

# Starting Strength

## The Blind Lead the Willing

by

Mark Rippetoe

When I first started in the fitness business in 1978, I worked at the Spa International and Nautilus Training center in Parker Square. I had been fooling around in the old weight room at Midwestern for a while, I decided that I needed a more full-time job than the weekend DJ gig, and I was every bit as qualified as anybody working there at the time. More so perhaps, I thought, because I was beginning to think logically about the things a 21-year-old kid is capable of thinking logically about due to my science background (we science majors liked to think this was as important to everybody else as it was to us). But really, nobody gave much of a shit about this except me because this was essentially a sales job, just like it is now. I could run the exercise floor any way I wanted to as long as membership sales were where they needed to be. The industry then as now was about sales, and very early on I had begun to confuse it with strength coaching. My job was to sell memberships and to show the new members what to do, in that order.

The club was open six days a week, Tuesday/Thursday/Saturday being the “men’s” days, MWF for the ladies, as well as Tuesday and Thursday mornings till noon. It was a co-ed club in the sense that men and women were members, but at that time it was felt that women would not exercise if men were present to watch, or “gawk” as men will do, so we segregated the membership this way. Remember: this industry is about sales – always has been and always will be – so this policy reflected the current thinking of the sales guys at the time. Times change and attitudes about modesty, social interaction, and the best places to get laid change, and the sales guys change with them, and the effectiveness of the policy with respect to the exercise itself was not then and will never be a factor in the decisions made in the fitness industry. The perception of the effectiveness of the exercise paradigm is shaped by the folks with whom the consuming public comes in contact with most frequently in that context, and three days per week for the guys was enough to train because that’s what we told them, and we were the experts. Ladies need more days, of course, since their exercise could not be as strenuous and relied primarily on stretching and moving around a little in a class-type setting, blah blah blah. But really, the club had more women than men as members, so the women’s membership was given more options for using the club. This segregated model also saved the club money when it was built, since separate locker, restroom, and wet area facilities were unnecessary.

We had a helluva jacuzzi, a fun place to be after hours with a major dance bar just down the sidewalk. In fact, those of you that have seen “The Last Picture Show” have seen it featured in the movie. I shall save the stories for when you buy me the beer.

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We had two separate exercise floors: one was equipped with older selectorized machines, a squat rack, a bench press, a bunch of dumbbells, a few flat benches, a couple of those machines that had a vibrating belt attached to them that you could put around your waist and make the fat vibrate off but which were actually pretty good back massagers, and me. The other exercise floor was the Nautilus room, equipped with what were at the time the most advanced, state-of-the-art exercise machines in existence, and Shaddrack Brown, a large, simple individual with 19" arms. Shaddrack and I would of course work in each other's areas, depending on whom I had sold a membership to that day and what I had told them, and what Shaddrack's "trainees" expected to do based on what the other sales guys had told them. Shaddrack was not a salesman, and he was seldom found in the offices up front, but if the manager sold a contract, or on rare occasions one of the sales gals sold a membership, Shaddrack usually got the member for the program set-up. The rest of his time was spent brutalizing the established members on the Nautilus equipment. Shaddrack could make these guys launch lunch anytime he wanted to, and – then just as now – there were lots of people who thought that vomit was the primary indicator of effective exercise.

As a complete off-the-wall aside, here's a funny story about Shaddrack, which I can tell now because I have not seen him in 25 years and he probably won't kill me. We were having a staff meeting one night, and Elaine, one of the sales gals, brought her little walking-mop dog to the club. Shih Tzu or Llasa Apso or some such hairy little bug-eyed dog, but sweet. We were in the office for about 30 minutes when Bob the manager said, "Where is Shaddrack? He's supposed to be here." I said I'd go find him, and I walked around the club until I got to the Nautilus room. We had a massage table in the corner of that room that we used for everything but massage, and Shaddrack was standing on the table, leaning into the corner, visibly disturbed, with the dog sitting on the floor looking at him. I said, "Shaddrack, what in the HELL are you doing up on the table? Are you actually afraid of this sweet little puppy?" Shaddrack said, "I...I...you...you don't know if that dog bites, d-do you?" I picked up the dog and took her back to Elaine, and then I had to come back and get Shaddrack off the table after promising him the dog was in the car. Dogs are funny creatures, no?

I tended to stay in the room with the more conventional barbell equipment. I knew how to teach the members how to use the standard twelve-station Nautilus circuit, because it only takes about ten minutes to learn. But I preferred the barbell equipment because I liked the fact that there was an aspect of technique involved that I could coach, and I preferred the absence of vomit. I have never enjoyed the smell, and I am personally averse to retching – as of this writing it has been sixteen years since I have puked, and I assure you that this is not a function of a lack of training intensity or having not had the flu. In 1994 it was associated with Cuervo 1800, a type of tequila apparently made from gasoline. Puking associated with exercise is a learned behavior, I'm convinced. Shaddrack taught it, I did not. My advice to you is to unlearn it now.

The adoption of Arthur Jones' Nautilus equipment by the industry in the mid-70s was an important step in the process of the growth of the fitness industry in several different ways. I have written before about the obvious logistical problems solved by an exercise method that can be learned easily enough in ten minutes that anyone with fingers dexterous enough to set a pin in a plate stack can function as an employee. But it has only recently occurred to me that 35 years of exposure to machine-based exercise has also changed the assumptions about exercise made by those whose job it is to provide guidelines for its effectiveness.

If you are going to practice exercise prescription as a profession, you are going to have to function within the context of the commercial fitness industry because that's where the equipment is

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located. Unless you get really really serious and build your own gym at a considerable expense – and therefore at considerable risk to yourself financially – you are going to be training in a facility owned by someone or something else. This usually means a privately-owned or corporate facility modeled after the standard industry paradigm, because that's what makes money. The members of this club will have signed a contract for 12-24 months of membership that represents paper worth between \$300 to \$600, which will usually then be sold to a finance company for 70-80% of the face value and collected by this third party. The members' value to the club after this event is primarily as a source of referrals for more members, which they will be regularly asked to provide. Or you could get a job in a rehab facility, which relies primarily on third-party (insurance) payment, in which case the atmosphere will be different. But the equipment will be the same.

The floor of this facility will be 50-60% “cardio” equipment such as treadmills, elliptical trainers, and step machines designed to allow the members to watch TV while performing long slow distance endurance exercise in an indoor (and thus sellable) environment. The rest of the exercise area will be devoted to machines costing between \$3000 and \$10,000 apiece, each allowing the performance of (with few exceptions) one exercise. The theory here has always been that if you have enough of these machines you have the capacity to provide the member with a “complete workout”, because all of the muscles in the body will eventually get exercised if you use enough machines. This of course ignores the nature of human movement, and this is our problem: we know why the industry functions this way, but why has the academic exercise community taken the side of the industry in this rather obvious willful ignorance of the realities of the nature of adaptation to loaded human movement?

It is because they have to. They have no real choice in the matter, given the fact that their academic production and their graduates are necessarily dependent on a place and a context in which to be useful. Of the tens of thousands of health clubs, commercial gyms, rehab facilities that sell memberships, “wellness” centers, community rec centers, on-site industrial fitness centers, hotel/resort facilities, and anywhere else there is for a kid with an exercise or PE degree to work, much more than 95% of them are based on the standard industry model of 55% cardio 45% machines. Any degree program that claims to prepare the student for more than just a graduate program in the same discipline must be commercially relevant, and this is defined by the terminal application of the material. So it is hardly surprising that machine-based isolation exercise is what you learn in school, what you're tested on in school, what you are certified in by the NSCA/ACSM/AFAA/IDEA/ACE/ETC., and therefore what you think you know to be correct.

(In fairness, most of these clubs have some barbells lying around, and a place to do chins. These are there to satisfy the small percentage of the membership that insists on their presence, but a casual glance around the room at 6pm reveals that they do not amount to a significant portion of the club's business. The only reason for the accommodation is the fact that the equipment is cheap to buy and maintain, takes up little room, and keeps the muscleheads quiet after they join. And you have to keep a few of these guys around to make the club look legit to the “prospect.”)

But there are several other conclusions that follow logically from the realization that 35 years of industry considerations have shaped their own explanation for why machine-based isolation movement is the preferred way to exercise. The interest in “exercise science” as an academic choice is driven by one's exposure to exercise, and the vast majority of the time this will have occurred in a standard industry-model facility. Without an exposure to barbell training, a young person entering into the field does so in the absence of any real exposure to this training paradigm. This in itself limits exposure to more effective training methods, since the professors, the graduate students, and the undergrads are

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all in the same boat, having all come from the same limited background of exposure to the standard industry model – the industry changed in the mid-70s, and the pros are approximately my age. So this 35 years of fitness industry momentum has been codified in the ACSM recommendations to do 8-10 exercises using 4-5 sets of 8-12 reps at moderate intensity, a typical machine-based training protocol no effective barbell program ever uses. This formalized set of guidelines has been adopted so enthusiastically that quite often exercise “research” is limited to protocols that conform to these guidelines, further assuring the academic exercise community of the safety and effectiveness of this paradigm, and the consideration of the merits of no other.

And now that we have formally established a training paradigm that is inherently incapable of producing enough systemic stress to drive a significant adaptation, we have two or three generations of exercise professionals who are unaware that a different outcome is possible, and who have therefore done no effective research on these other, more-effective methods and their possible mechanisms of action. And since the vast majority of the exercise profession and the exercising population have grown up in an environment where nobody makes any significant progress, odd things ensue.

They are unaware of the “novice effect” since none of their trainees has been stressed enough to adapt rapidly, so that it becomes a point of academic rigor to insist that it cannot occur. The taper at the end of the novice progression is never reached, and no effective training methods are therefore developed to deal with it. Conversely, the recognition by some coaches and academics that advanced athletes had to come from somewhere prompts the insistence that if you want to be an advanced athlete you have to do an advanced, periodized program, despite the fact that it does not apply to novice athletes who are capable of adapting much more quickly than the adaptation rate provided by advanced programs. This is a direct result of the fact that most coaches have never seen rapid progress and never observed the effects of correctly-designed novice programs because their standard industry training protocols are incapable of producing it. If you have never observed normal novice progress on a barbell training program, you cannot know how to produce it. Furthermore, you will never design a study to investigate these effects because you don't know they exist. As a result, it is impossible to put together an “evidence-based” barbell training program due to the absence of anybody willing to ask the questions that need to be answered. As a result of this, barbell training for the foreseeable future will remain in the hands of a few practitioners working in a few facilities outside the standard industry model, who will be criticized by the academic/industry conventional wisdomers for their obviously non-scientific and therefore clearly ineffective approach to exercise.

Even more perversity has arisen: barbell training is now understood by the academic community to be Dangerous, and this conclusion is confirmed by a short discussion with any Physical Therapist, all of whom are also experts on exercise prescription and strength training. This assumption further reinforces the machine-exercise paradigm through back-engineering a safety objection to what is really a safer and more effective protocol. If barbell presses destroy your shoulders, if full squats blow out your knees, if deadlifts wreck your back, and if the Olympic lifts are so advanced that only competitive lifters can possibly hope to do them at all – much less safely – then the ugly legacy of Arthur Jones is cemented in place from the top and the bottom. If machine-based isolation exercise is safe and effective and barbell training is dangerous and inaccessible, well, my friend, there you have it.

There is hope. The rapid growth of CrossFit and other iterations of intense “old-school” training that have recently become popular – places with bars, bumper plates, kettlebells, climbing ropes, rings, and an atmosphere of sweat and work – have provided thousands more gyms equipped with the potential to conduct effective barbell training. These gyms were not there five years ago, and

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they may be the way out of the mess that has been made of the fitness industry in the past 35 years, and the subsequent mess that has been made out of exercise science in an attempt to justify, legitimize, collaborate with, and facilitate its own academic production.

Shaddrack went out of town for a month on vacation – to Maine, of all the places on Earth to go – and some of his guys asked me to train them while he was gone. I showed them how to squat, bench, and deadlift. I had only been doing this for short while myself at that time, and even with my then-undeveloped ability as a coach all the guys, every one of them, gained weight in that month, having not put on a single pound in as much as two years on his Nautilus circuit. I'm just sayin'...

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