

# the **CrossFit** JOURNAL ARTICLES

## Silly Bullshit

Mark Rippetoe

I have been accused of being an asshole on more than one occasion. This is probably due to the fact that I am an asshole, and compounded by the additional fact that I speak my mind rather too easily. I tell you this to provide context for the following remarks, some of which may cause less cynical people to take exception. But here we go.

There is a lot of advice, information, and well understood knowledge regarding the field in which I practice—strength training and fitness—that is just silly bullshit. Plain old “SB” (to keep from baiting the censors too temptingly). And it comes from numerous sources: chief among them are medical professionals who think that they are also exercise professionals, muscle magazines published specifically for the purpose of perpetuating it, home exercise and weight loss advertisers, Internet fitness sites, the academic exercise people, and the mainstream media, who are the mindless pawns of the others.

### Doctors et al.

Let’s start with medical professionals who practice more than merely medicine. Doctors who treat exercise as a subset of orthopedics or cardiology are more common than those who regard it as a separate discipline that merits *actual study*. These folks are sufficiently arrogant about the vast scope of their knowledge that they probably will offer to fix your television if you mention that it broke while you’re at their office for your tendinitis.

Here’s an example of exercise advice from a doctor who doesn’t understand a few key points. From the

website of Gabe Mirkin, M.D., we receive the following wisdom: *“Exercise does not make you stronger. If it did, marathon runners would have the largest muscles of all athletes.”* (This reflects the common conception in the medical community that long slow distance equals exercise.) *“The single stimulus to make muscles larger and stronger is to stretch them while they contract.”* (Since this is obviously impossible, I assume he means an eccentric phase.) *“When you try to lift a heavy weight, your muscles stretch before the weight starts to move.”* (Yep, he means eccentric.) *“The greater the stretch, the greater the damage to the muscle fibers and when they heal after a few days, the greater the gain in strength. The results for this study give a clear message. You become stronger by lifting heavier weights, not by exercising more.”*

Fascinating. His last sentence is correct, but if I am correctly interpreting his poorly informed comments—and I believe I am—he apparently thinks that no one gets stronger without an eccentric phase included in their chosen exercise. Power snatches, power cleans, and throwing heavy things cannot make you strong. Yet look at this from another article on strength for cycling: *“Competitive cyclists gain tremendous leg muscle strength just by climbing steep hills very fast, which exerts as much force on their leg muscles as weightlifting and makes them very strong.”*

The man doesn’t understand that riding a bike completely lacks an eccentric component, but he claims that you can still get strong by climbing hills. And here is a repeated theme: *“All athletic training is done by stressing your muscles with a hard workout, taking easy workouts until the soreness disappears, and then taking another hard workout.”* The notion that training while sore is detrimental appears

1 of 6

## Silly Bullshit (continued...)

in many articles on his website, and reflects a lack of understanding of how advanced athletes train and adapt to their training.

This is typical of the level of understanding that physicians bring to the weight room. The recommendation to wait until soreness is gone to train again indicates a complete lack of practical experience with weight training, experience that would teach the necessity of training while sore for virtually every athlete who wants to improve. And the failure to understand the difference between eccentric and concentric types of contractions is understandable in a lay person, but not for a doctor with a fitness website.

And isn't it fascinating that your pediatrician will always advise you to prevent your child from lifting weights, an activity that in any incarnation is far safer than most other things kids can do, but will never, ever advise against soccer—the most dangerous sport in the world. (Go ahead, Dr. Sultemeier, look it up. I dare you.)

We have doctors to thank for lots of SB. The advice to always ask a doctor before you (yes, you) start any exercise program is rather self-serving, considering the fact that they are the ones billing for the office visit, and the silliness of insisting that a healthy 35-year-old get a checkup before he starts to lift weights makes one suspicious of the actual purpose. As mentioned earlier, the medical community is famous for equating exercise with running, walking, cycling, and other such monostructural aerobic-pathway activities that are measured by the time spent engaging in them. The pamphlet rack in the waiting room is typically stuffed completely full of references to “20 minutes of exercise a day, 5 days a week,” as if the only way to quantify a stress that leads to an adaptation is with your Polar RS 800 fancy watch/heart rate monitor.

Tommy Suggs, my old lifting friend, once said, “If I had to choose between looking like a marathon runner or having a heart attack, I'd take the heart attack.” How running 26.2 miles at one time ever got to be associated

with a Good Thing just beats the absolute hell out of me. Yet it is held up to everybody as the sine qua non of physical accomplishment. Why, the very term “sports medicine” actually means “treatment of running-induced overuse injuries.” Long slow distance training—or LSD, as it has come to be called—is not only a poor way to lose bodyfat and gain cardiovascular fitness; it may be the single best way (especially when combined with the FDA's dietary recommendations) to lose muscle mass ever devised, and it has never made anyone stronger (as even Dr. Mirkin knows). Yet the vast majority of exercise advice from the medical community involves LSD of one type or another: the old traditional workhorse of the LSD world, jogging, its even more ineffective little brother, walking, or their still less effective but more fun and better-looking cousin, cycling. All these activities

can be measured in minutes, which makes them easy to prescribe but also renders the prescription virtually meaningless, as it completely ignores the intensity at which the exercise is done. The “S” is usually overemphasized by people doing LSD.

This little tidbit is one of the problems with most advice from medical types. Their idea of exercise is so conservative that it fails to produce enough stress to force an adaptation. LSD is not sufficiently consumptive

of oxygen and substrate to cause an actual improvement in aerobic capacity; people get better at moving their feet and pumping and oxygenating blood, but only within the limited context of the easy, infinitely repeatable, short range of motion, low-force non-stress provided by an activity like walking or jogging a 15-minute mile. An actual improvement in  $VO_2$  max is stimulated only by an effort intense enough to depress  $O_2$  saturation, and that requires more stress than CYA exercise prescriptions are willing to advise. And their model of strength training is funny. The American College of Sports Medicine recommends—for all who consider themselves apparently healthy and adult—eight to ten exercises using a minimum of one set (but maybe as many as three if you are *really serious*) of eight to twelve repetitions (ten to fifteen if you are frail, in which case

---

*It is incumbent on you, yes You, to educate yourself to a sufficient extent that you are in a position to evaluate information issued from a position of authority. You are supposed to be able to recognize silly bullshit when you hear it.*

---

## Silly Bullshit (continued...)

you apparently need more endurance work and less strength so that you can continue to effectively maintain your frail status) to the point of volitional fatigue, two to three days per week in a slow and controlled manner through a “full range of motion.” In other words, the ACSM wants you to do Nautilus training. But not too hard. And never, ever hold your breath, lest you join the pile of corpses on the floor of my gym that performed the Valsalva maneuver during a heavy set of five squats.

This overly conservative approach to strength training is derived from the version—the only version—of “exercise” that is taught in medical and physical therapy school: rehabilitation. The training of doctors, physical therapists, and athletic trainers requires no formal education in strength training, especially not the effective, barbell kind of strength training used by athletes who are serious about improving their performance. They are taught a method for getting sick and injured people back to “normal parameters,” not how to take a healthy athlete from baseline to elite athletics, or even how to make a healthy non-athlete fitter and stronger. Their unwillingness to recognize the difference is the problem they don’t know they’ve got.

### Pop fitness magazines

On the other hand, the folks who publish muscle magazines ought to know better when it comes to legitimate information about strength and conditioning. And they actually do, since significant numbers of them used to be athletes or bodybuilders. They just don’t care. (Or, more likely, care more about the quantity in their wallets than the quality in their pages.) Over the past four decades, the fitness media has developed (I won’t say *evolved*) from some fairly informative monthly publications (Peary Rader’s *Iron Man*, Joe Weider’s *Muscle*, Bob Hoffman’s *Strength and Health*) and a handful of newsletters to a landslide of monthly misinformation primarily intended to sell supplements and other advertising. The July 2007 issue of *Flex* is 56 percent ad copy (179 of 320 pages), and one of the articles is six pages about whey protein. The other articles are all the same, the photography is all the same, and the emphasis is on appearance, not performance.

Muscle and fitness magazines are also largely responsible for giving women who desperately need to build some muscle mass the only excuse they’ll ever need to remain flabby: the certain knowledge that if they lift weights they’ll get “big, bulky muscles,” just like Ronnie Coleman

and me. They are terribly careless when they prominently feature pictures of female physique competitors who are all too apparently willing to do enough steroids to grow huge muscles without a disclaimer to that effect. The overwhelming majority of the female population is not capable of building huge, masculine muscles, or noses, chins, ears, hands, veins, feet, beards, eyebrows, and all the other little details that separate the boys from the girls. Pictures of females who have taken this rather drastic step in a rather atypical direction should not be viewed by impressionable housewives trying to decide whether to start a weight training program. It’s bad for membership sales, and I have to think it can’t be terribly good for supplement sales either. Yet the publishers seem to be oblivious to the fact that they have created an objection to be overcome every time an uninformed woman comes into a place that offers more than Pilates, yoga, and treadmills.

And muscle magazines are at least partly to blame for an epidemic of SB concerning teenage boys and young men. A recent trend has developed amongst these little snots that makes it very difficult to put any muscular bodyweight on them: they all seem to think they have to have visible abs, even if it means staying at a bodyweight of 135 pounds. They all want a “six-pack” despite the fact that they don’t have an ice chest to put it in. They won’t eat breakfast, they eat some type of fast food goo for lunch, and if they eat supper it’s because Mom made them. This is intentional, and is their version of “dieting” to keep that trim, fit look.

Now don’t misunderstand my concern here: I know that we live in a society largely dominated by fat slobs. Maybe not where you live, but where I live this is true, and I suspect that the vast majority of the United States suffers this unintended result of our economic prosperity. So any drift in the opposite direction is cool, right? Look, when high school and college-age kids come to me and ask how to put on muscle and I take the time to tell them and then they won’t do it because they’re afraid they’ll lose their Washboard Abs, it pisses me off to waste my time with people who ask and then won’t listen to what I *know* will work for what they *claim* to be trying to do, and, well, it just gets *aggravating*, you know? And it’s all because they actually think that 1) if they have abs they’ll look like Ronnie Coleman and me, 2) chicks really dig a six-pack, and 3) what does Rip know anyway?

Well, Rip knows that a 135-pound, 5’ 9”, 18-year-old kid doesn’t look like either Ronnie or Rip, even if he has

## Silly Bullshit (continued...)

a twelve-pack, and that if he seriously wants to head in that direction the first thing to do is to gain about 60 pounds. Ole Rip also knows that women don't really care about abs. They care about Other Things. And after all, you asked Rip; he didn't ask you. So put down your *Muscle and Fiction*, do your squats, drink your milk, and pay better attention to the answers when you ask the questions.

### Advertisers

Next on the agenda are infomercials: the symptom of a healthy economy and a failing public education system, and the primary purveyor of SB in the modern world. This very second, a 30-minute TV program is in progress that is predicated on the assumption that you are stupid. Depending on which one you watch, you will be told that sitting in a little rotating chair will give you six-pack abs, that juicing all your vegetables will give you six-pack abs, that jumping rope/dancing to very specific types of music/pretending to kickbox/turbojamming (all of which feature things called "moves") will give you six-pack abs. You might be encouraged to buy an Ab Roller, Ab Lounger, Ab Belt, Ab Energizer, AbTronic, Ab Rocker, Ab Doer, Ab Force, Ab Swing, Ab Rocket, Ab Flex, Ab Dolly, Ab Away Pro, Ab Lifter Plus, Abrageous, FastAbs, HipHop Abs, or 6-Second Abs by the promise that they will give you six-pack abs. The iGallop really looks like fun—like riding a horse!—and will give you six-pack abs. You might even own a ThighMaster, bought many years ago (Still available today! Call now!) because they promised that it would give you six-pack abs.

Yes, there is a definite pattern here. Cheesy appeals to everyone's desire for the chiseled midsection—which really comes only from hard work, eating correctly, and, in some cases, genetic predisposition—shamelessly offer results to people not willing to pay anything more than money for them. It is always easy, it is always fast, and for some reason it is always abs. Even Chuck Norris's Total Gym gizmo, which claims to be better than free weights, dwells on abs, although, in fairness, not quite as much as everything else does.

These devices always promise to take fat off of your belly. Apparently *just* your belly. Spot reduction—the idea that somehow fat soaks out of your adipose tissue and straight into the muscles you're working right now, or the equally weird idea that fat is loosened in a specific place by some device or a certain aspect of an exercise, travels straight to the kidneys, and is then "flushed out,"

despite the fact that no one's ever seen any floating in the place it supposedly gets flushed into—is as integral to weight-loss popular culture as Richard Simmons. Spot reduction is really stupid, but I'd be surprised if 95 percent of the population doesn't accept it as fact, because they want to believe so very badly. It's like you were about Santa Claus when you were nine.

And that's just the stuff that promises miracles with some special kind of "exercise." There are pills on the market that cut right to the chase: lose fat with no work at all. None. Cortislim, Zantrex-3, Leptoprin, Propolene, Relacore, Tetraxene, and lots and lots of other products promise effort-free weight loss with various blends of stimulant herbs. It is astonishingly apparent that if there were any pill, any medication, available anywhere that actually worked, there would be only about three fat people in North America. Because aside from those three people who keep showing up on Oprah encouraging us to accept them, everybody else wants to be fit and slim, and a pill fits what they're willing to do to get there just about perfectly.

### The Internet

Internet "fitness" sites, of course, are not exempt from this tirade. Here is an excerpt from one of my favorite websites, [www.womensportsnutrition.com](http://www.womensportsnutrition.com) :

*The skin is the largest organ in and around your body. The skin makes up approximately 80-90% of your body weight and personality. Your skin has trillions of cells which are being replaced every second by the millions. This replacement enables you to keep your youthful look and prevent the aging process. Each cell is made up of memory, intelligence, and energy governed by the nutritional chemistry of DNA and RNA. This, along with hemoglobin, the nutritional part of your blood that makes skin glow, makes up the chemistry that keeps your original, youthful design and separate male and female personality features and characteristics.*

Now, I am not clever enough to make up this particularly high grade of SB. It is the work of one Donna F. Smith, C.C.N., C.N. If you happen to live in the greater Wichita Falls area, you could visit her sometime for a Clinical and Sports Nutrition Comprehensive Analysis (CSNCA), \$195, a Comprehensive Health Appraisal (HAC), \$45, or a Deferred Re-Evaluation Analysis (DRA), a bargain at only \$250. What do you suppose somebody who

## Silly Bullshit (continued...)

thinks the skin makes up 90 percent of your body weight will tell you about nutrition? (Of course, she says that the skin makes up 90 percent of your personality too, so social interaction with her may be awkward.) The traditional medical community, whose authority “Dr.” Smith desperately wants to invoke, has no stranglehold on the supply of SB.

### Mainstream Media

If the mainstream media are good at anything it is the mindless dissemination of hearsay and innuendo. The hairdos of the networks, hairdo-wannabes that work for the TV stations at the local level, the journalism majors who write for the smaller newspapers, and the grown-up journalism majors who write for the big newspapers and wire services are prominent, prolific sources of SB. These people regularly mangle information from everyone else’s specialty too, so we strength and fitness folks need not feel singled out. (The enormity of this topic is beyond the scope of this humble venue, but we’ll discuss it over beer sometime soon, just you and me.)

Few of the news reports on recently published scientific studies preserve much of the detail of the actual paper, certainly not enough to sort through the generalization errors made by the newsreader hired for his rugged good looks reading gibberish that attempts to summarize a twelve-page paper in four sentences for a lay audience. What starts out as “Peak Power, Ground Reaction Forces, and Velocity During the Squat Exercise Performed at Different Loads” becomes “A recent study finds that exercises with heavier weights should be done at slower speeds. The findings, by Dr. Attila Zink of the University of Miami, Coral Gables, reported this week, determine that the heavier a weight being lifted is, the slower it will move, and the lighter a weight is, the faster it can move.” Or, possibly, “A recent study has determined that full squats are bad for your knees.” And if you think the news report is SB, you should read the paper: a classic case of garbage in/SB out.

### Academics

Which brings up another good point: the academic exercise community cannot seem to understand that poorly designed studies, such as the one above, are not helpful, and in fact add to the general level of SB that gets accepted as Truth. The study cited above, for example, was designed to measure the effects of “squats” on vertical jump performance when done in immediate proximity to the test. The squats they tested were “half squats” and “quarter squats.” First, I have no problem with using partial squats in a testing protocol if that’s what these guys want to do, but they don’t even quantify the movements; they just say that they are “demonstrated in Figures 1 and 2, respectively.” Figure 1 shows a kid with his knees and hips at somewhere between 95 and 105 degrees, and Figure 2 shows the kid with his knees and hips just barely unlocked; no depth markers, no angles measured, no anything measured, just pictures. This, my friends, is not science. It is guesswork. It might be useful for other scientists to able

to reproduce this experiment in case the findings turned out to be unusual, controversial, or otherwise important (they didn’t), but without actual standards for the tests used, this would be impossible (even if they did). And, second, and most incredibly, they *actually tested a half squat and quarter squat one-rep max!* I am overwhelmed by the silliness of such a thing. Anybody who has ever trained with weights, who has ever done squats, and who has ever had any personal experience with heavy weights on their back

whatsoever knows that you can quarter-squat just about whatever you can load on the bar, because a quarter squat is whatever you want it to be. Five degrees of angle might be worth another 50 pounds, so it matters how deep your quarter squats and half squats are done. It therefore really doesn’t matter what the conclusion of the study was; it is SB by definition.

Sadly, this is the quality of a vast amount of the exercise science literature. A high percentage of the published studies have a glaring methodology flaw that renders

---

*Cheesy appeals to everyone’s desire for the chiseled midsection—which really comes only from hard work, eating correctly, and, in some cases, genetic predisposition—shamelessly offer results to people not willing to pay anything more than money for them.*

---

## Silly Bullshit (continued...)

the results meaningless, or at least suspect. And the reason is that the folks doing the research lack sufficient personal experience with the subject being investigated to understand that they are generating SB. Quarter squats may look good on paper, but unless you have personally taken pride in telling your buddies that you squatted 750—when in reality you quarter-squatted 750 and can only actually squat 395—you don't really have a handle on why your study is SB.

Recently the fad in exercise is “core stability,” which apparently is obtained by rolling around on inflated rubber balls and doing very light asymmetrical exercises from a position of unbalance. It sounds scientific, it looks complicated, and it would never have occurred to you, so it must be valuable, right? No. It is classic SB. A heavy overhead squat produces core stability. So does a heavy back squat, especially if you remain stable while you do it. I don't care how hard it is to stay on a wobble board for 30 minutes; it doesn't accomplish anything either quantifiable or significant outside the context of injury rehab, and any type of squats work better. And if you haven't ever done heavy squats, you lack the experience to understand why this is true. Many academics and most physical therapists haven't.

\*\*\*

What is it that drives the dissemination of silly bullshit? The drive comes from commercial interest (obviously) and ego (amazing!). Donna Smith could use the money; so can I, so I appreciate this motivation. The magazine people want you to keep buying them, and to buy from their advertisers, and if they make sure to hire writers that have “CSCS” beside their names, they have covered their asses. The fine folks who bring you HipHop Abs, the Ab Roller, and CortiSlim are counting on the fact that you will probably fail to do your homework. On the other hand, Dr. Mirkin probably isn't in a jam for the cash, so he just likes the idea of being a Fitness Expert in addition to a doctor (and, for all I know, maybe a very good one in his actual field of specialty). The orthopod who tells you that full squats are bad for the knees and they'll stunt your growth, and that you need to just do lighter weights and use higher reps because “they do the same thing,” doesn't expect you to pay him for this advice; he's throwing it in for free. He knows he's qualified because after all he is a doctor. The exercise science people have qualified themselves. And the media don't care who's qualified; they just need a story to fill 45 seconds.

The problem is complex, and the solution is simple. It is incumbent on you, yes You, to educate yourself to a sufficient extent that you are in a position to evaluate information issued from a position of authority. You are supposed to be able to recognize silly bullshit when you hear it. And I'm sorry if it's hard to have to think all the time, but the consequences of placing your responsibility to do so in the hands of others can result in a closet full of Thigh Masters, which will make it necessary to find somewhere else to hang your shirts—like on your Bowflex.



Mark Rippetoe is the owner of [Wichita Falls Athletic Club/CrossFit Wichita Falls](#). He has 28 years experience in the fitness industry and 10 years as a competitive powerlifter. He has been certified as an NSCA Certified Strength and Conditioning Specialist since 1985 and is a USA Weightlifting Level III Coach and Senior Coach, as well as a USA Track and Field Level I Coach. He is co-author, with Lon Kilgore, of the books [Starting Strength: Basic Barbell Training](#) and [Practical Programming for Strength Training](#), and has published a collection of his essays titled [Strong Enough?](#)