

An analysis of the article entitled: “At the core of a new movement – Pilates is popular, but it requires concentration”

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In light of the fact that obesity rates are rising in the United States, people need to be given the proper tools to combat this epidemic. We need to offer effective methods based on the facts (not on commercial interests), and then provide the opportunity to employ them in a practical and time-efficient manner. It all boils down to quality, calorie-consuming exercise coupled with sensible nutritional habits for long-term benefits.

While reading this article I cringed not once, but a number of times. What came to mind were misguided individuals who failed to understand basic exercise fundamentals and the reality of fat loss. I am not a genius, but any fitness professional with even a tincture of common sense should find the article misleading and replete with confusing buzzwords, half-truths, and sub-standard exercise recommendations. Another example of why Americans are inundated with inappropriate exercise recommendations from well-meaning, but misinformed individuals in the fitness industry.

I have a lot of issues with this piece and have highlighted them as follows: My comments to the “quoted” sections are in bulleted boldface:

“Workouts are based on the teachings of Joseph Pilates and focuses attention on strengthening the core posture muscles and deep breathing.”

- **Pilates is core posture muscles and breathing only. What are the specific “core” muscles for posture? Name them.**
- **Explain the deep-breathing focus. What does this do? Please offer physiological details, or at least a general goal of this.**

“Exercises in workouts based on the fundamental principles of Pilates, which are centering, control, breathing, fluid movement, form, concentration.”

- **From this, Pilates now incorporates more than just core posture and deep-breathing. Is it some type of relaxation technique due to the emphasis on "centering" and "control?"**
- **What are “centering” and “control”? Please explain.**

Continued...“if you do the workouts about three times a week for an hour each time, your waistline will probably be trimmer because there is a lot of abdominal work.”

- **This implies that doing abdominal work reduces body fat. Spot reduction is impossible, and we’ve know that for years.**
- **An hour per workout 3 times per week focusing on core/posture muscles? This amount of time is unnecessary. One can address those muscles in much less time if exercised properly.**

- **An hour (or less) devoted to higher-calorie burning activities (e.g., circuit training) and addressing the “core” with basic strength training exercises would be more productive.**
- **Regarding “...waistline will “probably be trimmer,” what about mentioning calorie intake relative to energy expenditure? To decrease body fat, a calorie deficit must be created. The addition of high-calorie burning exercise (which Pilates is not) will also improve one's chance of getting a "trimmer waistline." This will allow one to take the "probably" out of that sentence.**

“Pilates also focuses on the muscles around your joints – especially the hips and shoulders, where you work to refine smaller muscles in those areas”

- **Are the shoulders now considered part of the “core?” Where do you draw the line for the “core” muscles?**
- **What specific joints and muscles are targeted in Pilates? List them. Show me how one needs a Pilates routine to address them as compared to conventional exercises such as barbell and dumbbell squats, lunges, leg presses, RDL’s, hamstring curls, hip abduction/adduction, glute/hamstring raises, and other low back and trunk flexion/rotational (abdominal) exercises. All of these exercises increase joint strength and stability, augment flexibility and can be a part of a program that burns more calories than a Pilates session.**

“It balances the muscle system so that no one muscle group is stronger than the other. You prevent injury because there is nothing pulling adversely on the skeletal frame because of muscular imbalance”.

- **A balance of joint strength and stability (push/pull or agonist/antagonist) is also the goal of a properly-designed strength training program (and has been for years).**
- **Please explain the "pulling adversely on the skeletal frame." What exactly does this mean?**
- **Working joint flexion and extension, adduction and abduction, inward rotation and outward rotation or whatever the case, contributes to joint stability and balanced strength. Again, this can be accomplished using conventional strength training exercises that activate more muscle through a variety of safe ranges of motions.**

“The workouts should help you do many more activities with more energy and efficiency – playing golf, running, cycling, walking, or sitting at your desk.”

- **How is Pilates specific to those aforementioned activities? Motor learning principles clearly state that no transfer occurs between dissimilar activities. EXACT replication or movement practice (specificity of motor skill work) is needed for positive results to occur.**
- **More energy? How does Pilates enhance energy system overload to develop more energy? Involving larger muscles (i.e., hips and legs...running or on-your-feet exercises) is more demanding on the body. This uses more "energy" and can better create a cardiovascular overload that ultimately leads to better conditioning, and therefore one having "more energy."**
- **Bottom line: how is golf, cycling or even pole vaulting (this would fall into the "many more activities" category) improved via Pilates? Explain the specific mechanism for adaptation from Pilates to these different activities.**

“Pilates creates an immense amount of body awareness, which is beneficial whether you’re sitting at your desk all day or you’re a serious athlete.”

- **Explain “body awareness.” Awareness in terms of standing, sitting, moving a specific way? How does this occur”? Explain the mechanism for adaptation to a higher level of body awareness.**
- **How does this help a “serious athlete” aside from their training that addresses sport-skill work, strategy, strength training, conditioning and attention to proper nutritional intake? GIVE ME SPECIFIC DETAILS PROVEN THROUGH REPUTIBLE RESEARCH ON HOW PILATES IMPROVES THE BODY AWARENESS OF A SERIOUS ATHLETE?**

“Pilates increases your flexibility because there is an equal emphasis on strength and flexibility. By rebalancing the muscles around the joints, you increase your range of motion.”

- **Regularly-performed flexibility exercises -- coupled with a comprehensive strength training program – also increases flexibility.**
- **How do you “rebalance” muscles? Explain the physiological mechanism of "rebalancing," aside from maximizing joint range of motion via conventional flexibility and strength training exercises. What does Pilates possess that the conventional way fails to offer? This is more mainstream verbiage with no science to support it.**

“It’s exactly what tight people who are tighter should be doing because it will help elongate their muscles.”

- **This one really irks me. Simply flexing and extending any joint to its fullest extent will “elongate” the muscle(s) acting at that joint. Any more “elongation” will require surgical intervention to alter muscle and/or tendon insertions and origins. YOU CANNOT MAKE A MUSCLE ANY LONGER THAN IT ALREADY IS!**
- **Conventional static-stretching exercises will also help “tight” people within the confines of their inherent skeletal structure. Time spent static-stretching can help maximize one's flexibility.**

“Doing movements incorporating Pilates principles will give you a supple, youthful spine and long, lean muscles.”

- **First of all, what exactly is a supple, youthful spine? Is this referring to a reasonable level of flexibility in the spine? This can be attained through other conventional strength and flexibility methods. I see this as implying that a 55 year-old woman can magically attain a 25 year-old spine just by performing Pilates exercises. Very misleading.**
- **Regarding “and long, lean muscles,” again, flexing and extending any joint to its fullest extent will “elongate” the muscle(s) acting at that joint. You cannot make a muscle any longer than that! And what about body type? Taller, longer-limbed humans (e.g., ectomorphs) have longer limbs and longer muscles as compared to shorter-limbed humans (e.g., mesomorphs) who have naturally larger muscle bellies.**
- **“Lean muscles”? Are they implying fat can be extracted at a particular spot adjacent on a muscle being lengthened during a Pilates exercise? Leanness (body fat reduction) comes from a calorie deficit and increased energy expenditure. And remember, one cannot spot reduce fat from particular areas of the body.**
- **Regarding calorie expenditure, how effective is a Pilates session relative to calorie burning for those seeking "long, lean muscles?" Is the time spent doing a Pilates session an efficient means of burning body fat? I looked it up: for a 150 pound person, 30 minutes of Pilates uses approximately 125 calories as compared to 153 when walking for 30 minutes at 3 miles per hour. Running at 12 minute/mile pace burns approximately 288 calories over 30 minutes. Do the math: get off your Pilates mat and start moving if you want to improve your chances of losing body fat.**

"Movement without form can lead to muscle imbalance and injury."

- **Without question, poor form can create a situation where injuries are possible when performing ANY exercise. Thus, using proper form is paramount for any activity. However, explain how muscle imbalance occurs without "form"? Does this mean only working one side of the joint (e.g., flexion) and ignoring the opposite side (extension)? This point needs further clarification because it is confusing.**

"The biggest mistake would be to approach these workouts without being patient, consistent and present."

- **Patience and consistency are understandable, but present? Of course one has to be "present" -- or show up -- for any workout if any benefits are possible. Why even mention this obvious point?**

"Subtle changes in position and alignment will completely alter the level of challenge and results."

- **I can understand that proper body position and posture is required for the proper execution of any exercise (and to optimize the level of challenge), but to say it will *completely* alter the results is confusing. If one is misaligned by one-half inch or 2 inches -- or if a specific muscle contracts out of sequence – are absolutely no benefits attainable? A specific example of an exercise done with a subtle change in position and alignment would help to clarify this point. I find it hard to believe that a *complete* alteration of results would occur.**

"There are a thousand ways to do one single movement, and we're looking for the best way to make the muscles and bones work harmoniously."

- **Are you kidding me? A *thousand* ways to do one single movement? If Pilates requires that type of precision, it should be a one-on-one training endeavor so the instructor can supervise every aspect of the movement/exercise (with a micrometer) to assure proper form and avoid the other 999 possibilities. Otherwise, the person will "throw away their movements," which was stated (whatever that means).**
- **Where it is stated "muscles and *bones* work harmoniously," last time I checked it was muscle contraction that moves bones because bones cannot move by themselves. Therefore, stating "muscles working harmoniously" makes more sense, but even this needs more clarification as to what the point is.**

"If you are doing an exercise without activating the correct muscles, you could injure yourself or end up not getting the results you want – a great toned body."

- **Be patient with me on this one. Doing any exercise activates the muscles involved with the performance of that exercise. That is, doing an abdominal crunch where there is trunk flexion -- then a return to the starting position (trunk extension) -- the rectus abdominus is activated regardless of the rep cadence or device is used. Provided one curls up to complete trunk flexion (fully engaging the rectus abdominus) -- then returns to the starting position -- it activates the muscles involved with that action. That point stated, it is unclear as to what *exactly* they mean by this other than suggesting to use proper exercise form/technique to maximize results and safeguard against harmful forces that could cause an injury.**
- **It is implied that Pilates gives you a "great toned body" provided one activates the correct muscles. I wish it were that simple. Obviously, one's God-given (and unalterable) body type,**

energy expenditure, exercise habits and nutritional intake play a HUGE factor in obtaining a “toned” body as opposed to simply using Pilates techniques.

- **Speaking on the subject of “tone,” it is mainly a marketing term with little scientific merit. The reality is, one cannot tone his/her body. One can alter his/her body composition in terms of fat and muscle composition to enhance muscle visibility (and get toned?). But to suggest that simply doing Pilates 3 times per week for one hour will give one a “great toned body” – not considering body type, energy expenditure, exercise regimen and nutritional habits – is totally misleading.**

Reviews of several popular Pilates DVDs:

“...emphasizes the tiny subtleties that make Pilates unique – breath, mindfulness, core focus.”

- **Weight loss is a matter of “breath, mindfulness and core focus” – are you kidding me?**
- **Breath? I assume this means an emphasis on breathing (an important factor in human longevity). But again, what exactly can be done to improve the natural act of breathing?**
- **Mindfulness? What does this mean, how is it addressed and, ultimately, what benefits are accrued?**
- **Core focus? So, Pilates IS for the “core” only. Again, I ask: what exact body parts/segments define the “core?” As previously mentioned, one program included shoulder work in the program and even total body. Joseph Pilates based his program on “strengthening the core posture muscles and deep breathing.” More nonsense, more confusion.**
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“Each 10-minute section targets a specific area: buns/thighs, arms/shoulders, abs and total body, plus stretch.”

- **Again, I am confused about what constitutes the “core” since Pilates supposedly is based on core and breathing. This DVD also addresses the arms, shoulders and total body, so please explain this.**

“The movement variety keeps you motivated while it sculpts your muscles in diverse ways.”

- **Similar to the ubiquitous use of “tone,” the term “sculpt” is also ridiculous. Explain how one can “sculpt” muscles? An artist can take clay and sculpt into various shapes and designs, but to think one can “take a bit of muscle off here, or add a small chunk of muscle there” is beyond inane.**
- **This “sculpting” thing has gone way too far. They make it seem like anyone can pick out a specific muscle group and alter its configuration simply doing a Pilates movement or series of routines. If it were that easy, I’d be a wealthy man.**
- **Fact: muscle can either get smaller (atrophy), stay the same size, or get larger (hypertrophy). Those are the only possibilities. If you want to look “toned” or “sculpted,” get your butt in the weight room and strength train to grow muscle, or at least keep it there if the goal is to restrict calorie intake. If you’re over-fat, start eating better and engage in more effective calorie-burning workouts.**
- **Muscle can be stimulated to grow larger if properly overloaded via high-tension strength training exercises. The extent of growth is dependent upon gender, inherent muscle belly size, nutritional intake and exercise effort.**

To sum up...

1. Pilates may serve a purpose in strengthening abdominal, lumbar and associated muscle groups, but it is a poor choice for those attempting to maximally burn body fat. Spot reduction is impossible and Pilates itself is not an efficient means of burning calories.
2. One does not have to spend one hour, three days per week addressing “core” muscles. Time would be better spent doing total body strength training (including abs and low-back) and/or some high-calorie burning exercise (e.g., running or cardio-machine intervals, circuit training).
3. Back off on the ridiculous buzzwords such as “core,” “tone,” “sculpt,” “long/lean muscles,” “elongate,” “supple/youthful spine,” “rebalancing,” “mindfulness,” “centering,” and “control and refine smaller muscles.” I know it helps sell programs and DVDs, but don’t flat-out lie or feed needy American with irrelevant and confusing verbiage.
4. Body fat is ultimately reduced by a calorie deficit: more calories burned than consumed, all other factors being equal. Exercise recommendations should address maximal calorie burning and muscle preservation or growth which forces the body to tap into existing fat stores. Good combinations: interval training and strength training, circuit training and strength training, and circuit strength training by itself.