

A Truth about Training: What Every Athlete Should Know

By Fred Hahn

I have an athletic "axe to grind."

But before I grind it, let me say that almost all of the "trainers" (this includes strength and conditioning coaches, physical therapists, athletic and personal trainers) I have met (and I've met many) are sincere, thoughtful and want what is best for their athletes. It's a tough job and our efforts often go unsung.

Having said that, innocent ignorance of improper training techniques runs rampant in the field of training and rehabilitation. Often it is not the fault of the trainer that dangerous or useless practices are used. Trainers often devoutly, yet blindly follow their mentors, coaches, equipment company reps, etc., who often misinform and misdirect the trainer away from scientific "boring in-the-box-thinking" (as they often like to label science) and instead towards Romper Roomish-circus-like training antics. This frequently results in none of the benefits hoped for and often in dire physical consequences — sometimes a minor, sit-out-the-game injury, sometimes the end of a flourishing career.

If a lay person overheard me say to an injured athlete "Hey, I know how to get you better and back to the game real fast. Let's go to the gym and do the same type of movements that injured you on the court in the first place. But this time, let's add weights to your injured limb!" they'd think I was insane. Yet everyday, many trainers and therapists (not all) subject athletes to these types of "rehabilitative" and "re-conditioning" techniques and modalities.

To quote expert Dr. Richard Schmidt, author of *Motor Learning and Performance: From Principle to Practice*:

"A common misconception is that fundamental abilities can be trained through various drills and other activities—For example, athletes are often given various 'quickenings' exercises, with the hope that these exercises would train some fundamental ability to be quick, allowing quicker response in their particular sport. There are two correct ways to think of these principles.

First, there is no general ability to be quick, to balance, or to use vision—Second, even if there were such general abilities, these are, by definition, genetic and not subject to modification through practice—A learner may acquire additional skill at the drill—but this learning does *not* transfer to the main skill of interest."

Given that motor learning/skill training is usually part of any well-rounded training curriculum, why do so many trainers violate these principles? And remember — we don't get to vote or have an opinion on motor learning principles. While the opinions of certain experts are often loud enough to squelch the voice of science, the truth remains — *science delivers the goods*.

Many athletes, especially at the professional level, rely upon their "natural" abilities. But sometimes this is not enough to perform at a top level. Many look towards the trainer for ways to improve. Training modalities like agility drills, plyometrics, balance training, etc., violate motor learning principles. And though they violate motor learning principles, they do produce some physical benefits. Their use will result in some degree of increased muscular strength. This increased strength will transfer to their sport bettering the athlete's speed or agility. However, attempting to increase muscular strength via these drills is about the most dangerous and inefficient way to go about it. But the trainer doesn't realize that increased muscular strength should get the credit; the trainer simply attributes the athlete's improvement to the drills themselves.

Things aren't always what they appear to be.

Another reason for such "academic forgetfulness" is the lure of the athletic products industry. There are dozens of catalogues, tradeshow, etc. devoted to devices and techniques which claim to produce dramatic enhancements to the athlete's skills. Their bait can be extremely enticing especially when the trainer can look like a hero if he or she can improve the athletes' lagging skills. Unfortunately, most of these doodads and techniques cannot deliver their promised results. They are about as effective at enhancing someone's sports skills as cellulite cream is at melting thigh fat away.

The female athlete is especially at risk from such training tactics as many women have joint angles that are ill designed to absorb impact especially in the hip region. Female athletes especially should avoid these practices at all costs. When a coach or trainer says "Hey, let's do some plyometrics!" just say no thank you.

Often these practices when used in rehabilitation slow the healing process to a crawl. Had the athlete avoided these practices e.g., balance training, proprioceptive neuromuscular facilitation, stability training, etc. and instead used proper strengthening techniques, she could have mended herself back into game shape far sooner and have been that much stronger to boot. I speak from experience in rehabilitating hundreds of people without all these supposedly necessary rehab techniques.

So here is my battle-axe: Shame on those companies who trick us into believing their hype and pseudo-science and shame on us for believing them. Weighted baseballs? Can you say "torn rotator cuff?" Plyometrics? Can you say "Bye-bye ACL?" Shame on those trainers who *knowingly* continue such practices in the face of what science shows us to be true and a "high-five" to those who get this message and quit wasting the athlete's time.



My axe is now ground.

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