to end) or perhaps you have given up all together because it's not worth the pain and discomfort.

Studies show the annual rate of injury among runners to be between 40 to 60 percent, with 30 to 70 percent leading to medical consultation or treatment. Most of the injuries stem from overuse; that is, repetition of the same motion over and over. In fact, running is one of the most complicated motions to execute correctly, and women are far more likely to be injured compared with men. Eighty percent of running injuries are due to increasing mileage too fast—in part because the cardiovascular system adjusts faster than the joints, and you may have a false sense of being ready to push harder. The knee is the most common source of running injuries (i.e., runner's knee), but other common problems include Achilles tendinitis, shin splints, hamstring pulls, stress fractures, and low back pain.<sup>26, 27</sup>

Running for you may be a hate/love relationship: *hate* when you start and *love* when it's over. Whatever your case may be, I am here to tell you there is hope. In this blog, we will be reviewing and grading ChiRunning and ChiWalking, a revolutionary approach to running and walking that has helped thousands of people learn how to walk and run pain free. This is for those who thought they would never run again, would like to begin a running program, and/or are still running but want to learn how to become more efficient and free of injury.<sup>28</sup>

Beginning in 1999, ChiRunning and ChiWalking have changed the way people move. Founder and president, Danny Dreyer combines his ultra marathoner running and coaching experience with his longtime study of Tai Chi to create safe and efficient running practice that works for virtually everyone. Through simple practices of cadence, focus, foot placement, body awareness, forward lean and core alignment, "ex" and current runners (and walkers) are able to enjoy pain and injury free running and walking ongoing.



### **That's Impossible! I Will Never Run Again!**

ChiRunning is not only based in experience and practice, Danny's ChiRunning is backed by science too. In a 2012 study ChiRunning was found to be less stressful on the joints of the lower extremities than other running techniques.<sup>29</sup> Core control and body awareness helps runners move with more ease and less impact, which can lead to fewer injuries. When the body is in ideal alignment and your mind is focused on keeping on that way, running becomes more efficient and effortless and a lot easier to enjoy.

ChiRunning's emphasis on proper alignment through core control is a strong foundation for the practice and one of the main components against injuries. Having a strong core protects the body from sustaining injury by minimizing load on the joints while distributing it more evenly throughout the body.<sup>30</sup> The cadence helps to set the rhythm of your stride, while foot placement and body awareness help to keep you mentally and physically sharp. Once you find your rhythm, ChiRunning becomes automatic. It flows. And you can always start your practice on a treadmill where you don't have to worry about ditches and rocks.

### **Not Ready For Running?**

If you aren't quite convinced about the running, then you can try ChiWalk-Run Program. The ChiWalk-Run Program offers a slow and progressive approach to introducing pain and injury free running into your program. You may also to mix the two and do ChiWalk-Run together either as intervals or on different days. And of course you can always stay with ChiWalking, if that suits your needs the best.

While some people may think that walking isn't 'hard' enough to make a difference, I beg to differ. Walking is one of the best exercises out there. In addition to being easy on the joints, it also reduces cardiovascular disease and lowers overall mortality rate.<sup>31 32</sup> Its accessible and free AND you get to check out cool neighborhoods and nature trails as an added bonus!

### **Intrigued? Here's What to Do**

While ChiRunning and ChiWalking work wonders, unfortunately this is not a 4-minute fix. This practice requires concentration and focus. There are some basic techniques that one must learn in order to perform Chi Walking and ChiRunning effectively. Here's where you may need to take notes. While it may seem like a lot at first, it will become easier with regular and consistent practice.

The center of focus is from the core out to the limbs. If the core is aligned then the muscles are aligned and the joints are relaxed. Keeping that in mind...

- Warm Up-Make sure your muscles, tendons, ligaments and joints are warmed up before beginning any exercise program.
- Maintain Good Posture-Efficiency of running is directly related to quality of posture; poor posture weakens your core muscles and restricts blood flow and oxygen to brain and muscles.

- Maintain Good Leg Motion-Over striding and incorrect knee angle can cause injuries and poor circulation. Landing with your feet under you and keeping your knee at a 90 degree angle is ideal.
- Cadence- long strides cause our bodies to work harder. Establish and keep a regular cadence of about 85-90 strides per minute. ChiRunners often use a metronome to help maintain their cadence.
- Body Sensing-In order to be in touch with your body, you must listen to it. Know where you are internally and externally.
- Mental Focus-You will work to train your brain to re-educate the body to run more efficiently. Eventually it becomes a part of muscle memory and, needless to say, more effortless and enjoyable. But you need to practice!
- Body Connection-The upper and lower body assume equal amounts of work between the two. Balancing the load so that one doesn't have to overcompensate (and overtire) for the other. Instead upper and lower are working in unison.
- Belly breathing-An important part of the Chi practice includes belly breathing. Belly breathing involves filling up the lungs such that the abdomen expands rather than just the upper chest. This allows for increase oxygen consumption and absorption, which boosts metabolism.
- Limbs-It's important to have a good bend in the joints -forearm and shin should be parallel to ground mid-swing, and relaxed.
- Staying Relaxed-Perhaps the most important thing is that you don't take it all so seriously. Enjoy the experience. Keep your mind open as you observe your internal world and the world around you. Tense muscles can lead to tightness and injury. Stay relaxed and go with momentum rather than against it.<sup>35</sup>

I know, I know. It sounds like a lot to learn. When we try new things, it's going to feel a little awkward at first. Your body has become accustomed to its (familiar) physical and mental habits. ChiRunning and Walking will challenge those patterns. But don't worry. You can do this slowly, one change at a time. If you look up Danny Dreyer ChiRunning on YouTube you can watch a video of the how the technique is performed, which will help you begin to visualize it. And again, take it one step at a time.

### **A for Awesome!**

ChiRunning and ChiWalking get high marks. ChiWalking is safe for everyone, accessible, free, and effective—so I give it an A+. ChiRunning is more complicated to execute properly, and I suggest training with one of Danny Dreyer's certified coaches. Because it's difficult to nail the form, I give ChiRunning an A-. You can learn more about ChiRunning and ChiWalking in my new book, *[The Hormone Reset Diet](#)*. Check it out, be patient, and let us know what you think!



### To Run or Not to Run? Dr. Sara's Report Card: Running Earns a B- for Women

Oh, the love-hate relationship with running. On the one hand, you get to exercise outdoors, up close with the trees or on the beach while burning calories and increasing cardiovascular fitness, unless you're confined to a treadmill in your garage or gym. Running is efficient, which became increasingly important to me when I had kids. On the other hand, running is uncomfortable. If it's not a bad case of the wiggly jigglies under your oversized shirt, it's the aching knee or the burning shin splints that has you agonizing through each step. Maybe your hip flexors or psoas is super tight on one side, and pull you out of alignment (Hello, Stan, Massage Man?). If you have ever been in superb running shape—when running feels effortless—then you know the euphoria that comes from a great run. However, the extreme difficulty of mastering the proper form of running, especially for women, may mean that running too often represents discomfort and dread, excessively high cortisol, and almost guaranteed injury.



In this blog, I will review running for women—the many risks and benefits that running can provide—as well as guidelines for creating an injury-free running experience.

Women run for many reasons. Some women set a goal to achieve a milestone such as a marathon or triathlon or to be a part of a community. Others run to clear their mind, general health, and weight loss. Still others, especially moms like me, run for sanity. Running is a no-frills and effective way to get and stay fit. Yet running comes with some caution. As a high-impact sport, running can be hard on the joints and connective tissue and may accelerate the aging process. Many people have poor form, which can lead to (or may be a result of) muscle imbalances and/or injuries. Furthermore, brisk walking, hiking, barre fitness, and cycling can be just as efficacious for cardiovascular benefit but are kinder on your joints.

Still, running is one of the world's most accessible and popular sports. It can be done anywhere and everywhere, and with very little equipment, which means it's inexpensive too. Benefits of running include improved cardiovascular capacity (a stronger heart), increased metabolism (fat loss), reduced bad cholesterol (healthier heart), strengthening of the bones, as well as improved self esteem and overall health.<sup>34</sup> It's also a great way to visit with friends (I run with my friend Jo every Sunday, and we have a T-shirt that reads "Running with a friend is cheaper than therapy"), get your dog some exercise, plus explore different cities and trails.

Since 2004, running participation increased 70% with women aged 25 to 34 years leading the group. Traditional (5Ks and marathons) and non-traditional running events have exploded, particularly those where obstacle courses and lots of mud are involved. Running apparel sales have climbed steadily as well. Rich Harshbarger, CEO of *Running USA*, states "running in America is thriving."<sup>35</sup>

### The Movement of Running

Running involves a complicated series of interdependent movements using the entire body from head to toe. While I used to think that my task was to lace up my running shoes and head out the door, a closer analysis shows that you want to pay close attention to your form. It's not as simple as throwing one foot in front of the other, at least not if you're female and want to prevent injury and strain.

- **Foot strike** plays a critical role in setting the "tone" for the flow of movement, or lack thereof, through the kinetic chain. Where and how you place your feet determines the biomechanics of the ankle, knee, hip and so on and can determine if and which kinds of injuries you may incur.<sup>36</sup> Before I knew any better, I had a nasty heel strike when running, which would send a jarring shock from the heel to the knee to the hip, and slows my forward momentum. Check out my lousy heel strike in the photo in Figure 1, evidence of my poor form before I knew better!
- **Thigh muscles and gluteals.** While your feet are the busy bees, the larger body muscles of the hamstrings, quadriceps, and gluteals are the engine that propels the body forward through space (and burning lots of calories along the way). Sometimes there are imbalances in either strength or flexibility (or both) in your muscle groups.
- The **arms** are relaxed but purposeful while the **core muscles** stabilize the entire unit. As a result of this multifaceted movement, running recruits a large muscle load, which gets your heart rate and metabolism going.



Figure 1. Check out my heel strike! Don't do this!

We've all heard that running is good for your heart. In fact, habitual physical activity such as running can prevent the development of coronary artery disease (CAD) and reduces the risk of other chronic diseases, including osteoporosis, obesity, depression, and cancer of the breast and colon. Regular physical activity is defined by The American College of Sports Medicine and Centers for Disease Control and Prevention as getting 30 minutes or more of moderate-intensity physical activity on most (preferably all) days of the week.<sup>37</sup> Regular exercise such as running increases Brain Derived Neurotrophic Factor (BDNF), which regulates the development and plasticity of the central nervous system, although the benefit may be lower in women compared with men.<sup>38</sup>

I mentioned that running is efficient. Did you know that a 160-pound woman running one hour at 5 miles per hour burns 600 calories? If she runs faster (8 mph), she will burn 861 calories an hour. That's a lot of calories!<sup>39</sup> While calories aren't the whole story when it comes to health and weight loss, they are important to consider. I don't like the "chronic cortisol" rise of longer runs with a steady and fast pace, and prefer interval training for the sprint/recovery phases, which build better stress resilience.

Variety is another benefit of running. You can run in the woods, on the beach, through cities or on a treadmill; the landscape of running is endless. If you like competitive events, you can sign up for the more serious marathons and 5k or get down and dirty with a good Tough Mudder. Running opens up a world of healthy, fun, interesting fitness community and near endless possibilities for all genders and ages.

### Running Injuries

Since perfect form is tough to master, there are a lot of injuries and discomfort associated with running. Some of the most common injury caused by running include [patellofemoral pain syndrome](#) (runner's knee), ilio-tibial band syndrome (ITBS), achilles tendinitis (often genetics put you at greater risk), plantar fasciitis (pain along bottom of foot), and shin splints.<sup>40</sup> Each year, 37 to 56 percent of people injure themselves because of running. The most common injuries occur in the lower extremity such as the ankle or knee, with the knee being the most common. Women are twice as likely to have ilio-tibial band syndrome compared with men.<sup>41</sup> At least half of these injuries are due to overuse and constant repetition of the same movement. These injuries reoccur 30 to 90 percent of the time and often need medical consultation and/or treatment.<sup>42</sup>

I used to think that women were at greater risk for running injuries compared men, probably related to joint kinematics, muscle loading, and bone density differences. Now, I understand that's not the case, according to recent meta-analyses.<sup>43</sup> A more nuanced view is that certain risk factors put women at greater risk of running injury, including:

- previous sports injury
- running on concrete
- marathon training and participation
- weekly running distance of 30-39 miles
- wearing running shoes for 4 to 6 months

Women have a wider pelvis compared with men, which creates biomechanical differences in the kinetic chain. I was taught that this has a cost in terms of locomotion for women versus men, but this notion has been disputed.<sup>44</sup> Overall, female runners demonstrate greater hip adduction, hip internal rotation, and knee abduction than men which can lead to more strain on the knee joint and surrounding connective tissues. Women use their gluteus medius whereas men utilize their gluteus maximus more with running. Women showed a progressive increase in activity of the gluteus medius with speed, which can cause fatigue and subsequent biomechanical adjustments to compensate for the fatigue. In fact, women have worse running economy compared with men, and lesser aerobic profile<sup>45</sup>—and that means we may tire more easily and lose proper form. Finally, women have smaller, less dense bones than men, which can lead to more strains and fractures.<sup>46</sup>

Improper running form is the major reason why many people get injured while running. Biomechanical imbalances, compromised range of motion in the joints, and muscle weakness causes gait modifications, which disrupts the flow of the kinetic chain, and can lead to injury.<sup>47</sup> As I mentioned earlier, proper running gait and foot strike is critical to absorb the impact of your body's weight hitting the ground. Improper foot strike may put excessive force on the other joints, muscles, and connective tissues.<sup>48</sup> If left unchecked, these imbalances become repetitive movement patterns, which can eventually lead to overuse and injury.

### **Don't Lose Hope! Here's Help**

If you are curious about running or getting back into running, there are some things you should consider. First, as with any exercise program, it is important to check that you are ready to exercise. It might be worthwhile to take the Physical Activity Readiness Questionnaire (PAR-Q), which contains a series of questions assessing your readiness for exercise.<sup>49</sup> If you answered yes to one or more of the questions, it's best to check with your primary care clinician and let them know you would like to begin a running program.

### **Form 101**

As I mentioned earlier, repetition, improper form and subsequent biomechanical compensations are main factors that can lead to running injuries. Of course, if you're like me, you probably missed the "memo" on proper running form. How hard can it be? One foot in front of the other, right? Not quite. You see, none of us are perfectly symmetrical so we start off with imbalances that, without awareness and correction, become unhealthy movement patterns. To add to this, we sprain, strain and break things along the way, which we probably didn't rehabilitate sufficiently. The body adapts to injuries by compensating, which leads to dysfunctional movement.<sup>50</sup>

What constitutes proper running form? Good question. As usual, there is not a one-size-fits-all answer. Even so, there are some basic things that you should be aware of.

- 1. Make sure you are warmed up.** You can walk, jog slowly, jump, march in place, or do calisthenics for 5 to 10 minutes. Get your hips, knees, ankles, and shoulders to move through their full range of motion to warm up for running.
- 2. Before you start, check in with your posture and core.** Make sure your posture is upright, but not too tense. Your core muscles are engaged and your focus is ahead. Keep your arms relaxed and elbow at a 90-degree angle.
- 3. Run with your feet under you** rather than out in front of you to avoid over striding. Maintain a consistent cadence throughout your run with equal effort coming from both your upper and lower body. Take care not to force a toe-strike or heel strike. Aim for a **mid-foot strike** but be mindful of the nuance. Here's Danny Dreyer's video on the topic: <https://www.youtube.com/watch?v=rkUqkdPQHs>
- 4. Balance strength with flexibility.** If you've been reading my work for a while, you know how much I believe in balance when it comes to your hormones, your nervous system, and your life. Now let's talk about your leg muscles, particularly your hamstrings (hammies for short). My husband, a recovering tackle football player, likes to stretch his hamstrings, one leg at a time over a park bench with his spine rounded over the leg. From Jill Dailey at The Dailey Method, I learned that in order to create flexibility in your hamstrings, you want to stretch over the hamstrings in two modes: one with spine extended, and one with spine flexed (rounded). She adds that the quadriceps must be stretched with both a bent and a straight leg. From barre class, I've also learned the importance of lengthening my iliotibial band for knee stability.
- 5. Don't let your butt sag (i.e., focus on gluteus medius).** Your gluteus is the biggest muscle in the body, but in women, the gluteus medius (side of the rear, see photo) is often weak. Some of this is aging, some is from sitting too much, and some of this is neglect. The clinical term for it is "gluteal atrophy," but you probably know it better as "saggy butt." I've heard trainers harp on the gluteus medius for years, and never really paid attention until I started having knee, low back, and hip pain from running. Now I'm a zealot for the toned glut med. Not only will it give you "dancer's dent," it will improve your running. See Figure 2 for an overview of the muscles, including the gluteus medius. Here's why: Your gluteus medius stabilizes the hip during single leg movement, and the athletes with the best developed glutes are gymnasts and ballerinas. This is another plug for integrating barre movement into your cross training if you want to run with proper form, or some form of single leg activity to develop your gluteus medius.
- 6. Roll out your IT band, hamstrings, quads, and glutes after the run.** As I've mentioned, women are twice as likely to have ilio-tibial band syndrome. When you have ITBS, you are more likely to lean their trunk more towards the stance limb which may be associated with decreased iliotibial band flexibility.<sup>51</sup> Lengthen your IT band in barre class or on a roller. While you're at it, roll out your tight hammies, quads, and glutes after the run. It doesn't improve muscle strength, but it's proven to help your range of motion.<sup>52</sup>

If you're a fan, take your training up a notch by watching the best "how to" videos on running form.<sup>53</sup> Purchase some sessions with a running coach to upgrade your technique. Make sure to invest in some quality sports shoes and clothing. Talk to your local sports store and ask them about running gear. Have your gait analyzed before buying running shoes. Exercise in comfortable weather; too hot or too cold can be unhealthy. Finally, common sense is to make sure you are hydrated.

### Easing into It

If you're not ready to run yet, walk first. You can build up to running and in fact, this is advisable beginners and people who have not maintained a regular running or exercise program. You can start off around your neighborhood then branch out up hills and trails. You can add some intervals as you get stronger by increasing your walking pace on alternating blocks or every 5 minutes for a minute. There is a wealth of information on the internet about transitioning from walking to running. Explore different options to see what works best for you.

### Final Grade: B-

Owing to the difficulty of running with proper form, I give running a grade of B- for women. I see too many women running with poor form, tight hips, or some compensatory movement dysfunction. One of the best ways to include safely running in your fitness regimen is to crosstrain, whereby you include other forms of fitness that address the key problems with form, such as a weak gluteus medius or tight ilio-tibial band. Improve your grade with running by crosstraining in a barre class, or studying Danny Dreyer's method of ChiRunning. I'll be writing about ChiRunning and ChiWalking in a future blog, as I've been working out with one of Danny's certified trainers, which has improved my form, boosted my energy, and prevented injury.

### Dr. Sara Grades Different Forms of Exercise for Women: CrossFit Gets a "B+"

When it comes to women and fitness, not all forms of exercises are equal. You already know that I'm in favor of barre fitness (barre-liever all the way!). But as a medical doctor and *New York Times* bestselling author of *The Hormone Cure*. and more recently, *The Hormone Reset Diet*, I feel it is my responsibility as a professional to provide science regarding the pros and cons of other types of physical activity so that you can make your own informed choice about which forms are best for you.



Second in my report card series is a fitness craze that has taken this world by storm. You have probably seen sweaty muscular men and their firmly-toned female counterparts (think short shorts and knee-high socks) flipping large truck tires, jumping on wooden boxes, slamming down barbells, and tossing those funny looking kettlebells all over the "box," which is code for a CrossFit gym. While it may look like a form of boot camp for Navy Seals, what you are actually witnessing is something called CrossFit. Yes, folks, this tire rolling, weight throwing, box jumping craze is actually an exercise class open to the public – available for any and all who dare to try it.

But Crossfit isn't just any old exercise class. It's a community, a way of life, a heart-thumping, muscle-pumping challenge that is going to give you a run for your money- and then some. You like variety? CrossFit is for you. How about intense competition? CrossFit lives for it. Accelerated fat burning? No sweat (well, actually lots of sweat!), CrossFit offers that too. In fact, CrossFit's key physical qualities include improvements in cardiovascular endurance, strength, stamina, agility, balance, power, speed, coordination, accuracy, and flexibility.<sup>54</sup>

### **So What Is CrossFit Exactly?**

CrossFit is a total body workout that aims to increase functional capacity by drawing on a variety of high intensity movements which incorporate an assortment of equipment and body weight exercises. These movements integrate exercise modalities such as high intensity interval training (HIIT), Olympic lifting, power lifting, plyometrics (jumping), and gymnastics and are often performed to fatigue. The "equipment" (more like weapons of max fitness), may be anything from large truck tires, gymnastic rings, jump ropes, and plyo-boxes, to medicine balls, dumbbells, and resistance bands (to name a few). Workouts of the day (WOD) are posted on the CrossFit website (among others) and are open to anyone who wants to try the workouts at home or at one of CrossFit's 10,000 affiliated gyms. Participants are invited to post their progress and accomplishments online, where they receive encouraging and positive feedback from a vast and active CrossFit community<sup>55</sup>.

CrossFit founder, Greg Glassman, developed his earlier success as a coach and trainer teaching efficient, high-intensity workouts to celebrities and athletes in gyms all over Southern California. In 1995 he was hired to train the Santa Cruz Police Department where he found that combining traditional heavy lifting with sprints and high intensity exercises yielded best results. Glassman incorporates his training modalities and opens his first CrossFit gym in 1995 in Santa Cruz Ca. By 2000 he founded CrossFit Inc. and in 2001 launched Crossfit.com which features his WOD of the day along with an extensive library of exercise videos, courses on how to become a certified CrossFit Coach along with a message board where members talk about all things CrossFit. In 2007 the CrossFit games were founded where athletes from all over the world come together to compete against one another once a year. The event became so popular that Reebok decided to sponsor it, with ESPN2 broadcasting it worldwide<sup>56, 57</sup>

### The Pros

CrossFit offers the best bang for your buck. The total body conditioning prepares the body for any physical challenge “unknown” and “unknowable”<sup>58</sup>. Its high intensity workouts increase cardiovascular and fat burning capacity, which can lead to a fit and lean body<sup>59</sup>. The variety of exercises keeps the workouts interesting, which makes exercise fun rather than something you dread. Workouts are measured over time so participants can track their progress and see results quickly. Moreover, because of the high intensity nature of the sport, you needn't spend as much time working out, which increases the desire to continue<sup>60</sup>. Last, but definitely not least, CrossFit offers a sense of community to any and all who join them. Whether a veteran or a newbie, all participants are welcome with (well developed) open arms and cheered on for their achievements and accomplishments<sup>61</sup>.

### The Cons

While CrossFit is taking the world by storm, there are some things that you should be aware of before you join the CrossFit craze. Because CrossFit is a high intensity workout you're more likely to hurt yourself than with lower impact movements. While coaches are there to guide you, the fast paced, heavy weight bearing, competitive nature of the sport can lead to poor technique and improper form. And when you lift heavy objects, quickly, and with bad form, it's a recipe for disaster. According to one study, 73.5% of participants sustained some type of injury during CrossFit training<sup>62</sup> with shoulder, low back and knee injuries being the most common<sup>63</sup>. Additionally, the smaller stabilizing muscles are often neglected, which may result in muscle imbalances and (you guessed it) injury.

What's more, high-intensity exercise induces a stress response in the body, which can lead to imbalances of homeostasis, or the tendency of a system to maintain internal stability, owing to the coordinated response of its parts to any stimulus that would tend to disturb normal condition of function.<sup>64</sup> In other words, our bodies strive for balance and, when we push it to physical extremes, it's not so balanced. Nor are we.

As I explain in detail in my *New York Times* bestseller, *The Hormone Cure*, this lack of balance can wreak all kinds of havoc on our minds, bodies and souls (and may be the reason you are feeling so tired!). Our bodies react by adjusting its hormone levels as it strives to get back to the “comfort zone”, causing additional imbalances to occur. Cortisol levels are particularly affected with HIIT and can become chronically high (and subsequently low) which can lead to symptoms of overtraining such as fatigue, sleeplessness, injury and weight loss or gain.<sup>65,66</sup> This is simply fair warning that if you tend to be an overachiever, an “all-or-nothing” type of gal, be aware because CrossFit may just push you to the over-training zone.

While I know folks who are 110% committed to their CrossFit and look amazing (Dr. Holly Lucille comes to mind<sup>67</sup>), I know more women who join CrossFit, don't lose weight, and get injured.



### **To CrossFit or Not To CrossFit?**

CrossFit is an efficient total body workout that allows participants to get many of the positive benefits of exercise, but in a shorter amount of time. If you have been an athlete or are involved in regular physical activity, you may want to give CrossFit a try, but please keep in mind the following guidelines; Try not to do too much too soon. Because of the high intensity nature of the exercises, your muscles will need time to recover. Give yourself a couple of days to rest in between CrossFit workouts so your body can acclimate accordingly. Also, Crossfit has trained coaches on hand. Ask them about the proper technique for the exercises you are unsure of. It is more important to get your form right than to kill yourself keeping up with Melanie Muscle to your left. Finally, don't try to show off! You may have a solid background in physical activity, but don't assume that "you got this." Take your time as you try new exercises out, and make sure you maintain proper form-even if that means you need to go slower. Oh and bring lots of water to stay hydrated-you'll need it!

### **Who Should Cross Out CrossFit**

If you are someone who has had a recent injury or a history of injuries, you may want to think twice about trying CrossFit. Due to the high intensity, heavy weight bearing, fast paced series of exercises, people with injuries are more at risk for hurting themselves. If you are new to physical activity and are just getting started on your fitness regime, you may want to wait before you try CrossFit. While it's a fast and effective way to get into shape, CrossFit requires a solid grasp of good technique and proper form, so it may be best to hire a personal trainer for a session or two, or observe a few classes, so you can establish a base of knowledge first. Finally, if you don't like extremely high intensity workouts, then CrossFit is probably not right for you. While the coaches may offer modifications to reduce exercise intensity, the very nature of CrossFit is competitive, which makes slower, lower impact versions difficult to follow.

With all of this information in mind, I give CrossFit a B+. While I find myself drawn to the cultlike quality, the ever-changing variety, and the potential fat burning capacity that it seems to offer, the risk for injuries limits Crossfits suitability for those with injuries and/or reduced fitness capacities. If you are a Type A personality with a hearty exercise foundation, this highly rigorous workout may be exactly what you are looking for, but if you are of the free-spirit, yoga type, Crossfit may push you beyond your OM and into your OMG! as you scurry to keep up with the fast paced workouts, leaving good form and Sivasana at the door.

Join me for my next in the series of exercise report cards: Tabata. To learn more about my 21-day plan to reset your hormones and get lean, go to [detox.hormonereset.com](http://detox.hormonereset.com).

## Endnotes

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## About Dr. Sara

Sara Gottfried, M.D. teaches women how to balance their hormones naturally so they can rock their mission. She is a Harvard-educated physician, speaker and *New York Times* bestselling author of *The Hormone Cure* (check out the new paperback from Simon & Schuster, 2014). She is board-certified in Obstetrics and Gynecology, and is regularly featured in magazines such as *Cosmopolitan*, *Glamour*, *Redbook*, *O Magazine*, and *Yoga Journal*. Known for effortlessly blending the seriousness of women's health with playfulness and humor, Dr. Sara's mission is to help women lose weight, feel great, and be vital from their cells to their soul. Work with her online by joining her semi-annual detox for 21 days! Learn more at [www.saragottfriedmd.com](http://www.saragottfriedmd.com).

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