

5 FITNESS FALLACIES

That sabotage your body
(and wallet!)



by Michele Bond, M.S.

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FORWARD

MESSAGE FROM MICHELE

Thank you so much for investing your time and energy in reading this book. I hope you find value and direction from it. That is my intention.

The ideas presented here have been cultivated from years of observing and evaluating the difference between what I learned from formal education and professional development and what is presented to the general public about exercise and associated concepts. I have spent over 20 years working with clients and using critical thinking skills to learn about and interpret the complex physiology of the body - it is deep and complicated. That being said, just understand that each of the concepts presented here could be discussed with far greater detail. I stopped at points for each concept that made sense for a publication such as this. I encourage you to strive for more after reading this, and I provide opportunities for doing so.

So much information gets pushed aside, misinterpreted, or falsified in the commercial world to make a quick buck. I find that offensive, and I want to do something about it. I have been explaining complex concepts in an easy way to understand and apply to my

clients for years and now it is time to broadcast that message far and wide.

I have a great respect for how the body works, and I am in awe of what it does on a second by second basis. From this standpoint, my mission is to truly represent the body in a positive but authentic way. My stance, as a kinesiologist, coach, and researcher, is not to 'sugar coat' the processes of the body to make getting to your goal sound super easy and fast. My duty and vocation is to represent the body in the most authentic way and suggest how one might get the best out of theirs in the fastest way possible while still adhering to the principles that the body operates on. It's a pretty straightforward approach.

Just understand, when you participate in an exercise program (a name brand or from a local trainer), you are 'buying into' their take on fitness - their interpretation of the science of movement, function, and physiology. Make sure it is solid. I hope I can shed some light on how to do that. Be well, and thank you for being on this journey with me.



WHO IS MICHELE BOND AND WHY IS SHE MAD?

BODY BLASPHEMY

I am furious with some of the headlines I STILL read!! I am a credentialed kinesiologist with over 20 years of experience and have been and still am constantly battling the headlines of the quick fix or incomplete explanations about how the body works. I have stopped at nothing to exceed expectations and deliver information that is rooted in evidence-based science. When I attend lectures or read validated research about movement and exercise, most of that presented material is either grossly misrepresented or not even addressed at all by the commercial fitness arena. The general public is being duped when it comes to the foundational principles of human movement, adaptation, and energy systems of the body. I shake my head when I see fitness media misrepresent muscle function or press people to hurry up and get with it. For example, in a 'self-improvement' show on TV, I saw a man that was 120 lbs overweight, asked to jump up from muddy soil to ring a bell, come down to do a push up, and then repeat that

several times. I fell on the couch. I was disgusted. I felt shamed. This is body blasphemy and it must stop. And, it stops here, now, today, as I help people, one by one, to really truly understand and respect the principles that the body operates on. Thank you for being here. You are the seed of change and reason.

JOURNEY TO THIS POINT

The topics I am about to present, in my opinion, represent the 5 most misrepresented concepts in exercise and fitness. There are others, but these really are a priority for understanding how the body works in terms of movement and your exercise efforts. I started in the fitness business in 1999 with hopes of changing lives in an authentic, educated manner. No other way, no other agenda. As a certified personal trainer, I started at a small studio in Santa Monica, CA as a cardiovascular coach. I studied hard and acquired a professional mentoring team consisting of doctors, nutritionists, physical therapists, and academics that I still have to this day. I continued on



WHO IS MICHELE BOND AND WHY IS SHE MAD?

working for large upscale commercial health clubs and then eventually my own business. In that time, I was so hungry for knowledge. I then became a corrective exercise specialist by implementing movement assessments and applying biomechanical concepts to help people ease pain, move better, and achieve many physical goals. I then earned my masters degree in Kinesiology and established my expertise in connective tissue (fascia) with published research, presenting with the founding international fascia research team, and writing an inaugural chapter in a second edition fascia textbook.

[Click for more information.](#)

I stopped at nothing to be absolutely sure I was giving my clients the best information out there. This book is packed with information, and I want you to take advantage of everything I present to you. THIS is the time we take a stand and push back on the commercialization of the body. It no longer has a place. You deserve better!

TOPIC OVERVIEW

Let us now discuss the top 5 fitness fallacies.

WEIGHT LOSS: weight loss lies - yes, big lies and other misconceptions

THE TRUE "CORE": what it is and what it is not and how the research got picked apart to suit particular agendas

MUSCLE FUNCTION: what muscle actually does and how you can work it to get a better response and results

CARDIOVASCULAR WORKOUTS: what to practically strive for and how to make them safe, effective, AND enjoyable

THE STRETCHING DEBATE: what we are actually stretching and why you may not even need to be stretching at all



WEIGHT LOSS LIES

INTRODUCTION

I chose this topic as part of the 5 fitness fallacies because it ties in greatly to exercise efforts and the overall commercialism of the body that needs to be addressed. The concepts discussed here also affect the outcome of the other 4 topics that will be discussed.

ALL THE HYPE!! (sigh)

Example 1: Lose 28 lbs in 21 days and the same ad says “belly goes first”.

Example 2: "Speed heal your thyroid and lose 38 lbs by Christmas." This cover also says to supplement with a certain mineral and lose 1 lb a day without dieting AND 90% more belly fat.

Example 3: "Drop 15 lbs in 14 days."

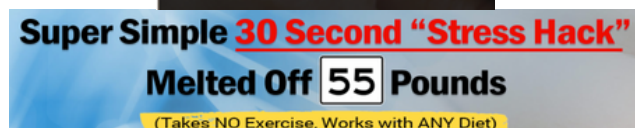
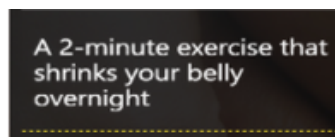
Example 4: "Diane lost 1.2 lbs the first day eating bread and ice cream."

Example 5: "Lose 20 pounds in 20 days without leaving the house."

Example 6: “This SIMPLE exercise will shrink your waistline, tighten your abs, strengthen your lower back, improve your posture, AND help you lose pounds of fat”....

Example 7: “2-minute exercise that shrinks your belly overnight”. This ad also says "Super Simple 30 second 'stress hack' melted off 55 pounds (takes no exercise, works with ANY diet)" (bottom photos)

Are you tired yet?! I am!!



WEIGHT LOSS LIES

THE BREAKDOWN

Ok, let's breakdown these examples and uncover the nonsense, hype, and unwarranted, dangerous suggestions.

Let's start with the most dangerous example - that of **rapid weight loss**.

Many of these examples are pushing for one pound a DAY or more weight loss. Let me be VERY clear - the medical recommendation is to aim to lose .5 to 1 lb a WEEK with 2 lbs being the most! When a headline reads (and I just saw this) "lose 21 pounds in 21 days", you need to really be asking, "21 pounds of WHAT!???" **What are you actually losing?!** You want to be losing the fat, but that is NOT the case when weight is lost like this.

When you lose weight this fast, you are losing mostly muscle mass and water. This is because 1 gram of glycogen (the main carbohydrate storage in the liver and muscle tissue) lost is attached to approximately 3 grams of water. So when that calorie restriction comes ("dieting" or some minimal plan), the body uses glycogen stores for energy and the water goes with it too. Here is the thing with muscle now. The only way you can preserve lean muscle tissue (where the fat burning mechanisms are that we will get to

shortly) would to be already involved in a solid, challenging weight training routine. If not, that lean muscle tissue, that helps burn fat, will be depleted and your metabolism is now in jeopardy. You are not losing much fat at all- which is the goal.

Other examples talking about **losing belly fat first** or some reference to a percentage more belly fat lost is absurd. There is NO way anyone can determine that. Losing belly fat is determined by many hormonal and various other body responses. You can't tell the body to burn fat in the belly area first. There are so many processes of the body that need to be taken into consideration and *respected*.

Then we have the "**eat anything you want**" claims, as in example #4 where the person lost 1.2 lbs the first day eating bread and ice cream as a part of their intake that day. HOW in the world can you even have a success dialogue by talking about bread and ice cream at a time like this!?!? When someone is overweight and most likely pre-diabetic if not type 2, why emphasize the so-called 'ease of this plan' by touting the use of bread and ice cream!? Everyone- We. Are. So. Over. This!!



WEIGHT LOSS LIES

I'm not saying you can't have treats at planned times, but this claim at this time in someone's health journey is just absurd and offensive quite frankly. This type of language is used to SELL magazines and to paint a picture of still being able "to do whatever you want". This is seriously NOT the best strategy. Eating whatever you want is not an option - it's more than looks. What about vascular health or disease prevention??

Then we have the "**limited or no exercise plan**" like the lose 20 pounds in 20 days without leaving the house example. Um, what does leaving the house have to do with anything!? It is suggestive that you do not have to go to a gym and perhaps suggesting getting exercise at home, which is great, but still this is way too much weight to lose in 20 days. But here's the thing - There is NO way possible, even if you exercised with weights hard starting at that point (which is dangerous for soft tissue and joints), that you could build up enough lean muscle mass in this short of time to offset the dangers of rapid weight loss. In fact, most promises of rapid weight loss **boast about not having to exercise at all!!** This is absolutely crazy!!! It simply is NOT how the body works. Losing that lean

muscle, as mentioned before, is a disaster for the body. The latest studies show that you will lose up to 30% of your lean muscle mass if you don't exercise while losing weight.

Then comes the "**quick fixes**" and "**simple tricks**". So ONE 'simple' exercise will shrink my waistline, tighten my abs, strengthen my back, improve my posture, AND AAANND help me lose pounds of fat!! Really - REALLY????!! Then everyone in the USA should be in great shape by now, yes?! This is so wrong on so many levels, and one being that the body is so anatomically and physiologically complex that one simple exercise can't do that. I am a kinesiologist with a solid reputation and credentials - can you see why I can't keep silent anymore? It hurts my mind and body when I read this. This is also an insult to you - YOU and your intelligence and worth by touting the simple way out, the easy way out, the no work way. This is just reinforcing harmful patterns in thought and action that damage the human psyche, spirit, and motivation. Period. It's a detriment and offense to our species. We need to stop disrespecting the body and deal with reality and truth. It's much better for all facets of our being - physically, emotionally, mentally, and spiritually.



WEIGHT LOSS LIES

Ok, one more. I'm spending a lot of time on this because the decades of these types of marketing messages in the weight loss industry have spilled into other sectors, such as the fitness industry, as you will see shortly.

Example #7 says "**2-minute exercise that shrinks your belly overnight**". Fat is fat! Two minutes is not going to address that- and certainly NOT overnight. This same example makes a claim of 'melting' off 55 lbs with no exercise and any diet. This is just simply a metabolic mess. Without exercise, there is NO stress to the muscle tissue and therefore you will lose lean muscle mass which in turn is what it takes to actually burn fat. Furthermore, it is so offensive to me that companies advocate for NOT having to move the body. Research studies show that it's not an increase in calories over the years that is making people overweight, but rather a large DECREASE in the amount of activity of people. We. Must. Move. More!!! Our bodies are designed to do this. And, if you are physically impaired, I encourage you to find a qualified professional to help you because the body is ready to accept, interpret, and produce an output to stimulus, as the body is always looking for a route to do all it can in whatever condition it is in.

WEIGHT (FAT!) LOSS SOLUTIONS

The breakdown of a fat molecule will be discussed more in the cardiovascular training section. For now, just understand that when a fat molecule is broken down, it is released as energy and carbon dioxide (when you breathe out). Other aspects of health such as nutrition, hormone balance, thyroid levels, and things of that nature play a role in fat loss but that is beyond the scope of this discussion.

WHAT you can you do TODAY?

Get your focus in order. Know the facts. Stop the misleading dialogue, like you are doing by reading this. Then, put that muscle tissue to work. Working muscle uses fat as fuel. Muscle tissue contains a structure (mitochondria) that transforms a fat molecule to be released as energy (fat burning). Weight training and aerobic activity increase lean muscle mass and optimize the fat burning process.

We will discuss muscle tissue and function in more depth shortly, but these are basic things you can do with exercise by understanding the role of muscle tissue in fat loss and preserving metabolic function.



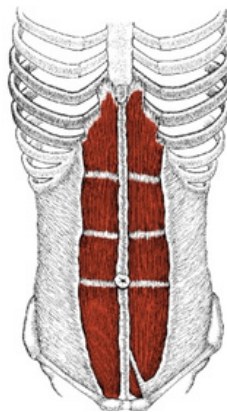
THE TRUE "CORE"

"GET A STRONG AND SEXY CORE"

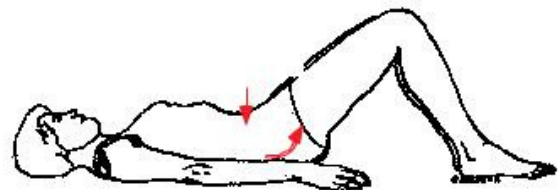
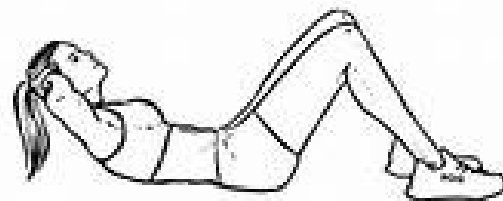
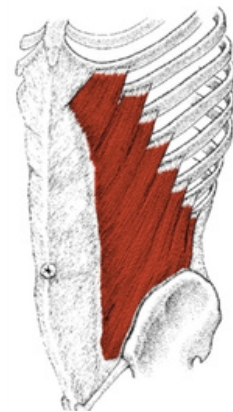
That claim is part of many advertising campaigns. While these words are catchy and possibly motivating, they do not illustrate what anyone should really be concentrating on for the best functional results. This "core" they are referring to is the rectus abdominus and maybe the obliques - all superficial muscles. These are not the muscles that are a part of the extremely important intrinsic function of the **true** inner core, that we will talk about in moment, but they are the MOST emphasized in advertising. They might look sexy, but they are not really structures of deep function to assist spinal stabilization (what you want) and proper development of **strength and endurance**. This is incomplete and misleading information. The rectus abdominus is only involved in two main motions - spinal flexion and extension. The middle picture shows the spine curving upwards from the top and the bottom picture shows the spine curving upwards from the bottom - all of which work the rectus abdominus with this spinal flexion motion as seen in a common exercise program. However, this muscle is a superficial muscle whose development should be *secondary* to sections of the

torso that better facilitate exercise and activities of daily living. Now that is not to say that this muscle is not important, but it does not have much of a place when discussing what I call the "true core".

Rectus Abdominis



External Obliques



THE TRUE "CORE"

THE TRUE CORE

Let's first take a look at what is referred to as the "inner core" or "inner unit" (Figure 1). This is simplified here but it gets the point across. The top of this sphere shaped unit includes the diaphragm (used in breathing-the first function of the core), the pelvic floor on the bottom, the transverse abdominus that wraps from the front to the back, and the multifidus (local muscles that stabilize the spine). These are the intrinsic, deep muscles that are working on your behalf to literally help perform every single movement you make. They stabilize and allow segmented movement of the spine as well as allow force transfer from your limbs bottom-up or top-down. This prepares the body for productive and safe movement. Then, we have the "outer core" or "outer unit" that involves various muscle chains that work together to produce coordinated movement as well as stabilize the body in certain circumstances. The photo shown here (Figure 2), represents 1 of 4 subsystems and is called the posterior oblique system that involves large muscles in the back of the body. Now, the exercises in most commercial core routines may include exercises that address the inner unit, but there is a lack of focus on developing their true

function as well as the *timing* of these deep muscles first. Training of this mechanism absolutely must precede the development of the superficial muscles like the rectus abdominus. This is not addressing the actual function of the body, but more for looks. Looks can only get you so far. So, this is why I am speaking out and providing education about this to you. In my programming with my clients, I teach them the most basic postures and exercises to make sure they can activate these deep, intrinsic inner unit muscles properly **FIRST** so they can **advance in strength and ability**. I call this the real mind-body connection – because you can't connect to things you don't even know you have or should be using!

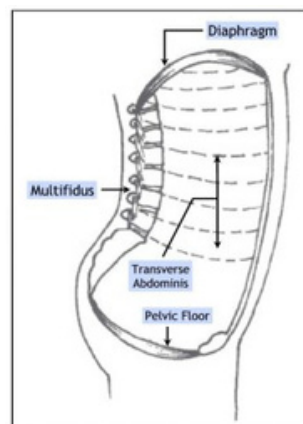


Figure 1



Figure 2

THE TRUE "CORE"

CORE REVOLUTION

In clinical studies, it was found that traditional ab crunches and ab blasting classes that focused on the rectus abdominus and external obliques, produced back pain and posture became less optimal. Those exercises should only be performed after inner unit activation and synchronization (the timing of muscle activation) have been mastered. The research that revealed this timing aspect of the inner unit was picked apart for strategic monetary gain by many commercial fitness entities. I'll explain. I am shown here with Dr. Paul Hodges, the world's leading back pain research expert who discovered that people with low back pain experienced slower activation of the inner unit muscles – their inner unit timing was off. In a study he conducted, EMG readings showed that the inner unit did not fire before arm movement instruction. This was groundbreaking research in 1999 and THIS is how the "core" discussion came about in fitness. The research was picked apart and then everyone said, "work your core to take away back pain" with no regard for the conditions of the study and what other causes there are for non-specific low back pain, let alone what muscles really

do what. Also, the exercises displayed in popular videos and magazines don't address foundational concepts revealed by the research. Sadly, the whole point of the study was missed as it was the components of and the timing of the inner unit that mattered most with low back pain and gaining strength. This inner unit ('core') should NEVER have been the poster child for endless ab exercises or fancy pieces of equipment. The sensation and sizzle of this was promoted instead of the therapeutic side until some professional agencies buckled down and developed the proper education and exercises to teach personal trainers.



Unfortunately, there is not enough of that population to really make a dent in society. Thus my reason for explaining this here,

and I have over 20 years of experience in programming this way for my clients. So, thank you Dr. Hodges - you deserve the credit – not celebrities showing off their 6 pack abs. You can't take ONE part of research and make a blanket statement or pick the parts you want to facilitate an agenda. It's not right. I am done with it, and I hope you are too.

MUSCLE MALICE

THREE MUSCLE FUNCTIONS

There are three main functions that muscle performs. ONE: A muscle can contract and relax. TWO: A muscle can move the joint it crosses. THREE: A muscle works best in the direction of its fibers. Let's take a look at some of the common misconceptions about muscle now.

MUSCLE (can do WHAT??!!)

Lift, Tone, Sculpt, Lengthen -

All words that you may have heard when an exercise program or product is promising results. Muscles can't 'DO' those words in the way they are depicted in these cases. I will explain how the commercial fitness industry arrived at those words in a moment, but in physiology discussions, those words are not used or have a completely different meaning. For example, "tone", in physiology, we talk about the *tone* of a muscle with regards to the input of signal from the nervous system to the muscle, not something that describes the "looks" of a muscle but rather a quality for function. Another word is "lengthen", and a muscle fiber can lengthen with a certain type of overload training, but the way this word is usually used in commercials is "get long and lean muscles" and they are on a mat

doing body weight leg exercises. You need way more stimulus to achieve this effect in the muscle tissue.

MUSCLE MISREPRESENTED

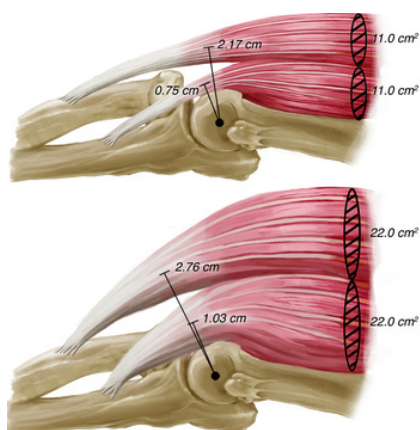
Now let's talk about functional aspects of muscle that get watered down and misrepresented. For example, the endless ads for lifting and sculpting the butt or glutes- (hip joint muscles). I've watched 100s of videos and classes and instructors rarely, if ever, talk about the fact that if you have tight hip flexors (which are the opposing muscle group) your chances of achieving your goal are fairly limited. This is because the signal (from your nervous system) is dampened to the muscle you are trying to fire. Not only will you not have the look you want, but you will not have the more important - optimal function. You can't affect the muscle group you want without addressing the health and function of the opposite muscle or muscle group. Furthermore, you can't sculpt a muscle the way you want it. You can reduce the fat around it and in it and you can work it to it's potential, but the origin and insertion points are set. After you reduce fat to a certain point, you will 'see' what you have and that's that. However, let's see what you CAN do!



MUSCLE MALICE

MUSCLE PHYSIOLOGY 101

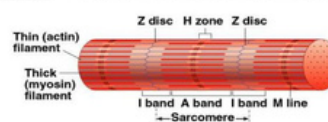
One thing that you can change in the muscle is the cross sectional area. It can increase under the correct load (see below). The bottom photo illustrates how the tendon cross section (and accompanying soft tissue through the muscle) has a larger measurement. This concept does allow for the quote “toned”, “sculpted” look. I know those words are nice to focus on when imagining a goal or to keep you motivated, but you need to understand what is *actually* happening in the body so that you can connect to it and focus on the things that will make a difference.



Another thing you can change in the muscle is the addition of contractile units, known as sarcomeres. These are represented by thick and thin lines (see photo to the side).

When you get involved in a progressive weight training regimen, and overload the muscle tissue just enough to signal that a change in the tissue needs to happen in order to adapt to a heavier load, you will increase the number of these units. That can cause an increase in cross sectional area that we just talked about.

Sarcomere - Contractile unit of a muscle fiber



It is important to get involved in a weight training program that progressively overloads the muscle. You can't lift the same weight or stay with the same routine forever. Progressive overload will assist greatly with fat loss to see the muscle and improve body function. However, corrective exercise is in order if there is pain in the body or there are postural issues. This is what I have been addressing with my clients for over 20 years to get them safe results that last.



CARDIOVASCULAR CONUNDRUM

BACKGROUND

Cardiovascular exercise is considered an activity (eg: walking, swimming) that elevates the heart rate to work the heart and lungs. When I mention this to new clients, many of them say, "I don't want to run" or something to the effect that they won't do hard core boot camp and things like that. There is NO rule that states that a person has to run or go to extremes to have it be considered cardio or to make it count! The American College of Sports Medicine and the CDC recommend, for health, that adults should perform 30 minutes of moderate intensity exercise on most days of the week. Cardiovascular endurance training should last upwards of 60 minutes 3 to 5 days a week. There are other benefits, such as fat loss, when exercise can be sustained in this manner. There are several ways that cardio is portrayed in society so let's review what is what.

HIGH INTENSITY INTERVAL TRAINING (HIIT)

This type of training involves exercising for a period of lower intensity followed by high intensity for a set amount of time (eg: 60 seconds) and then returning to the lower intensity.

This is repeated for a number of cycles. This is a great goal to strive for. Studies show that this type of training reduces body fat content and activates major hormones involved with fat metabolism. But, you have to stay in a certain lane, so to speak, and gain some foundational conditioning first because HIIT involves pushing your body fairly hard. There are other types of interval training that are incredibly beneficial, and I help people determine what type of cardiovascular training is best for them and progress from there. Cardio is pushed in a particular way in fitness, so be careful. Slow and steady to start wins the race. I remember one of my first cardiovascular clients in 1999 – she was afraid to sweat. I helped her mentally to develop trust in her body. It was slow, but the result was that she ended up really enjoying indoor cycling and outdoor walking and created a new, enjoyable and sustained activity and lifestyle.

I'M BORED

Another aspect of cardio, is that some people get very bored. All I can say is, start with doing something you like. So if treadmills and bikes are not for you, try dancing, walking (even if slower), sweeping, kicking or throwing a ball, just move. You are trying to keep an



CARDIOVASCULAR CONUNDRUM

even heart rate (steady state as opposed to interval) – that's it. If you HATE it all, watch TV on a treadmill or indoor bike. I dislike saying that, but I got several of my clients to adhere to and reap the rewards of exercise. Music and podcasts did not do the trick for them. Start somewhere, but at least understand the science behind it so that you are not disappointed with the results you get for the type of effort/activity you do. This leads into the next topic.

HOW MANY MINUTES?

This answer depends on your fitness level, joint health, and any medical conditions. As mentioned at the beginning of this section, different amounts of time yield different benefits. A beginner might start out with 20 minutes 4x a week and exercise at an intensity where they were slightly out of breath. A more conditioned person can do more, but I recommend no more than 45 minutes in a session so that other aspects of a fitness program can be adhered to (eg: weight training). All exercise is a stressor, so you want to not overdo it and have time to recover. However, different goals require different programming (eg: a marathon). The main idea behind

cardiovascular training is to encourage circulation, improve heart/lung capacity and function, and to reduce heart disease risk factors. In my professional opinion, it is best to be consistent, even if just 20 minutes 4 days a week, rather than 90 minutes every two or three weeks. The body needs input consistently to foster an environment that allows its amazing processes to take place. For more personal assistance, I am here to help. You will enjoy a custom training program based on evidence based research and a thorough evaluation.

THE 'FAT BURNING' ZONE

Is there one? To some extent, but there is an optimal exertion level for each person, individually, and not from the generalized chart that is shown on the treadmill or bike at the gym. Before I explain that, there are several types of fat in the body that do different things. But for now, we are going to talk about the fat that is primarily stored in designated fat storage cells called adipocytes. For the most part, adipocytes are located just under the skin throughout the body as well as in regions surrounding vital organs (for protection) called visceral fat. Exercise intensity has a great impact on fat breakdown – thus the



CARDIOVASCULAR CONUNDRUM

creation of the “fat burning zone”.

Maximal fat breakdown occurs at low to moderate intensity (between 25% and 60% of maximal oxygen consumption or what is known as VO₂max). And 60% of VO₂max being the most beneficial.

However, and this is BIG everyone!! - the fat burning zones on the machines at the gym are calculated by heart rate and that is very different than VO₂max. VO₂max is the highest rate that oxygen can be taken up and consumed by the body during intense exercise and can only be accurately calculated with sophisticated machinery in a lab. There are apps and formulas to estimate VO₂max, but that is just an estimate compared to the sophisticated lab equipment. The proper intensity is of vital importance as these fat molecules have to go through major hoops to make it to THE ONLY place that fat can be broken down and burned as fuel - the mitochondria - a special structure in the muscle cell. That's it!! If you do workouts above this threshold, the after effects of burning fat are higher during a recovery process that happens with higher intensity workouts. So the rest time can be more productive, but there are reasons to hold off on that until a solid aerobic base is built. In any case, the breakdown of this fat yields carbon dioxide, water and energy.

Bottom line -

You exhale out carbon dioxide - that is a part of the breakdown of fat. I discussed this in the weight loss section, and your optimal “fat burning zone” is going to depend on how well fatty acids make it to the muscle cell's mitochondria. So, what can you do now? Just start simple and build an aerobic base and endurance. That will be your best bet for the safest and most productive results. I offer a signature system for my clients to help prepare them to start, continue and succeed. **A note of caution** - since most cardiovascular work involves repetitive patterns, it is important to address orthopedic issues, postural misalignments and range of motion limitations before starting a program so that you are not repeating faulty movement patterns over and over. I also provide corrective exercise strategies for my clients to make sure these things do not become an issue. This is imperative for preventing injury and maximizing the body's potential. Remember, your output is ONLY as good as your input.



'STRETCHING' THE TRUTH

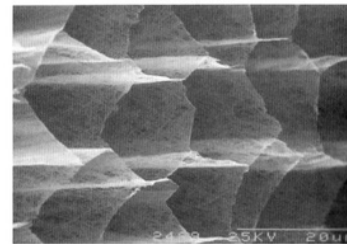
ALWAYS STRETCH EVERYTHING- NO!!

Stretch everything – every time you exercise or just because – NO. NO. and NO. Just understand that this topic could take many pages for the complete explanation, but I'm simply introducing this to you as a way to expose this topic. It is WAY overdue. For today's purpose, I will be referring to "static stretching" (holding a stretch for a designated amount of time). There are many more types of stretching. So, don't stretch everything all the time. WHY? You probably have been told to always stretch all the main muscles after every workout or in a separate routine to gain range of motion (ROM) and extensibility. No. This is why I assess people before assigning exercises and stretches. Exercise changes the body. Stretches ALSO change the body. You need to know WHY you are attempting to change the body. If someone has a ROM at a joint that is optimal, there is actually no reason to stretch particular muscles that cross that joint. The exception could be a very challenging workout and muscle soreness usually occurs as a result. The research on static stretching has been shown to reduce soreness and assist with return of optimal muscle force production.

WHAT ARE WE REALLY STRETCHING?

You are technically not stretching muscle tissue, per se. Muscle goes along for the ride. Remember it was mentioned that muscle tissue can only contract and relax? Well, **each** muscle fiber is contained in it's own compartment – endomysium... fine collagen fibers (see below). This was a MAJOR discovery back in 1994, but the research regarding **fascia**, a specialized connective tissue, was still getting underway. Now that the research has advanced considerably, we now have a better understanding of how the body functions and best practices need to be updated.

Electron micrograph showing fine collagen fibers (endomysial sheets-fascia) separating adjacent muscle fibers



Parfitt P, Trotter JL, 1994. The morphology and mechanical properties of endomysium in serially stretched muscles: variations with muscle length. J Muscle Res. Cell Motil 15, 299-304

THE STRETCHING DEBATE

A lot of research has ended the debate whether to static stretch before exercise or not. It was thought that static stretching before exercise would help reduce injury – research has proved otherwise – DON'T DO THIS!!! Unless it is at least 30 min. before

'STRETCHING' THE TRUTH

exercise or sport- otherwise you will REDUCE muscle force output and relax the connective tissue too much which may increase the chance of getting injured. A better warm up option might include dynamic movement (eg: easy walking) or foam rolling.

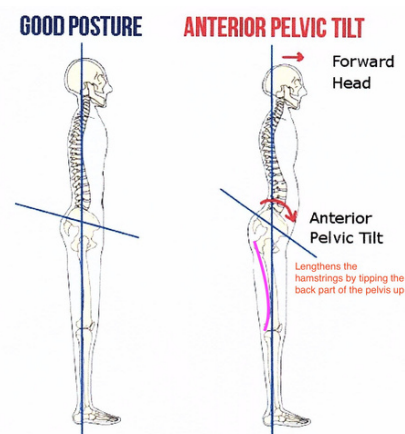
GAINING SYMMETRY

Another concept that is overlooked, but extremely vital to exercise and rehabilitation success, is gaining and maintaining symmetry in the body. You should not stretch the same for each side of the body if there is a discrepancy between the two sides. Take the hamstring stretch for example. If there is a difference between the range of motion of each leg, there may be a need to stretch one leg differently than the other- or one not at all. There are several methods of handling this situation based on the findings of a range of motion analysis. Gaining and maintaining symmetry – I'm not hearing about this as a major theme in mainstream fitness! It's so important! It is the FOUNDATION for balance in the body and optimal function.

I "FEEL" TIGHT

Another concept that also needs attention is when sometimes you THINK you have a tight muscle but in

fact it is a skeletal misalignment that needs to be addressed. In the case of the hamstrings again, if the pelvis is tilted too much to the front, (photo) you should NOT be stretching the hamstrings at all!! They are already lengthened and a correction in how the pelvis is oriented is needed FIRST. Then, once that is corrected, a program can proceed on the continuum for optimal flexibility and strength. There are several other concepts about stretching that are beyond the scope of this book, but just understand it's certainly a topic commercial fitness has not addressed, and that is my purpose for bringing these concepts about how the body truly works to your attention. Bottom line – if you are going to stretch -know WHY you are - what is your goal?? When someone works with me, that is what we get to the bottom of after evaluating posture and movement.



FASCIA - THE GAME CHANGER

The top of this page starts this conversation. I can say with an enormous amount of passion, mainstream fitness better watch out with any incorrect messages about this~ but I'm already seeing it. As a researcher in this field and ambassador for the truth, I'm coming out of the gate to announce that "there better be NO sensationalism with fascia research and application to human movement and therapy".

Remember I mentioned fascia at the beginning of this book? Fascia is the soft tissue component of the connective tissue system that surrounds and penetrates every muscle, organ, nerve, cell, and area in the body. The research about fascia is OFF THE CHARTS and gaining exponential momentum with insight on how this specialized connective tissue behaves in the body. It is way more than a packaging for muscles and organs. Fascia research reveals that it has signaling mechanisms, updates mechanical principles of the body, and it can be accessed through movement to adapt for better posture, movement and strength. This is a GAME changer – hands down – for me as an exercise professional. This is why I have dedicated myself, since 2011, to

studying this tissue and applying these principles to my clients' programs.

I declare that THIS is indeed the NEW paradigm for exercise and mobility. The health of this tissue, and really system, directly affects any and every other health and fitness goal you have. I'd like to offer you the opportunity to dive into this a bit more and find out what it holds for your success for exercise results and improving activities of daily living. My mission is to make sure this specialized connective tissue – fascia – that effects your posture, muscle function, and ultimately your fitness and weight loss goals, is saved from getting it's research picked apart and sensationalized. I can't let this happen to the information brought to us by some of the greatest researchers of our time. I am urging you to join me on this mission as we use this information correctly and benefit from the suggested exercises and practices. For those of you that are in the field or just want some academic knowledge, visit my [fascia Facebook page](#). For updates about my programs for fascia and exercise, you can subscribe on my [website](#).



CONCLUDING REMARKS

I hope you have found this information to be thought provoking, useful, and motivating. My desire is to help you get a 'can-do' attitude with a body you can depend on.

While I do believe there are wonderful professionals and companies promoting best practices, it's not enough of a drive to reach the masses. It's time to bring a different conversation about exercise and fitness to the forefront. I look forward to the day when the conversation among people is "hey, I've improved my squat pattern", or "my hamstring symmetry is coming along".

I know that sounds different, but it's the reality from my lens. I focus on what gets results for people not just functionally, but also internally as I watch people have many "ah-ha" moments in understanding how their body actually works and then applying that knowledge to everyday life.

These are things that serve people time and time again when they have to evaluate what is best for them at any given moment. I have witnessed this countless times with my clients. The idea that you can understand what you can do and when for your body is very empowering.

Thank you for your attention. If you would like information about how I can assist you with THE most personal and precise program for your body, please contact me at michele@michelebond.com

Connecting you,

Michele

