# A Michael Boyle StrengthCoach.com Reader

## Part One: Coaching Theory

## Part Two: Training & Olympic Lifting

## Part One
## Coaching Theory

### *My Road to the Top*

It must be New Year's resolutions and goal-setting time because I've recently received plenty of email and Facebook messages asking how I got started as a strength and conditioning coach. I thought I'd use this opportunity to tell a story that might inspire a few readers.

I've been lifting weights since 1973. Like many kids at that time, I started in my basement with the York 110-pound set and a wall chart. My father was a teacher, a high school coach and was a Hall of Fame football player in college, and I was going to be just like him.

To cut to the chase, my football career was ended by two serious problems that afflict far too many athletes. The combination of lack of size and lack of talent were two things I couldn't overcome in sports. It's tough being too small and low on talent.

What I learned in the self-improvement process was that I had some fast-twitch muscle fiber and I liked lifting weights. Lifting kept me sane after giving up football. I pursued athletic training in college, and in true *Outliers* fashion, I was lucky enough to have a dorm director named Mike Woicek for my first two years of college. Mike is the current Dallas Cowboys strength and conditioning coach, and the man with the most Super Bowl rings in NFL history. What luck!

Another guy at Springfield College at that time was Rusty Jones, current Chicago Bears strength and conditioning coach. Very early on I had great mentors and role models.

After five years I left Springfield College with a Masters degree in Athletic Training, actually called Athletic Injury Management, and took my first job at Boston University as an assistant athletic trainer. I was paid $13,500 a year, and took home about $200 a week after taxes.

In the back of my mind, I knew I wanted to be a strength and conditioning coach, although very few schools had full-time strength and conditioning coaches at the time. It was 1982, and I was about 185 pounds soaking wet. I didn't look like a strength coach then and I still don't.

After six months of athletic training work at Boston University, I took the plunge—I quit my paid full time job as an athletic trainer and became the volunteer strength coach. I gave up a salary and benefits for a volunteer job, and started my journey. I tended bar four or five nights a week to pay the bills and threw myself into the work.

I was a former football player and a competitive powerlifter, but I became a hockey expert at the urging of the hockey coaches at BU. For those who don't know, BU is to college hockey what Notre Dame or USC is to college football. I figured hockey out and also discovered there wasn't anyone in Boston training professional hockey players.

I had found my niche.

I met a hockey agent and talked him into sending me a few minor league clients, but no NHL guys. I needed desperate athletes who would listen to a football guy tell them how to make it to the NHL. I also started training some high school hockey players because I needed the money.

That may have been the smartest thing I ever did.

Some of my new minor league clients made it to the NHL, and the Boston Bruins offered me a part-time

job as their strength and conditioning coach. With a little money from BU and some from the Bruins, I gave up the bar business and was now a full time strength and conditioning coach with two jobs.

I worked from 8:30 to 11:30 AM with the Bruins, and then drove to BU and opened the weight room at noon. I coached at BU every day from noon until 7:00 PM, with some 6:00 AM football training thrown in during the winter before the Bruins practices. I'd then either go to a BU game or go back to the old Boston Garden at 7:00 PM and train the injured players or those who didn't dress for the game. After the game I'd try to coerce a few players to work out, and eventually I'd get home about 11:00 PM. Not a bad day for an eight-month season.

At the roughly the same time, I began my speaking career by accepting invitations to speak at everything but the opening of an envelope. Most of my 'speaking engagements' were to middle school hockey players in groups of 10-12, an audience that foreshadowed things to come. Chris Poirier and Perform Better gave me a break when they began their Perform Better clinics, where I was one of the first speakers and, like any good job, I never left.

I worked at BU and for the Bruins for 10 seasons. At the same time, I found the opportunity to open Mike Boyle Strength and Conditioning, one of the first for-profit strength and conditioning businesses in the world. As Alwyn Cosgrove and Jason Ferrugia so aptly describe in their article *The Business,* I was becoming an overnight success one 12-hour day at a time.

The rest was simple: I kept doing what I was doing.

I worked in my business. I put in my 10,000 hours. I coached athletes and I coached coaches. I think the big key is that I took chances and was willing to work long hours. It wasn't easy. Except for my brief six-month athletic training job at BU, I didn't have a full time job with health insurance until I was 30 years old.

I read this quote in a book the other day—

*Most people give up right before the big break comes.*

Don't be that person. Keep moving forward. Remember, the big break might be right around the corner.

## *My Top Coaching Influences*

A blog reader recently posted this question and it got me thinking: *Who were my top coaching influences?*

I put a little thought into this and came up with a list. Initially this was going to be a Top Ten, but the more I thought, the more the list expanded—with apologies to those I left out. I've been very lucky to have met so many great coaches.

**Arthur Boyle**

My dad was a high school phys ed teacher, who also coached football and basketball. He went on to be a high school principal. I never saw him coach when I was old enough to get it, but I learned a lot. He won what amounted to state titles in the 1960s in basketball, even though he was a college football player—it was called the Tech Tourney then.

My father showed me that coaches could coach any sport. It didn't matter what sport they coached or what sport they played. I think this helped when I began to coach hockey players at BU. I also learned that some of my father's most loyal fans were former managers who kept score books and ran errands. My dad innately knew how to treat everyone with respect.

I also learned racial tolerance. My father coached lots of young African American kids in the 60s and loved it. I didn't even know what prejudice was until I was much older. My dad was a Vince Lombardi-era guy who often echoed the old adage, "It's not whether you win or lose, but how you play the game."

My dad believed that, as do I.

**Mike Woicek**

Mike Woicek is an NFL legend. He has the most Super Bowl rings in NFL history—six, three with Dallas and three with New England—actually more than any player. In 1978 and 1979, he was the resident director in my dorm at Springfield College. For two years I sat in his room, listened to oldies, drank a few beers and worked my way through a box of *Strength and Health* and *Ironman* magazines. Mike introduced me to plyometrics, and the old *Soviet Sport Review,* the predecessor of the *Yessis Journals.*

Mike was my mentor during my early years at BU and was probably the single greatest influence on me as a strength coach. Mike was so far ahead of his time in

the late 70s. As a former track thrower, his perspective on sports training was progressive.

**Bruce Buckbee**

Most everyone who reads this will wonder, "Who is Bruce Buckbee?" Again in the wide world of luck and serendipity, Bruce came to Springfield College for grad school at the same time as Mike Woicek and was my instructor for a course called Weight Training.

Prior to Bruce's arrival, Weight Training was a simple and boring class. Bruce, however, had come from University of Hawaii, where he trained with the legendary Bill Starr. How about using Bill Starr's *Strong Shall Survive* and being taught by a guy who had been taught by Bill himself?

We learned the Big Three—squat, bench press and power clean—from the book that coined the term. I was at Springfield College learning from a guy who had just finished training with a legend. At the same time I was chasing two other future legends around like up-and-comers are doing now.

**Rusty Jones**

The third part of the Springfield connection is another NFL legend. Although Rusty doesn't have Mike's rings, he has had more teams in SuperBowls than anyone, second only to Mike. Rusty was a graduate assistant football coach at the time and a nutritional pioneer in the 80s. Rusty and Mike are the two longest tenured guys in the NFL.

Wonder why the word *lucky* keeps coming up?

**Jack Parker**

My fourth influence is not a strength coach; he's Jack Parker. Jack is the winningest coach in NCAA history at a single institution with over 800 wins at Boston University. Yes, it's the same school again. Coach Parker has been the head coach for 37 years.

Next to my father, I don't think there's anyone in the world I respect as much as Coach Parker. I've had the pleasure of being part of about 500 or 600 of his wins, as well as two National Championships, and have learned so much along the way.

I learned about coaching, fairness, and about grace under pressure. I've been able to be in a locker room after National Championships wins, National Championships losses, and devastating player injuries. You learn valuable lessons in all these situations.

**Vern Gambetta and Don Chu**

Vern and Don fit together to me because they were the guys I wanted to be when I first attended NSCA conferences in the 1980s. Both men came from track backgrounds and were instrumental in changing the field of strength and conditioning. I can remember watching them lecture and thinking to myself, 'Imagine if I could ever captivate a room the way they did.'

I read everything they wrote and bought every VHS tape they made. I idolized them. I wanted to be them. I hope today when I speak, I do them justice.

**Gary Gray**

I don't know if anyone has had as significant of an impact on my mind as Gary in the last 20 years. Although I don't agree with everything he says or does, there's no mistaking the effect he's had. In the early 1990s, Vern Gambetta told me I had to go to a Gary Gray Chain Reaction conference. I went to Phoenix and came away a changed man. I entered the room a meathead powerlifter and left a functional training guy.

When Gary began to explain the concepts of function, my entire world was transformed. It all made sense. These days I think the concept has gone too far, but that doesn't change the things I learned at that first Chain Reaction seminar.

**Johnnie Parker**

I met Johnnie when he was the Strength and Conditioning Coach for the New England Patriots. Johnnie was the consummate coach and the consummate professional. When I lecture, I see myself emulating Don Chu and Vern Gambetta. When I see myself as a coach, I see a guy who wanted to be Johnnie Parker.

Johnnie is confident, yet humble. He believes in the basics, but is always learning and progressing. The most important thing to Johnnie was coaching. He coached from morning to night and pretty much stayed out of the limelight. Being in Massachusetts, I took advantage of his generosity and visited him in Foxboro. With Johnnie, it was about getting players better and keeping players healthy.

Everywhere Johnnie Parker coached, teams went to SuperBowls and guys became Johnnie's guys. There is no better testament to your ability than the loyalty of your players.

**Al Vermeil**

Al might be my favorite person in the strength and conditioning field. I always say I want to be Al when I grow up. I don't know anyone in our field who is more enthusiastic about learning than Al. He's the kid in the candy store.

I brought Al in to do a seminar for my coaches a few years ago. The night before the seminar I brought him to the facility to observe our coaches and athletes. After about 30 minutes, I expected Al to be ready to leave. Instead, he was ready to coach. He looked at me and asked, "Can I coach some kids?"

I was dumbfounded. I had to drag him to dinner two hours later. Al Vermeil, he of nine world championship rings in two different sports, stayed on the platforms and coached like a graduate assistant.

Kids had no idea who this enthusiastic old guy was, but I did. I'll never forget that night. It made a lasting impression on me and again showed me who I might be when I grew up. I'm fortunate to be able to call Al a good friend and to be able to spend time with him every year at the Perform Better Summits. Honestly, the smartest people at the seminars never miss a chance to hear Al.

**Mike Clark**

Mike was the first of the whiz-kid PTs. The first time I heard him speak, I thought, 'Wow, this kid is smart.' Mike is like a physical therapy encyclopedia. I personally think he was the guy who fast-forwarded many of us into the marriage of rehab and training. Gary Gray was a visionary thinker. Mike was the practical application guy. Mike took physical therapy and training and made them one science in a way no one else had.

**Gray Cook**

The original son of a preacher man, Gray has the ability and charisma to reach any audience. Gray may have influenced the way I program more than any one person over the past 10 years. Mike Woicek and the others built my foundation earlier, but Gray was a guy who changed much of the house.

Another of these whiz-kid PTs, Gray has singlehandedly changed coaches in every professional sport. Because of Gray, the Functional Movement Screen is now the gold standard screening tool in our industry.

**Mark Verstegen**

Mark was one of the first whiz-kid strength coaches. When I first read about him in *Outside Magazine*, I was sure I wasn't going to like him. Crew cut, snarling ex-linebacker? Not my type. Boy, was I wrong. The guy can coach and is a great judge of character.

I went to International Performance Institute in Florida to observe him and came away with a friend for life. Both of our dads were high school principals and we grew up with the same values. Although he was 10 years younger, I felt like I had met my little brother in the world of strength and conditioning.

**Alwyn Cosgrove**

Alwyn was a great influence because he called me out at a time in my career when I needed it. To make a long story short, Alwyn reached out to me to connect on a few occasions and I was 'too busy' to respond. Alwyn's response was to tell Ryan Lee I was a bit of an ass. When Ryan communicated that to me I simply said, "Oops."

Alwyn was right. I had been a bit of a jerk. Alwyn taught me a valuable lesson and I thank him for it. He also taught me another much more valuable lesson. He taught me that life is a gift and should be lived every day. As a two-time cancer survivor, Alwyn inspires me to live better every day.

**Ryan Lee**

Many who read this will wonder, "Ryan Lee?"

Many of us in fitness and strength and conditioning owe a great deal to Ryan Lee. Ryan revolutionized our field. Ryan empowered us as coaches to realize it was okay to make money. It was okay to try to develop a business. I vividly remember Ryan looking at me and asking, "Is your stuff good? Then why are you ashamed to sell it?"

Like many things in many professions, people took Ryan's advice the wrong way and in the wrong direction, Still, we have to remember not to shoot the messenger.

**Chris Poirier**

Chris Poirier is the man behind Perform Better. Chris saw the future and the future was education for trainers, coaches and therapists. Chris is probably the best businessman I know—not because he knows how to make money, but because he understands people. Bill Falk, the founder of MF Athletic, gave Chris a chance to develop a small offshoot of MF Athletic into a company that is now the leading education provider in our field.

Chris's idea was this: *If you give someone quality education, you create customers.* It's a simple and brilliant idea. He tells his speakers, "Don't sell, teach." If you educate them, they'll naturally become customers. It was a brilliant business idea that made industry names out of many of us. Without the Perform Better tour, I'm not sure where we would be.

And finally—

I know as I publish this I'll remember someone I left out. But today the most important thing for me is to say thank you to the people who influenced me, whether mentioned or left out. Without you I would not be the person I'm today.

## *Rules of the Weightroom*

I'm all about creating the right training environment. To do that, you have to have rules. Athletes may view the rules as restrictive, but there is a method to the madness. What follows are the weightroom rules I've developed over the years. We use this both at BU and at Mike Boyle Strength and Conditioning (MBSC).

**Rule 1—Treat people the way you want to be treated.**

They don't call it the Golden Rule for nothing.

**Rule 2—No lifting gloves.**

I hate lifting gloves. I hate all weightroom paraphernalia. Gloves, long pants, work boots and flannel shirts have no place in the weightroom. I hate gloves because I hate athletes who don't want calluses. Calloused hands are the sign of a worker. I want workers. My upperclassmen used to love it when a new guy showed up with gloves. They're such sadists, they let the poor kid come into the weightroom with his gloves on just to see me tell him to put them back in his locker.

**Rule 3—No iPods.**

I used to say no Walkmans—how old am I? I still occasionally use the term *Walkman* when referring to an iPod and get curious looks from my players. Why no iPods? I want unity and interaction, not each guy jamming to his own tunes. I also think they're unsafe. Some guy blaring Pearl Jam may not hear you when you yell, "Look out, I just dropped a big, heavy dumbbell."

**Rule 4—No music that contains obscenities, racial or sexual references.**

I had trouble figuring out how to make this point clear. I knew the words I didn't want to hear, I just needed to be able to express it. I felt like the late George Carlin in his *The Seven Dirty Words You Can't Say on TV rant.*

I came up with this: No derogatory racial terms—that eliminated one word easily—and no reference to sex with family members—that eliminated the other, use your imagination. I tell the staff if they want rap or hip hop, download the clean version at iTunes or bring in Walmart rap.

**Rule 5—No tank tops for men.**

I'm well aware this is an incredibly sexist rule. Women can wear tank tops, but men can't. We had a little fight over this at work and this is how I explained myself: First, yes, I know this is a double standard. I'm not stupid. However, men in tank tops spend too much time trying to catch a look at themselves in the mirror. Plus, if you allow men to wear tank tops, they'll continue to cut them down until there is barely any shirt left.

With women, tank tops are all about empowerment and confidence. I want the young women who train with us to be confident and like the way they look. There are far too many negative messages about body image in their lives. This is not the case with men, which is the rationale for my double standard.

Some of my coaches didn't like my stance. I had to remind them that the name of the gym is Mike Boyle Strength and Conditioning. When they have their own gyms they can have their own rules.

**Rule 6—Shorts must cover both ends of your ass.**

This is a unisex rule, but applies differently. I think it's great when a young woman feels good about her body. However, I don't want to peek at her underwear every time she bends over. Exercises like hip lifts and single-leg straight-leg deadlifts become too adventurous with short shorts.

The opposite is true for men. For a young woman we're covering cheeks, but for a young man, we're avoiding the jail look. This is my old-fashioned coach persona at work. Pull up your shorts and cover your underwear.

The truth is, you look like an idiot with your hat on sideways and your underwear showing. This is old-fashioned, maybe, but as stated above, I get to make the rules.

**Rule 7—Don't be an ___hole.**

I've no use for big-timers. If you want to yell and scream and throw weights, go somewhere else. The big impression is made in lifting the weights, not in putting them down. If you lift heavy weights, I promise people will notice. You don't need to yell.

Hope you find some of this humorous …and useful.

## *The Balance*

By now, we all know about the idea of 10,000 hours. We've heard about it over and over. If you want to be an expert, you need to put in your 10,000 hours. The number may not be accurate, but you get the point. Experience matters.

In our MBSC staff meeting the other day, the topic of *how* to accumulate the 10,000 hours came up. Many on my staff think a young crop of strength and conditioning coaches and personal trainers have either inadvertently or intentionally skipped a step.

Many of our 'experts' in the fields of strength and conditioning and personal training are not yet 30 and haven't trained hundreds of clients or put in thousands of hours. Many are frauds, writing about things they've never actually done or have done on a small scale. These types of coaches have placed the cart firmly in front of the horse and my crop of bright, young strength and conditioning coaches know it. Alwyn Cosgrove and Jason Ferruggia wrote about this years ago in one of my favorite articles, *The Business.*

However, the thoughts about 10,000 hours does provoke a couple of questions. What is the balance or makeup of the 10,000 hours? In some of my recent talks, I've made a point of saying the 10,000 hours must be a mixture of practical and educational experience. Practical experience might be further divided between training others and training yourself.

The question remains, what is the perfect mixture? I won't pretend to know, only to further explore the thought. Is it 8,000 hours in the training trenches and 2,000 hours of reading books, watching DVDs, and reading blogs? Or is it 8,000 hours of books, DVDs and blogs, and 2,000 hours of training? Both are very different and would produce very different results and potentially a different kind of expert.

The first option might produce a great coach with less book smarts, while option two might produce a book smart person with limited practical experience. Another thought relates to the value of hours training. Are hours spent doing the same things poorly over and over defined as practice or insanity? Is 8,000 hours of the same program the definition of insanity? Insanity is defined as doing the same thing over and over and expecting the result to change.

I go back to a quote from Martin Rooney in a Perform Better seminar lecture. To paraphrase: *First read everything you can, write your impressions of what you have read and add your own written thoughts.* In his talk, Martin was describing a progression of years, not weeks or months.

I think initially the 10,000 hours is heavily weighted towards the reading, studying and self-training side. You must be a student before a practitioner, and you should probably practice what you intend to preach before you ever preach it. It would be like trying to teach math without being able to add or subtract.

Next you should practice your craft, keeping careful notes of what you read and observe.

Last, you begin to add your own thoughts. You, in effect, become a teacher.

The progression of accumulating 10,000 hours toward becoming an expert might look something like this—

**Student/Lifter—100%**

**Practitioner/Writer—80-20%**

**Practitioner/Teacher—80-20%**

I guess the key for me is that I'm encouraging my staff not to get stuck only in the practitioner role. They need to realize they have potential to become great teachers in the worlds of strength and conditioning and personal training. Simultaneously, I must caution them not to become an internet fraud that trolls the Facebook world, posting contrarian articles and tossing barbs at those they perceive to be above them in order to impress those they perceive to be below them.

The key is the balance. I firmly believe we must always be active practitioners to be true experts. Stopping for any length of time is the beginning of the end for most professionals. This is why I train clients and athletes every day. I not only need to know the latest information, but must put that information into daily practice.

Then and only then, should I write about what I know.

### *Becoming a CNP—Certified Nice Person*

One question that tends to come up frequently on the *StrengthCoach.com* forum is about certifications. People want to know what certifications they need to get a job in this field. They ask about NSCA, ACE, NASM and others, as if the certification matters.

I can tell you two things with relative certainty.

1—Clients only care that you're certified. They have no idea what the letters mean.

2—Potential employers only care if you're certified to protect them from liability.

The other day I suggested to one reader if he wanted to get hired he needs a CNP certification. CNP stands for Certified Nice Person. I said it as a joke, but realized in so many cases we miss the boat when looking for employees.

Hiring is simple: Hire nice, motivated people.

The best way to find these people is get them when they're young or when they're changing careers. This is where we have had the best luck.

Once you hire people, train them in your philosophy. If you're successful as a trainer or coach and you hire nice people, you should be able to duplicate your success. This is the essence of what we do at MBSC.

CNPs have a service mentality. It's not all about them. In fact, it's rarely about them.

You can usually tell a CNP instantly. In the fitness field, CNPs wear clothes that fit. They don't carry their food in Tupperware. They generally don't look like bodybuilders or powerlifters. CNPs, hopefully, aren't covered in tattoos, and have earrings only in their ears—yes, I know there can be exceptions.

If you don't like people the first time you meet them, chances are they're not CNP material. One thing I've realized is I can make our coaches and trainers smarter, but I can't make them nicer. Believe me, I've tried. It's much easier to impart knowledge than it is to try to change personal qualities.

How do you find a CNP? The number one route is through internship. These are like tryouts. The best thing about interns is they don't expect to be hired. You just keep the ones you like. It's perfect. Most of our staff were hired this way.

Those who fail the CNP and work ethic tests move on.

Work ethic tests? Yes. During internships, pay attention. Do these potential employees arrive early? Do they stay late? When you ask for volunteers, are they first to volunteer? Do they ever ask for time off? Are they frequently sick? Do they have any family emergencies during their internship? These are all signs of poor work ethic.

I know, things do come up. But if you're 21, life shouldn't get in the way that much.

CNP tests? Simple. Watch people. How do they interact with their peers? With clients? With delivery and service people? I want someone who is nice to everyone, all the time.

I want someone who cares. I can teach that person and help the new staff member succeed.

One of the first things I suggest to interns is to read Dale Carnegie's *How to Win Friends and Influence People.* This self-help classic is step one to becoming a CNP. Add a little Steven Covey and some John Maxwell and you're well on your way.

What about in an interview? Some people don't have the luxury of having interns.

Hiring through interviews is tough. First thing, check references. The best reference is from someone you know and trust. The worst is from the current boss. A current boss will lie to rid himself of a bad employee. I always ask the current boss something like "What will I say to you next time I speak to you?" This often pulls out the truth. The thought of you calling back a few weeks after the hire is a bit scary if they're lying. Their great reference sometimes gets a little lukewarm.

After references, think first impressions.

I only hire people who want to work at Mike Boyle Strength and Conditioning. If they ask too many questions about benefits and time off, I know we won't get along. I need people who are excited to come to work and help people every day.

How are they dressed? I love a tie—I can't resist. A little old-school respect goes a long way. It may be a job in a gym, but it's still a job interview. We've had people show up in sweatpants with untied shoes. No, thanks.

In our gym I also want to see people who have networked. Ideally, they have already visited the facility, taken a tour, met some staff. If they live near Boston and have never been in our gym, why would I want to hire them?

Becoming a CNP is probably more about upbringing than anything else. We need to find the right people. If we look for certifications, degrees, experience and other things, we miss the boat. Look for personality and work ethic. Knowledge is easy to provide, but personality and work habits are tough to instill after the fact. Get CNPs, they'll make you look smart and help create a successful business.

I have to give credit to Ray McCarthy for this one. Ray recommended *First Break All the Rules* in a *StrengthCoach.com* forum post, and I bought both the audio and the book. I think this book is a must-read for any coach, business owner or business manager.

Here are some points that jumped out at me from that book. The first one dealt with a problem I see all the time. As coaches or employers we are always trying to fix players or employees. In *First Break All the Rules,* page 141, author Marcus Buckingham says:

*"Great managers would offer you this advice: Focus on each person's strengths and manage around his weaknesses. Don't try to fix the weaknesses. Don't try to perfect each person. Instead do everything you can to help each person cultivate his talents. Help each person become more of what he already is."*

This is great advice and would save a lot of us in coaching or in management from considerable headache and heartache. Sometimes we get so focused on what someone can't do that we fire, trade or bench a great contributor out of frustration at not being able to change them.

Buckingham goes on to say—

*"This story describes a doomed relationship. The conventional manager genuinely wants to bring out the best in the employee, but she chooses to do so by fixing the employee's weaknesses. The employee probably possesses many strengths, but the manager ends up characterizing him by those few areas where he struggles."*

Read this book and see if you don't see a little bit of yourself.

## *What I Learned in 2012*

I like the idea of a New Year's Special Idea, but instead of talking about what I changed, today I'd like to look at what I learned.

I learned I need to repeat myself more than I think. I don't change as much as my staff does. I've been coaching longer than almost all of our staff has been alive, but it's my job to teach them. When I see a 'mistake,' I realize that the mistake is mine for not continually going over core principles. You know what they say about *assume.*

I learned—or relearned—that coach education and training is the key to success in our business. My goal for next year is to take more beginner groups, so I can coach with my coaches.

I learned I need to write down what I believe in short form. By short form, I mean quick blurbs that say, *We believe this!* Sad but true, I'm certain there are kids working for me who have not watched the Functional Strength Coach DVDs 1-4 and have not read my three books cover to cover.

I learned not to get too caught up in myself. The basics are the basics, and we need to keep going over the basics. Train, don't entertain.

I learned that good athletes can make bad coaches seem like good coaches. Curious George could coach my Olympic hockey girls. They're awesome and perfectly compliant. However, I struggle with my daughter's high school team and have had to modify my expectations for them. I'm the same coach in both places, but my audience is different. In one place I look like a genius…in the other, not so much.

I learned I have to believe. I believed in Ryan Lee when he said I needed multiple streams of income. Was he right! I believed in Thomas Plummer when he told me to expect more of myself. I believed in Anthony Renna when he told me to start a blog. One million views later, I know he was right. I continue to believe in the right people and it pays.

I learned it's better to have half or less of something than all of nothing. I'm part owner of MBSC, Body By Boyle Online, *StrengthCoach.com* and MBSC Thrive. My partners are awesome. When we do well, everybody wins.

I learned that the more I give, the more I get. I've given responsibility and I've gotten a better business. I've created partnerships and reaped the profits. I've given dollars and always seemed to have more dollars at the end.

I've learned that life is about abundance. There are lots of clients to be had. If you live with a scarcity mentality, you will live in scarcity. In you live with an abundance mentality, you will live in abundance.

## *There is a Reason There's a Box*

How often have you heard someone described as an *out of the box* thinker or heard someone praised for thinking outside the box?

This is usually considered a compliment. However, in a recent conversation with one of my clients who happens to be a world renowned plastic surgeon, I made the statement that forms the title for this article: *There is a reason there is a box.* I went on to say I thought most people would do well to familiarize themselves with the inside of the box. I like to think the coaches I admire could be described as people who know the subject matter inside and out, versus someone who thinks outside the box.

Coach John Wooden has a great quote—

*"If you spend too much time learning the tricks of the trade you may not learn the trade."*

Coach Wooden was a brilliant man and the way he coached basketball was amazingly simple. He began every year with a detailed explanation of how to put on socks to avoid blisters. This could be described as very inside-the-box thinking. Some coaches might view something as mundane as this as a waste of time. Wooden viewed players missing practice from blisters caused by not putting socks on correctly with no wrinkles inside the shoes as the real waste of time. He was correct. Wooden drilled fundamentals, which is very inside the box.

Most of the best coaches I know talk about simplicity more than complexity. Athletes Performance founder Mark Verstegen often uses the phrase *simple things done savagely well* in his talks, while Dewey Neilsen of Impact Sports Performance implores us to be brilliant at the basics.

There's a Buddhist quote that says, "*In the beginner's mind there are many choices. In the expert's mind there are few.*"

There is a reason why I often agree with so many of the people I consider to be good coaches. Those who have attained the expert level seem to think very much alike, and react in very similar ways to new information. The experts are open to change and have great mental filters. As a result, the best coaches seem to end up at the same places even when coming from different paths.

People might view me as an out-of-the-box thinker, but that may be based on 30 years in the box. I can't tell you how often I give the same answer to a different

question. People ask questions. I tell them to KISS it—and I don't mean my rear end. I tell them *Keep It Simple Stupid.*

Stay in the box. Out-of-the-box thinking should be reserved for those who know the inside of the box like the literal back of their hands.

Next time you hear someone described as an out-of-the-box thinker, ask yourself if the person being referred to is also the master of the box. The key for us as coaches is to become masters of the box well before we become out-of-the-box thinkers.

## *Is Your Box Too Small?*

The premise of the *There is a Reason There's a Box* article was that out-of-the-box thinking is running out of control and that we need to make sure we're masters of the box before beginning to think outside the box.

A recent conversation with Dan Dyrek, DPT, added yet another thought to the process. As we discussed the premise of the article, Dan asked , "What if your box is too small?"

This was a brilliant slant I had missed. I've often criticized the one-tool wonders. These are people who have a very small toolbox, yet think they can cure every ill with their one tool. Imagine a handyman with nothing but a hammer in his small toolbox. The visual quickly brings us to the clichéd line, "When the only tool you have is a hammer, everything looks like a nail."

What about when the only tool you have is a kettlebell, or a Pilates workout or a yoga class? Any of these tools in isolation clearly gives you a limited toolbox.

Personally, I like to have all of these tools in my toolbox. I love kettlebells for swings, split-squats, one-leg straight-leg deadlifts and getups. I love stretches derived from yoga and groin rehab from Pilates. I consider my toolbox to be large and well-stocked. Much like browsing the tool aisle at Home Depot, I'm always experimenting with new tools.

However, I think carefully before I add them to my box. If you look in your box and see one tool, you should ask yourself what you can fix with that tool. If you answer, "Everything," you should probably think again.

We should all start with a small toolbox and add tools as needed. The important point is to realize you're not yet a master carpenter, and you still need to add quality tools and learn how to use them.

The one-tool wonder idea does not only apply to strength and conditioning or fitness. We often see the same thing in the worlds of physical therapy and sports medicine. There we may have more of a 'tool of the week' or 'tool of the year' approach. It's okay to add ART or Graston to your toolbox. Just don't throw out all the other tools.

The real key may be to ask yourself if your box is big enough, well-stocked, and has room to expand. A expandable box in this case is an open mind. Well-stocked means you have enough tools, but not too many. Room to expand means room to learn and grow.

Some suggested steps—

**Step 1**

Buy the basic tools that will serve you well for 90% of the jobs you need to do.

**Step 2**

When something arises where your tools don't work, you go buy another tool—the tool you need.

**Step 3**

When another problem arises, buy another tool. If there's no problem, you don't need new tools.

Over time your toolbox will be huge, but it doesn't start that way.

This gives you time to master the tools you have before you buy more.

## *The Shit Test*

I've been very reluctant to write this article. I have young kids and I'm not sure how I'd feel if they read this. However, in most of my lectures I end up using this analogy and it works, so here goes.

More times than I can think of a coach will ask the question, "How do I know if they're doing the exercise right?"

My answer is always the same: *How does it look? Does the exercise look correct?*

Coaching strength and conditioning is easy. We know what proper technique looks like. We just have to get clients to do it.

I often use the analogy of the Shit Test. My description is simple. If you had a dog and you walked in your yard and felt something squish under your foot, would you assume it was dog shit? You would look down. If it looked like shit, chances were pretty good that was what it was.

If it smelled like shit? More proof.

What does this have to do with strength and conditioning? Simple. If you watch a client do an exercise, do the shit test. How does it look? If it looks like shit, the form is shitty. Pretty simple. If it looks like shit, fix it.

Either make a correction, or more likely, make a regression. It's pretty simple.

## *Filling Buckets*

There's a kid's book my son read in first grade called *Have You Filled a Bucket Today.* In short, bucket fillers give you good stuff and help fill your bucket. Bucket dippers dip your bucket—They do things to you that make you feel bad.

As I read the *StrengthCoach.com* forum the other day, there was a question about in-season programming. The basic gist of the conversation concerned what to do during in-season strength training for wrestling. The strength coach was concerned that the coach did a lot of conditioning, such as running the hallways and lots of calisthenics, that might detract from or disrupt from the in-season program. She was looking for advice on what to do in-season with these athletes.

My advice was simple. My feeling would be to fill the empty buckets. Don't fill a bucket that's already filled.

If we look at each quantity—strength, power, endurance, conditioning—as a bucket to be filled, the answer becomes simple. Even in strength and conditioning, we want to be bucket-fillers.

Fill the empty buckets; don't overflow full buckets. If the strength bucket is empty, fill it. If the muscle endurance bucket is already full, leave it alone. Don't complain about who filled it or how, just move to the next bucket.

Remember, though, when I say to fill the bucket, I don't literally mean to fill it to the absolute brim. We all know what happens when you try to do that; it overflows as soon as you try to pick it up or move it.

Instead, you want to leave a little room at the top to give yourself a small buffer zone to avoid spillage. And when in doubt, it's better to leave a little more space than fill it too high.

The same can be said for in-season training. It's better to leave a little bit left in the tank than overdo it and run your athletes into the ground. You still want them to get stronger, but if you get greedy, you'll overflow their recovery capacity and create a mess.

## *Does It Hurt?*

I get asked exercise questions all the time. I've worked with athletes in almost every major sport who were told by a doctor or trainer they were, "All done." Because people know my background, they often ask for advice on dealing with injuries or on selecting exercises.

Unfortunately, most of the time they ignore the advice because the advice doesn't contain the answer they want. They say, "It only hurts when I run;" I say, "Don't run." They were hoping for something different.

A famous coach I know once told me, "People don't look for advice, they look for agreement or consensus. If you don't tell them what they want to hear, they ask someone else."

His advice to me was to not bother wasting my time giving advice.

Here I go again, wasting time.

If you have an injury and are wondering whether or not a certain exercise is appropriate, ask yourself a very simple question. "Does it hurt?"

The key here is that the question *Does it hurt?* can only be answered with a yes or no answer. If the answer is yes, you're not ready for that exercise, no matter how much you want to do it. Simple, right?

Not really. I tell everyone I speak with that any equivocation is a yes. Things like, "After I warm up it

goes away," for example, is a yes answer. It's amazing to me how many times I've asked people this simple question only to have them dance around it.

The reason they dance around the question is that they don't like my response. They want to know things like *What about the magic cure no one has told me about? What about a secret exercise?*

I've another saying I like: *The secret is there is no secret.*

Another wise man, Ben Franklin I think, said, "Common sense is not so common."

If you're injured and want to get better, use your common sense. Exercise should not cause pain. This seems simple, but exercisers ignore and rationalize pain all the time.

Discomfort is common at the end of a set in a strength exercise or at the end of an intense cardiovascular workout. Additional discomfort—delayed onset muscle soreness—often occurs the two days following an intense session. This is normal. This discomfort should only last two days and should be limited to the muscles, not the joints or tendons.

Pain at the onset of an exercise is neither normal nor healthy, and is indicative of a problem.

Progression in any strength exercise should be based on a full, pain-free range of motion that produces muscle soreness without joint soreness. If you need to change or reduce range of motion, this is a problem.

Progression in cardiovascular exercise should also be pain-free and should follow the 10-percent rule. Don't increase time or distance more than 10 percent from one session to the next.

I've used these simple rules in all of my strength and conditioning programs and have been able to keep literally thousands of athletes healthy. I'm sure the same concepts will help you.

## *It's Not the Program; It's the Coaching*

Sam Dadd, one of the senior coaches at MBSC, thought the concept mentioned in the title would make a great article. The discussion began, as many do, with a question in a staff meeting. Why does an assistant go to a new program, institute the same program used in the old job, yet fail to get similar results?

Or, when a head strength coach moves on and the assistant takes over, why are the results not the same?

The obvious answer would be talent; however, that's an oversimplification. My response to the question was simple and to the point: *It's not the program, it's the coach.*

In the football world, legendary coach Bum Phillips described the coaching of another legend, Paul Bear Bryant, this way, "He can take his'n and beat your'n, and take your'n and beat his'n."

In other words, if you and Bryant switched rosters, in a year he'd beat you with your own team.

A good coach with a mediocre program is much better than a great program and a mediocre coach. A program is a piece of paper or a file in a computer. Programs cannot motivate or create accountability. A piece of paper can't figure out what's inside a person and how to reveal it. A great coach can do all those things.

A great coach will teach, motivate and create an accountability system. He or she will figure out what makes each person tick, and then use that knowledge to get results. I've said for years that all of our programs are the same. Our base philosophy never changes.

Want to get fast—run sprints. Want to get strong—lift weights. The difference is in the selling. The difference is in knowing what makes each athlete tick.

Another legendary coach, the late quarterback guru Tom Martinez, described it this way in the book *Outliers.* "Every kid's life is a mix of shit and ice cream. If the kid has had too much shit, I mix in some ice cream. If he has had too much ice cream, I mix in some shit."

Martinez knew there was a different key to every lock. To paraphrase Dan John, the key is to find the key.

Bottom line, there is a reason that strength and conditioning coaches Mike Woicek, Al Miller, Rusty Jones and Johnny Parker had a team in almost every Superbowl for about a 15-year period. They were great coaches who got the best out of their players.

There is a reason a coach like Phil Jackson succeeded in circumstances as different as Chicago and LA . Coaching matters. Coaches change lives; programs don't change lives. The people will always matter more than the paper.

## *What I Learned From Coaching Kids, Again*

In the past few months I've gone back to coaching kids. It's something I haven't done in quite a while, not since the early MBSC days 15 years ago. The sad truth is the higher the level you work, the more spoiled you get. I've been spoiled by training primarily professional and Olympic athletes.

I've always said that coaching great athletes can give us a false sense of our coaching skills. Dealing with athletes who have a higher training age and more athletic ability inevitably makes us take some things for granted. Dealing with better athletes can also make us think we're a lot better coach than we may be.

I'm presently working with players on my daughter's hockey team who range in age from 13-18. They're all reasonably good athletes, but have a wide range of ability and experience. The majority had never been in a weightroom or picked up a weight prior to the start of our training experience.

As always though, experience is the best teacher. And as always, the best laid plans go wrong. I must admit, I had grand visions—I'm such a great teacher and coach, I'd whip this group into shape in no time.

Maybe not. Instead, these young women taught or re-taught me some valuable lessons.

### Things I Learned or Remembered

*In-season Training*

In-season is a tough time to introduce any group to strength training. I wasn't fortunate enough to have a pre-season period. Because we were starting in-season, both the girls and their coaches were worried about soreness, about muscle pulls, and about decreased performance. As a result we went with our old stand-by, the KISS principle—Keep It Simple Stupid.

Trust me, I was the one who looked stupid. Thank God no one watched the first few workouts. It was cat herding without a whip. All I could think of was, 'Thank God no one is watching this mess.'

In order to get the workouts done after practice at the rink, we went as basic as possible with nothing but sets of dumbbells we brought and stored at the rink. We had about 10 minutes after practice to get in our lifts. On the bright side we needed no warm-up as the players came almost directly from the ice. The program consisted of two sets of squat jumps, two sets of split-squats, paired with two sets of pushups followed by two sets of one-leg straight-leg deadlift paired with dumbbell rows. They did 10 reps of everything except squat jumps, which were 3x5.

Even in this simple setting, it's tough for one coach to teach 20 girls in 10 minutes. On day two, we established a rule: *Don't talk.*

Try to keep quiet and do your work for 10 minutes. It worked. Things began to slowly improve. It was nothing I was proud of, but a system started to fall into place.

After a few workouts we amended rule one to read, "No talking to anyone holding a weight." This meant they could talk between sets, but not to the person lifting. We managed to string together one to two workouts per week, and at least get acquainted with the basics.

The big lessons? Small goals, small victories. Rome wasn't built in a day. The big key for me was not getting frustrated, and keeping the girls improving and engaged. I had my eyes on the off-season.

*Off-Season Training*

Fast-forward a few weeks and we began our off-season workouts. I always say in-season training is like going to the dentist. Being an in-season strength coach is like being the dentist. People dread seeing you. You represent extra work, extra time, extra rules.

Off-season is entirely different. As a strength and conditioning coach, you're viewed as a person who can make a difference. We stayed with our KISS concept and continued to attack basic patterns.

I quickly realized that pairs were going to be good, and tri-sets would be bad. We couldn't focus on two things at once, much less three. Tri-sets were designed to get more rest between heavy sets on major exercises. Tri-sets allowed us to stay research-based, and get three to five minutes between heavy sets.

If the workout challenge is neural and motor learning, this isn't an issue. For beginners, pairs make more sense. As coaches, we can concentrate and focus on point one above, Keeping It Simple Stupid.

Basic patterns matter—we work on clean and front squat combos nearly every day. I don't know if there are two more important exercises for young athletes. Please note, we have 15-pound bars and 5-pound training plates. Most of the girls are just getting to the 45-pound bar after about a month.

## *Three Big Lessons*

**Lesson 1—***KISS. Keep It Simple Stupid.*

In my case, I was the stupid one. In order to get any learning done we needed rules. Enforce rule one: "You can't talk to anyone else." As I said, after day two I softened slightly and I amended rule one. "You can't talk to anyone who has weight in their hands." With kids you need to work on focus and attention. It's a constant battle. Be positive, but keep emphasizing focusing on the work and minimizing chatting with other kids.

**Lesson 2—***Design the program for the group; don't try to fit the group to the program.*

Ask yourself questions like *Are they learning or lifting?* Learning takes lots of repetition. Lifting needs control of things like volume and intensity.

Ask yourself another simple question: *Is the motor pattern the challenge or is the load the challenge?* For most kids, the challenge should be the motor pattern. You're working on teaching exercises, not strength training. There's a difference.

Forget mobility work and stretching if you only have an hour or less. Time is king and basics take time. Splits-squats are mobility. Squats are mobility. A good basic routine is a mobility routine.

**Lesson 3—***You might need two programs.*

Program one is a learning program for beginners with a limited number of basic exercises done for more sets. Program two is a strength program. We have tried one-size-fits-all and it doesn't work.

This summer our program will be based on proficiency and training age. Those who have been with us for multiple summers and are proficient will have one program. Beginners will have another. Proficiency in my book means, *Can they do a clean and a squat?* If they can't, teach them.

Limit variety and increase the number of sets. Nothing teaches like repetition.

**Side note:** *Repetition* and *repetitions* are not the same. We want more perfect sets, not a few high-rep sets. Create motor patterns, not stress.

Three sets of five gives us 15 quality reps and three opportunities to coach. Two sets of 10 might provide more volume, but less coaching opportunity and more opportunity for technique to deteriorate.

The big takeaway? Younger kids are tough. They will challenge all your coaching skills.

And that can be good for you.

## *Other People's Athletes*

The best ideas frequently come in the form of questions. Whether it's on the *StrengthCoach.com* forum, on Facebook or in a personal email, I find myself inspired to write articles instead of giving answers.

One question that seems to come up at the beginning of every summer is how to deal with athletes who train with you at a private facility, but play a sport for a team or school. More specifically, how do we deal with an athlete who brings us a program we perceive to be poorly written and says, "I need to do this for school."

The honest answer is that I don't allow athletes to do anything but our programs in our facility. Usually I will begin the process by showing the athlete the similarities of the programs and by highlighting the things contained in both.

I often say things like, "The big difference is in how it's organized," which may or may not be entirely true. I try to not say anything negative about the coach or the program, although I must admit I sometimes fail when I see the programs.

To get around this dilemma, our first question when dealing with another coach's athlete is, "What is the testing?" We always want our athletes to perform

well on tests, whether or not we agree with the tests and associated programming. It almost becomes like Combine training.

We simultaneously train to get better using our program, while training for any specific tests the athlete will encounter at school or with a new team. The two most common tests we need to train for are a back squat and a power clean from the floor. If the athlete has to perform either or both of these tests, we train for these 'events' at the end of the week. For a power clean test from the floor, we add sets of floor cleans to learn technique, while working to develop power through our regular program of hang clean and hang snatches. For back squats we do some supplementary sets, either singles or reps depending on the tests.

For running we do the same. We use our running program, but prepare for their tests. We also teach any exercises included in their program even if they're not included in ours. The bottom line is we believe in our program.

We also know that allowing any athlete to deviate from our program in our facility opens the door for all athletes to deviate. This is a slippery slope. However, we also realize that athletes in college or on junior teams have obligations they must meet. The key for us is to compromise around testing and not training. We must instill confidence in the athletes that our program will properly prepare them to play, while training the athlete to be evaluated by their new team or coach.

It's a fine line. Bob Alejo, Director of Strength and Conditioning at North Carolina State, has a good guideline. He suggests when working with someone else's athlete, have the courtesy to call the school, introduce yourself and ask about the program and testing. This is professionalism. I have to admit to failing to do this and making enemies in the process. Follow Bob's advice and contact the coach. At least you will have done your part.

Don't compromise what you believe in. If an athlete comes to you for an off-season program, do what you feel is best based on your philosophy and your facility. It's a thin line, but a little communication and some mutual respect can help you walk it.

## *Learning to Speak Coach*

Valerie Waters is an expert in coaching women. She claims to speak 'woman.' Much like Mel Gibson in the movie of the same name, Valerie knows what women want. She believes she speaks 'client.' She means she understands what the female client wants and can present a program in a way that engages the mind of a woman.

When I speak to strength coaches, I often tell them my own version of the same thought process. You need to learn to speak 'coach.'

The great disconnect between strength coaches and sport coaches is often like the language barrier in a foreign country. Sport coaches always say things like, "We don't want to do football stuff" or "We want a program specific to our sport."

Strength coaches often battle back by saying, "Strong is strong and fast is fast; you coaches don't get it."

The truth is most coaches on either side don't get it. Sport coaches believe that football players are supposed to be in the weightroom lifting heavy weights. In the coaches' mind, every other athlete should be running and lifting light weights so they don't get too bulky and lose speed.

How do we get around all these old-school thoughts?

The simple answer is learn to speak 'coach.' Much like Valerie saying she speaks 'client,' we need to learn to speak coach. Do you think your soccer coach will respond if you tell him that when his players get faster, they'll get to more loose pucks? Of course not.

In soccer it's winning the 50/50 ball. You need to know the language. How about if you tell him that hang cleans will increase his players' vertical jump and they will be able to dunk? He could care less, but if I tell him we'll control more headers off corners, his eyes light up. When I say, "We'll dominate in the box on set pieces," we're now talking the same language. The truth is, I've said the same thing, but in a different language.

In hockey, coaches may say, "Who needs upper body strength?" When I answer, "We do," and mention that hockey is the fastest game in the world played with less padding than football and with the highest

speed collisions in sport, they immediately say, "Boy, do we need upper body strength," and, "Mike really understands our game."

I could give example after example of how to speak 'coach.' In women's basketball and soccer, strength training is important because it helps to prevent ACL injuries. Want to get a woman coach's attention? Talk ACL prevention. That's the hot button. The truth is that strength training will make her players run faster and jump higher, but the way to sell the strength program is spelled A-C-L.

When the swimming coach doesn't want her athletes to lift you say, "But, Coach, in short-course swimming, at least 33 percent of the race is start and turn."

What makes for good starts and turns? Leg strength and leg power. Suddenly, you know swimming, the coach is your buddy and the athletes are lifting.

The bottom line is, you need to understand the sport, what makes the players tick, and what makes the coach tick. Many strength coaches fail not because they don't know the material, but because they don't speak the language.

Imagine this. You go to France. No one speaks English. Everywhere you go you speak English and no one responds. Would you be surprised if no one paid attention to you? Would you be frustrated?

The key is to learn to speak the language.

## *Training Women*

I wrote an article for *Powerlifting USA* entitled *Training Woman Powerlifters.* I wish I still had it, as it would save me some time. Time is something I don't have a lot of, so let's cut to the chase.

Last week a young woman came up to me with her lifting sheet in her hand and a disappointed look on her face. I asked what was wrong and she said, " I got crushed on my bench." I looked at her sheet. Last week she had done 100 x 8. Her coach had penciled in her heavy set for this week as 110 x 5. She got three and was disappointed. I pointed out to her that she probably should have gone to 102.5 or maybe stretched to 105.

Many of you reading might wonder, "Increase 2.5 pounds?"

At MBSC, we have 1.25-pound plates and dumbbells in 2.5-pound increments for exactly this reason. Woman athletes or young athletes must be given the chance to improve. Often their coaches are older and stronger and forget something basic: *It's not how much weight you increase by—It's what percentage of the total load that weight increase represents.*

Confused?

Think about this. If an athlete benches the 45-pound bar for 10 reps and then moves up by 5-pounds, what is that increase as a percentage? It's actually over 10 percent. Four-and-half pounds would be 10 percent. Five pounds is a huge jump.

In the early neural stages of strength training and motor learning, this might be possible, but would certainly not be considered good coaching. Imagine an athlete who bench presses 225x10. Would you jump 10 percent to 245? Any experienced coach knows they would not. Stronger athletes routinely add five pounds per week. This is an increase of about two percent.

Even with 1.25-pound plates, we may still be overreaching for our younger athletes and women. This is why we have 15-, 25- and 35-pound Olympic bars, dumbbells in 2.5-pound increments and 1.25-pound plates. Use your small plates and use them intelligently to create lasting progress.

And choose the warm-up sets well. For three sets of five, think warm-up first, heaviest set second, heavy set minus five pounds third. This means if the goal is 85x5, think 65x5, 85x5, 80x5.

Next time an athlete asks you to pick weights, think percentage, not poundage.

## *The Curse of Knowledge*

How could knowledge be a curse? Don't we talk at length about the value of continuing education?

Unfortunately, knowledge can be both a blessing and a curse. Too much knowledge can sometimes make you a bad teacher. How many times have you taken a class or heard a lecture by an expert in a field and left confused?

The speaker has *The Curse of Knowledge.*

In the book *Made to Stick,* the authors Chip and Dan

Heath describe a very simple study done at Stanford in 1996 by Elizabeth Newton, which serves as a perfect illustration for the *Curse of Knowledge.*

Newton divided the study participants into two groups: tappers and listeners. The tappers were given a song to tap out on the top of the desk. These were common songs like *Happy Birthday* and *The Star Spangled Banner.* The listener's job was to try to recognize the song. The tapper tapped out the song on the desk top while the listeners listened.

Pretty simple, except for the fact that the tappers had the *Curse of Knowledge.* They knew the song and could hear it in their heads. The listeners had no such knowledge. The interesting thing about the study was that tappers thought the listeners would get the song right 50 percent of the time, but in actuality, listeners only got the title of the song two percent of the time. The tappers—think teachers—were frustrated because they knew the answer to the test. They also couldn't understand how the listener could miss it.

Now substitute teacher for tapper and student for listener, or coach and player, or boss and employee. Look at the numbers. Fifty percent expected, but two percent results.

These stats make how we run practice, how we teach or how we run our staff training seem important. This study explained so much to me. It explained why I say KISS so much. *Keep It Simple Stupid.*

What I'm saying is, *Remember the listeners.* Don't strive to show how smart you are. Instead, strive to show what a great teacher you are. I now believe the key to KISS is to strive to MISS—Make It Simple Stupid.

We need to keep it simple for our staff, students or team by making it simple. We need to make sure the *Curse of Knowledge* doesn't frustrate us and our students, players or employees.

I always tell my coaches if it appears a group is not grasping a concept, back up and say, "Let me explain that again. I must have done a bad job explaining it the first time."

This puts the responsibility on the teacher, coach or boss. Sven Nater, one of John Wooden's prize pupils, wrote a book entitled *You Haven't Taught Me Until I've Learned.* It's an excellent title. We must realize we haven't taught until someone has learned, and our knowledge can often be a detriment, not a benefit.

Understanding the Curse of Knowledge is the key to great instruction in any field.

## *Abbreviations and the Curse of Knowledge*

Now that you understand the *Curse of Knowledge*, I want to describe what I consider to be the number one symptom of someone suffering from it. You know you have the *Curse of Knowledge* when you understand a topic so well that you can't readily explain it to a lay person. The number one symptom of someone suffering from the *Curse of Knowledge* is beginning to speak about your topic in abbreviations.

My first frustrating experience with the abbreviation *Curse of Knowledge* thing occurred when my wife began her career as an occupational therapist. Every night she would come home and speak 'hospital' to me. When she finish her sentence I would ask, "What does that mean?" She'd routinely say hospital stuff like "the RT and I worked on a lady with COPD today."

I gave her what I call the dog look" The dog look is the look your dog gives you when you talk to it. Head cocked to the side, kind of quizzical. The abbreviations drove me crazy.

Fast-forward to my first experience with the Postural Restoration Institute—the dreaded PRI, an abbreviation unto itself. I was walloped again by abbreviations and the *Curse of Knowledge.* Our guest speaker began to describe a few common syndromes and show us examples.

Unfortunately from then on he only referred to these syndromes by their abbreviations. I was constantly looking back in my notes trying to remember what a left AIC was. While I was trying to remember what the abbreviation stood for, the speaker was already describing the next issue. I was lost in the first few minutes.

The speaker was too knowledgeable about the topic. Things that were confusing to me had become so second-nature to him, he referred to them by their abbreviations. I was not so lucky, so informed, or so smart.

So… just a quick note. As you become expert in anything, try to remember that teaching is about learning. It's not about you. We know you know what

the abbreviations stand for. If you didn't understand the topic, you wouldn't use abbreviations.

We know you're an expert. However, there is a big difference between being an expert in subject matter and being an expert teacher. The next time you go to teach, lecture or present, assume your audience does not remember terms that are second-nature to you, and literally spell it out for them every time.

I finally realize why we have the cliché 'I'll spell it out for you.' You don't really have to spell it out, you have to speak it out.

Every time you get ready to use an abbreviation either in speaking or in writing, remind yourself that the number one symptom of the Curse of Knowledge is speaking in abbreviations. Then remind yourself there is a big difference between being an expert in a subject and being a great teacher.

The great teachers make complex ideas simple. The great teachers overcome the Curse of Knowledge to actually impart knowledge.

### *Too Busy to Get Better*

Lately I've been too busy to get better.

What does that mean? It means I've neglected my continuing education. I'm lucky, I love to read, so I can get a lot of continuing education from a book or an audio program. However, there's nothing like immersing yourself in a weekend seminar to get the intellectual juices flowing. This year, because of coaching commitments, I've attended the least volume of live education of my career. One goal for next year is to fix that.

Ask yourself if you're too busy to get better. I think many coaches are. I frequently see coaches fall years behind in their knowledge because they feel guilty about taking a few days away from the weightroom. I hear coaches say this all the time, "I was going to go to that seminar, but we had workouts that day."

Trust me, we all have workouts.

The definition of insanity is doing the same thing over and over and expecting the results to change. Are you insane? Do you want better performances or fewer injuries, yet you keep doing the same workouts year in and year out?

Don't be too busy to get better, and don't make your staff too busy to get better. Make a commitment to continuing education. Attend at least two seminars a year. I'll give you two can't-miss recommendations right now. Take a Functional Movement Screen course and attend a Perform Better Summit. In order to get better, continuing education must trump workouts at least twice a year.

Steven Covey calls this process sharpening the saw in one of my favorite books, *Seven Habits of Highly Effective People.* Take time to sharpen your saw and make sure your staff sharpens.

One thing we have done at MBSC is to bring in speakers. Our staff has gotten large, so we can save money and time by having our own mini-seminars. If you're pressed for time, think about bringing in the person you want to hear to your facility during a down time. I've done this numerous times over the years and have made great friends and had great learning experiences. In any case, don't be too busy to get better.

Remember, we must lead by example.

### *Assessing Credibility in the Internet Age*

A recent Strengthcoachblog.com post got me to sit down and finish this article. Tim Edgerton, a UK strength and conditioning coach, named me the most influential man in strength and conditioning, which was cool.

However, the rest of list was made up of at least half non-coaches. There were a bunch of academic NSCA types, a few internet marketers and a few coaches.

The 'how to get rich on the internet' business is thriving in fitness and strength and conditioning. New products are launched every month. I'm sure many of you reading this are thinking, "You have a paid website and you did the *Functional Strength Coach* DVD sets, who are you to talk?" Those are legitimate questions. However, the fact is, my website sells content. Good content, updated every week. I'm not picking up affiliate commissions for using my list to sell another program.

I'm a bit tired of internet marketing. It always seems to be the same guys selling the same products.

The same resumes, "_____ is one of the world's most sought-after experts in the field of strength and conditioning and …."

Next time you consider buying a product, ask yourself a few questions.

1—Is the seller one of the world's most sought-after experts in any area?

2—Does the seller make his or her living in the area in which they're selling a product, or do they make their living selling the product? In Alwyn Cosgrove's words, "Have they been there, done that and are they still doing it?"

3—Has the seller ever made a consistent living coaching, training or helping people lose weight?

4—What does the seller do every day? Does he sit at a computer and write effective sales copy or does he work in the field?

5—Is she making money by telling you how to make money?

6—Did he ever make a substantial amount of money doing what he's selling?

7—Is her resume legitimate or has she inflated her qualifications and client list?

If you don't know the answers, do a little searching and find out. You might be surprised at what you learn. There are a lot of Bernie Madoff's in fitness. Look at the last name, Madoff. Like made off with your money?

I may sound cynical, but I don't want to bankroll some 25-year-old who just read *The Four-Hour Workweek*. Buying products is great. I've bought many and sold many. Be sure when you buy that you're buying a product from a person who has done the work and succeeded.

## *Only One Body*

Imagine you're 16 years old and your parents give you your first car. They also give you simple instructions. There is one small hitch: You only get one car—you can never get another. Never. No trade-ins, no trade-ups. Nothing.

Ask yourself, how would you maintain that car? My guess is you would be meticulous. Frequent oil changes, proper fuel and maintenance.

Now imagine if your parents also told you none of the replacement parts for this car would ever work as well as the original parts. Not only that, the replacement parts would be expensive to install and cause you to have decreased use of your car for the rest of the car's useful life. In other words, the car would continue to run, but not at the same speed and with the efficiency you were used to.

Would we put a lot of time and effort into maintenance if that were the case?

After reading the above example, ask yourself another question. Why is the human body different? Why do we act as if we don't care about the one body we were given. Same deal. You only get one body. No returns or trade-ins. Sure, we can replace parts, but it's a lot of work and it hurts. Besides, the stuff they put in never works as well as the original 'factory' parts. The replacement knee or hip doesn't give the same feel and performance as the original.

Think about it. One body. You determine the mileage? You set the maintenance plan?

No refunds, no warranties, no do-overs?

How about this perspective? One of my clients is a very successful businessman. He often is asked to speak to groups. One thing he tells every group is you're going to spend time and money on your health. The truth is the process can be a proactive one or a reactive one. Money spent on your health can take the form of a personal trainer, massage therapist and a gym membership, or it can be money spent on cardiologists, anesthesiologists and plastic surgeons.

Either way, you will spend money.

The same goes for time. You can go to the gym or to the doctor's office. It's up to you. Either way, you will spend time.

Some people say they hate to work out. Try sitting in the emergency room for a few hours and then get back to me. Working out may not seem so bad.

Much like a car, a little preventative maintenance can go a long way. However, in so many ways, the body is better than a car. With some hard work you can turn back the odometer on the body.

Do yourself a favor—spend some time on preventative maintenance, it beats the heck out of the alternative.

# Part Two
# Training & Olympic Lifting

## *Evolution of a Strength Coach, Part 2*

A few recent events have made me realize all strength coaches will eventually evolve to the same place. Like many, I listen and read a great deal from the internet. One trend that I've seen is that some of the previously hardcore guys are gradually embracing the corrective exercise and functional training side of the coin.

This made me realize why I think the way I do, and why others make fun of me.

The reason I think the way I do and the reason lots of the hardcore guys make fun of me is because I'm old. I'm further along the evolutionary trail of the strength coach.

You see, we all start at about the same place and we probably all end up at the same place. I started my journey sooner. In fact, I'm in year 32 of my evolution. Phase 1 of the Evolution of the Strength and Conditioning Coach, The Bodybuilder, was in the 1970s. I saw Boyer Coe guest pose at a show in Connecticut and wanted to be the next Frank Zane. If you don't know who those guys are, it's okay. You're just too young.

The truth is almost all male strength coaches and personal trainers go through the evolutionary process listed below.

### Stage 1—The Bodybuilder

We all started here. Maybe we wanted to get better at sports, but what we wanted in our teens was to look better for girls. To do this, we picked up a muscle magazine, joined the local gym, copied the routines and began bodybuilding. The beauty of this stage is that we knew it all. We bombed and blitzed our way to success as Joe Weider looked on from the pages of *Muscle & Fiction.*

### Stage 2—The Powerlifter

At the onset of stage two, the bodybuilder realizes the real strong guys in the gym don't give him the time of day. The truly strong guys laugh at him in his tank top as he admires his arms in the mirror. The young bodybuilder and future strength coach is determined to get some respect, so he works on his bench press to gain that respect. What he then realizes is these strong guys don't respect anyone with no legs and a big bench. The bodybuilder soon evolves to the powerlifter.

As in stage one, we still know it all, but what we know is different. We realize what we thought we knew in the stage one wasn't quite as true as we thought. At this stage we never admit any mistakes, though.

Stage two lasts for two or three years, or until the first major injury. You fall in love with the weightroom during this time period. You become diligent about diet and not missing training days, and you get stronger almost every week. Your training partners cheer you on.

Your technique is not perfect, but you're moving big weight. Usually in stage two, you also decide to enter a meet. A meet is great reality therapy.

Your 315 bench done in 'all you' form with a bit of an arch and bounce becomes a 275 pause bench. Your 'parallel' squats suddenly expose your lack of knowledge of geometry. Usually you bomb in the squat in your first meet and resolve to return a much better lifter.

In stage two you're your most macho. You laugh at anyone who doesn't do back squats and deadlifts and post frequently to internet forums. All posts mention how strong you are, and usually some line that belittles those who don't lift heavy iron.

### Stage 3—The Injured Powerlifter

This stage begins with a bad back or a sore shoulder and usually lasts through one or two surgeries. Stage three is like denial in the substance abuse world. You realize your days of lifting huge weights are coming to an end, but you refuse to say it out loud. Your searches of the internet now focus on healing your wounds. You vow to make a comeback. Often, you have surgery and attempt to lift in a meet again. Like a guy repeatedly slamming his fingers in the car door, you can't wait to get back under the bar.

You learn about ART, MAT and a bunch of other therapies that seem to have men's names. You also begin

to sneak a few looks at books on injury prevention and, heaven forbid, you begin to explore things like warm-up and mobility.

You begin to apologize to those older and wiser whom you made fun of and called names during the end stage of the earlier powerlifter. You realize that much like your parents, the guys you taunted on internet forums were older and wiser.

**Stage 4—The Functional Training Guy**

Most of us end in stage four. Usually we have a few scars from our time in stage three putting off the inevitable. In stage four, we realize we can still train. However, the days of trying to pick up the heaviest thing you can lift are gone. You become an innocent bystander watching car wrecks as you see the young guys move from stage one to stage two.

You try to warn them, but they laugh at you and go into their chat rooms and make fun of you. All you can think of is, "Call me when you're 50 and we can talk."

The truth is evolution and development are both inevitable. Young men will always want to impress young women. They will also, in a very primal way, want to impress other young men.

We can only hope to speed the evolution and save people some pain. As you read this, hopefully you will see yourself in one of these stages and intervene. The next time you get ready to lay it on the line, ask yourself why.

## *Sport-Specific Training*

Here's a question that comes up all the time and sounds like a great set-up for a joke. "A parent walks into a strength and conditioning facility and says…."

In many ways, it's a joke on us. Parents regularly walk into a facility and say, "My son (or daughter) plays _____. Can you design a program for _____?"

You fill in the blank based on your area. The sport doesn't matter, because the answer is always the same.

I like to use logic when dealing with parents. My first question is always something like, "Does a fast baseball player look any different than a fast soccer player?"

Most parent will answer no. Then I say, "Our number one goal will be to increase speed."

The key is not to sell sports-specific programming, but to sell a general program to that specific parent.

This is where we go back to the idea of learning to speak 'coach.' Speaking the language of the sport is key to demonstrating your knowledge. Speaking 'coach,' or in this case, speaking 'parent,' comes down to relating what we do to what they want. When the soccer parent can't understand the need for lower body strength training, an explanation about improved vertical jump may not make sense, but the idea of controlling more headers in the box for set plays will.

It's all about knowing the potential client, and in this case the potential client is really the parent of the potential client. The kid has no money, and Mom and Dad are filled with half-truths and buzzwords. Tell a soccer parent that speed work is the key to winning 50/50 balls and now you're the expert.

You have a choice. Be a BS artist and try to tell each parent you can design a sports-specific program, or tell the truth and make them see the generic aspects of speed and power training. The only way to do that is to speak 'sport-specific.'

Like I wrote about in *Learning to Speak Coach,* you need to speak to parents in their language even if you're telling them the same thing. This was the conclusion to my *Learning to Speak Coach* article and it's the same here. Many strength coaches and strength and conditioning businesses fail not because they don't know the material, but because they don't speak the language.

The key is to learn to speak the language. The parent is right there waiting to be sold. Make it an honest sell.

### Improving Foot Speed and Agility

I can't tell you how often I hear a parent or a coach ask, "How can I improve my son's, daughter's or athlete's foot speed or agility?"

It seems everyone always wants the shortcut and the quick fix. The better question might be, "Do you think you can improve foot speed?" or maybe even the bigger question, "Does foot speed even matter?"

That begs the larger question, "Does foot speed have anything to do with agility?" I know coaches or parents reading this are asking, "Is this guy crazy?"

How many times have we heard that speed kills? I think the problem is that coaches and parents equate fast feet with fast, and quick feet with agile. However, fast feet don't equal fast, any more than quick feet equal agile.

In some cases, fast feet might actually make an athlete slow—often I see fast feet as a detriment to speed. Some of our quick turnover guys, those who would be described as having fast feet, are very slow off the start.

The problem is fast feet don't use the ground well to produce force. Fast feet might be good on hot coals, but not on hard ground. Think of the ground as the well from which we draw speed. It's not how fast the feet move, but rather how much force goes into the ground.

This is basic action vs reaction physics. Force into the ground equals forward motion. This is why the athletes with the best vertical jumps are most often the fastest. It comes down to force production.

Often coaches will argue the vertical vs horizontal argument and say the vertical jump doesn't correspond to horizontal speed, but years of data from the NFL Combine begs to differ. Force into the ground is force into the ground.

Vectors don't seem to matter here. The truth is parents should be asking about vertical jump improvement, not about fast feet. My standard line is, "Michael Flatley has fast feet, but he doesn't really go anywhere."

If you move your feet fast and don't go anywhere, does it matter? It's the old 'tree falling in the woods' thing.

The best solution to slow feet is to get stronger legs. Feet don't matter. Legs matter. Think about it this way: If you stand at the starting line and take a quick first step but fail to push with the back leg, you don't go anywhere.

The reality is that a quick first step is the result of a powerful first push. We should change the buzzwords and start to say "that kid has a great first push."

Lower body strength is the real cure for slow feet, and the real key to speed and to agility. The essence of developing quick feet lies in single-leg strength and single-leg stability work… landing skills. If you cannot decelerate, you cannot accelerate, at least not more than once.

One of the things I love is the *magic drill* idea. This is the theory that developing foot speed and agility is not a process of gaining strength and power, but rather the lack of a specific drill. I tell everyone I know that if I believed there was a magic drill, we would do it every day. The reality is it comes down to horsepower and the nervous system, two areas that change slowly over time.

How do we develop speed, quickness and agility? Unfortunately, we need to do it the slow, old-fashioned way. You can play with ladders and bungee cords all you want, but that's like putting mag wheels on an Escort. The key is to increase the horsepower, the brakes and the accelerator.

I love ladder drills. They provide an excellent multi-planar dynamic warm-up. They develop brain-to-muscle connection and are excellent for eccentric strength and stability. We do less than five minutes of ladder drills, one or two times a week. I don't believe for a minute that the ladder is a magic tool that will make anyone faster or more agile.

However, I do believe from the neural perspective, it's a piece of the puzzle. People waste more than five minutes on biceps curls, but then we still have long debates about ladder drills.

I've never used the term speed ladder. We always call it an agility ladder if we call it more than the ladder. These are also a great tool to show to coaches who want foot speed. Sometimes it's easier to 'yes' them than to argue. Give a guy with 'bad feet' a jump rope and you get a guy with bad feet and patella tendonitis.

The development of speed, agility and quickness comes down to good training. We need to work on lower body strength and lower body power, and we need to do it on one leg.

## *Dealing With Hamstring Injury*

Strangely enough, there were three separate forum threads the past two weeks dealing with hamstrings strains and hamstring rehab. I thought it would be better to take the time to write a thoughtful article rather than a rushed forum post.

To begin to understand hamstrings strains, we need to go back to our Shirley Sahrmann idea of, 'When a muscle is injured, look for a weak or inhibited synergist.'

The big key to understanding hamstring strains is realizing the hamstrings are not the problem. Most often a hamstring strain will be the result of either poor progression—not obeying the 10% rule in conditioning or sprinting—or poor glute strength.

Priority one in hamstring rehab is to attack the glute. Bridges, hip lifts, squats, deadlifts and more are key to hamstring rehab. Make the primary extensor the dominant muscle.

Remember, the hamstrings is a secondary hip extensor. The hamstrings group is the third most powerful hip extensor, behind the glute max and adductor magnus. If the glutes are not up to par, the hamstrings will be forced to overwork and will strain. Short-sighted rehab will focus on the hamstrings with foolish open-chain exercises like leg curls. The end result will usually be another strain.

To rehab the hamstrings you need to understand its three functions. As mentioned above, the hamstring works in concert with the glute max and adductor magnus to extend the hip. In order to address the extensor function, we need to include exercises like the one-leg straight-leg deadlift.

In addition to hip extension, the hamstrings also eccentrically act to resist leg extension in sprinting. To visualize this function, think of the muscle acting as a brake to control leg extension while sprinting. Without proper eccentric function of the hamstrings, we would run like drum majors with our legs flying into extension.

The slideboard leg curl and eventually the glute ham raise do an excellent job of addressing the eccentric strength of the muscle. Here it's important to emphasize that prone leg curls and slideboard leg curls have very little in common. The lying or prone leg curl is a useless non-functional exercise that strengthens a muscle that is not often weak to begin with. In contrast, the slideboard leg curl forces the hamstrings to work in concert with the glute in its role as a secondary hip extensor, while also allowing the muscle to eccentrically work both to control leg extension and concentrically to create knee flexion.

The concentric knee flexor role is the least useful of the three roles of the hamstrings, but is the one most therapists and trainers concentrate on. The slideboard leg curl also fulfills this role, but is a closed-chain exercise with an element of ground reaction force, something lacking in the prone version. The most important teaching and coaching point in the slideboard leg curl or stability ball leg curl is that any element of hip flexion is a failure to properly perform the exercise. The hamstring must be forced to perform all three roles to maximize the benefit of the exercise.

Last, but certainly not least, look at your running and speed programs. It's important to closely monitor volume of work in sprints and in conditioning. Repeatedly increasing the volume by more than 20 percent is another cause of hamstring strains. Strong extensors can fail if exposed to poor training programs.

Keep sprints short initially—five x 5-10 yards—and the volume low—five to six sprints. Gradually expose the extensors to greater distances while keeping the volume roughly the same. We do five to six short sprints twice a week, gradually increasing the intensity.

The same applies to conditioning, although volume increases over the summer. Be sure to track your volume and look at percentage of increase in total yardage each week.

Ten percent increases are ideal, but never more than 20 percent.

## *Half-Racks Revisited*

One thing I've become well known for is changing my mind and admitting when I'm wrong. I called this article *Half Racks Revisited* because for years I've told people not to buy half-racks.

In my second book, *Designing Strength Training Programs and Facilities,* I wrote, "Don't buy the currently popular half-racks. Half-racks have become increasingly popular over the past five years, but the truth is a half-rack is a half of a power rack that doesn't cost half as much, but is half as useful. Half-racks are designed with pullup bars, but the reality is you can't simultaneously use the rack for squats and pullups because the squat bar is in the way… half-racks look good, but function poorly."

If you visit Mike Boyle Strength and Conditioning in Woburn, you would see we have gone to all half-racks. What made me change my mind? The new Perform Better PB Extreme rack system eliminated the big drawback of the half-rack. I've to admit, I've always liked the look of the half-rack. They make the room appear less cluttered. It wasn't until I ordered six of them in 2004 and realized we couldn't do chins and squats together as a pair that the drawback became obvious.

The PB Extreme racks with connectors take a design flaw and turn it into a strength. We all know we need approximately six feet between racks. In most cases, many of us used that space to place a tree for plate storage.

However, as rack systems evolved, most racks came with plate storage built into the rack. The between-rack space was now only dead space because for safety reasons we still needed at least three feet between bar ends. This means that the racks themselves must be six feet apart.

Reminder, the rack itself is about four feet wide, but the bar is seven feet long. This means 18 inches of the bar is outside the rack on either end. With three feet between bar ends, we get six feet between racks.

The idea of connectors between the racks takes dead space in your weightroom and suddenly makes it useable. Whether you're doing chinups or mounting a TRX, the between-rack space gets effectively used, and if you're like us and like to pair exercises, this is a huge bonus.

If you read Designing Strength Training Programs and Facilities and decided against half-racks, you might want to look at the new PB Extreme racks and reconsider.

## *In-Season Training—Something is Better Than Nothing*

I often talk to coaches who say, "We don't train in-season; we don't have a weightroom." I think I have a simple, low-cost solution.

Recently, I was approached by one of my former athletes, a two-time Olympian, who is now coaching women's high school hockey with exactly this dilemma. As a former Olympic team member, the coach was well aware of the need for training, but faced the same hurdles so many high school coaches face. *How can I get these young women to train without equipment and a facility?*

I took a few days to think through the problem, as I've always had at least a bare bones facility to work with throughout my career. In this case, it wasn't practical to train at the high school, and the rink had no weightroom.

I contemplated a number of solutions, but had a few obstacles. One, to be effective, the program had to be done at the rink immediately after practice. If not, time commitments and attendance became problems. Two, the program had to be implemented with absolutely no budget. Three, the program would have to be done in a narrow area in front of the bleachers with 20 women at one time.

I thought back to my early *NSCA Journal* days and the excellent articles written by Istvan Javorek about the innovative training he had done at his community college in Kansas. I thought about Dan John's excellent piece called *From the Ground Up,* which you can find on his site, danjohn.net, and the solution became obvious: *Bodyweight and dumbbells.*

I had extra dumbbells at my facility. I had a total of 10 sets of 10-,12- and 15-pound dumbbells, three sets of 10s, four sets of 12s, and, three sets of 15s. Armed with these dumbbells, and the knowledge that we had bleachers, a simple progressive program began to take shape.

Initially, the program would be done primarily with bodyweight. The dumbbells would only be used for two exercises, a dumbbell row and a combination of half-squat, hammer curl, and overhead press. This would make the workout simple, time effective and muscularly effective.

In keeping with our philosophy, the workout needed to be simple, yet cover the important areas.

We chose one exercise for each major area.

**Power—***squat jumps, 3x5*

**Knee-dominant—***bodyweight split-squat, 2x10*

**Upper push—***pushup, 2x10 or 2xMax if less than 10*

**Hip-dominant—***forward-reaching one-leg straight-leg deadlift*

**Upper pull—***dumbbell row*

In addition, the half-squat, hammer curl and overhead press were added to give an introduction to total body combos, and hopefully form the basis for future explosive combos.

Progression concepts were easy. For split-squats, we would add dumbbells in week two and move to a rear-foot-elevated split-squat in week four. We would elevate the feet on the bleachers for pushups. We would change the reaching one-leg straight-leg deadlift to a single dumbbell version when we felt the girls were ready—technique was the greatest issue here—and eventually to two dumbbells.

For the dumbbell row, the plan was to try to procure dumbbells of increasingly larger sizes as strength increased. Upper pulling exercises are the most difficult to replicate without equipment. My idea was to gradually increase the pace of the combo to a squat, cheat curl, push press combinations if the girls continued to gain technical proficiency.

To begin we had two goals. First was to be consistent and train three days a week. The second was to become technically sound.

If we became consistent and technically sound, the wonders of progressive resistance exercise would do its magic. The split-squat would become a rear-foot-elevated split-squat, initially with bodyweight and eventually like the initial split-squat with dumbbells. Finally, we might get to real one-leg squats.

Total time for workout one was about 12 minutes. We introduced the workout and let the girls do it. Remember, the tortoise beat the hare.

Squat jumps were done first, followed by paired pushups and split-squats. Reaching-one-leg straight-leg deadlifts were paired with dumbbell rows, while the squat-curl-press was the finisher.

To be honest, workout one was a little ugly as we struggled to teach 17 relative beginners out of a group of 20. Workout two went much more smoothly as the girls began to understand the process. Workout three began to look like a team lift.

We received odd looks from the collection of parents, siblings and figure skaters in the rink, but slowly the looks switched to looks of respect as they saw the girls work.

Dumbbell rows and overhead presses were a work in progress, but the overall progression was nothing short of amazing. Over a period of a few weeks a group of young women, most of whom had never before lifted a weight, began to grasp the basic concept of progressive resistance exercise.

The key to this program is that it's balanced, simple and cheap. This is exactly what the high school coach is looking for. So… stop making excuses. Start rounding up some old dumbbells and get your in-season program started.

Ask yourself, "How can I get it done?"

## *Weightlifting Belts?*

Recently someone wrote and asked if we used weightlifting belts at Mike Boyle Strength and Conditioning. Rather than respond with a quick 'no,' I decided an short article would be a better vehicle to get my thoughts across.

The use or non-use of weightlifting belts can be a tricky topic. I'm not a weightlifting belt fan, but there are some 'experts' in the medical field who feel weightlifting belts are beneficial. Even though I don't agree with them, I also don't want to end up in court. I can just imagine an injured athlete trotting out an expert witness who is a doctor, and the doctor says the athlete should have been wearing a weightlifting belt to 'protect his back.'

We live in a litigious society. People are always looking to sue someone. My feeling is you should cover your butt when it comes to weightlifting belt use. As a result of this thought process, our policy is simple. We don't recommend that our athletes use weightlifting belts, but we don't tell them not to. We take the Switzerland approach; we are neutral.

Even though we might have an opinion, we keep it to ourselves.

We keep a few cheap Velcro-type belts around in case anyone asks if they should wear a belt. My response is always, "Sure, if you feel like you need one."

If the person persists in questioning, I always say, "It's up to you."

If I sound a bit wishy-washy, so be it. I always say think like a lawyer first. It's great to be a hard ass until you get sued.

Is Foam Rolling Bad For You?

As is always the case of life on the internet, someone has to decide to take the other side of an argument. I often think those who do so are looking for recognition in a crowded field.

Recently, we have had two widely distributed articles critical of foam rolling.

I find it funny because it seems difficult to criticize something that universally makes people feel better. In one article, which was written four years ago, the author Mike Nelson, makes the very basic case that pain is bad—the foam roller causes pain, so the foam roller must be bad too.

However, in reading the author's bio, I can't help but notice he has been a student for the last 16 years as opposed to a coach and moreover, carries a clear bias toward the neurological origins of pain.

I'm not discounting the neurological basis of pain as that would be illogical. But the author's primary premise seems to be that pain is bad and should be avoided at all costs. It's also worth noting that the author is a paid practitioner of a technique he feels is better than foam rolling.

It's obvious I don't agree. I intend to make a scientific case for my disagreement rather than a personal one.

I'm also of the belief that pain is bad. However, I will qualify that statement and say that most pain is bad. In the case of the foam roller, I will go so far as to say pain is good. I frequently tell my athletes the foam roller is the only violation of our Does it Hurt? rule.

In a nutshell, my normal reaction to any question as to whether someone should do any exercise is to ask, "Does it hurt?" If the answer is no, the exercise is generally acceptable. In the case of foam rolling, though, I think we need to seek out painful spots.

Foam rolling is counterintuitive.

Mike Nelson's theory is based on the belief that pain is neurological and it causes reflexive actions, all of which are negative.

However, in the world of physical therapy, the belief is widely held that often painful techniques of soft tissue mobilization are essential to produce long-term healing.

What he fails to acknowledge in his treatise on foam rolling is that in the end, the process is about chemistry, not electricity. All mechanical and neurological inputs become chemical inputs. It's clear scientific fact that the disturbance caused to tissue via mobilization through rolling, massage, Graston or ART in effect irritates the tissue. This irritation is painful in the short term, but the response is often a healing one, not a negative one. In soft tissue mobilization, the tissue is deliberately disrupted in order to produce the exact substances that tissue needs to heal and to realign.

Mike also attempts to draw a line between massage and foam rolling by saying the skilled hands of a therapist in essence make soft tissue mobilization okay. His premise is that soft tissue work done by a person is infinitely better than pressure provided by an inanimate object. Again, this logic is flawed.

He makes the case that a skilled therapist knows how much pressure to use, while a people working on themselves will produce so much pain as to render the technique useless. To be honest , I think most people are much easier on themselves than a therapist would be. I don't think I've ever seen a bruise produced by a foam roller, but I've seen numerous bruises produced by well-meaning massage therapists.

The second, more recent anti-rolling article focused on the IT band. The author, a muscular therapist, focused on the fact that the IT band couldn't be changed through foam rolling. He implores us to stop rolling the IT band. Again this anti-rolling article was widely distributed on the internet.

However, if you continue to read into the comment section of the post, the author makes two critical points. In one post, he says he is ranting and is not sure if he even believes himself. In another, he eludes to the fact that maybe he wrote this when he was having a bad day.

In any case, both blog posts were widely read and distributed without the accompanying comments.

Now then, back to why we foam roll. In the simplest sense, rolling is step one on the preparatory process. Our pre-exercise goal is to prepare the tissue for the stresses about to be applied. Proper tissue preparation allows an athlete to perform a workout without injury.

I think or hope we can accept the position tissue changes in response to stress.

If the tissue is optimally stressed, the resulting adaptation is positive. If the tissue is overstressed by inappropriate volume (too many reps), speed of lengthening (too fast), or inappropriate overload (too much weight), the tissue response can shift from positive to negative.

Although tissue soreness is normal, we must acknowledge there is an ideal amount of that normal response and the response should be limited to the muscle tissue and not be present in the connective tissue. In other words, sore quads would be okay, but sore knees would not be okay.

Additionally, muscle soreness and tissue damage can be the result of blows to the tissue instead of the planned application of stress. This tissue damage must also be mitigated, not just by time. It's important that tissue maintain its ability to properly deform. Loss of this tissue deformation ability results in what is called a stress riser. These stress risers set us up for later injury.

The big take-away point is that thousands of athletes are rolling every day and getting a good results. Two blog posts should not be enough to relieve us of our common sense. Pressure to tissue when well-applied seems to produce positive results. Even if we're not confident of the exact physiological response, the results of thousands of athletes speak for themselves. Don't be fooled by internet writers looking to take a contrarian stance to get site hits. Focus on results. Massage works, and so does foam rolling. Ask anyone who does it.

Quick note. I've often said the density of the roller corresponds to the density of the athlete. If you lack muscle, try Yamuna balls or soft white rollers—yes, I know they don't last, but it's a compromise.

Progress to the Perform Better black roller as tolerance improves.

## *In-Season Training for Football*

Football in-season training presents some interesting issues. It's essential for football players to maintain or increase strength during the in-season period, yet they must do this while putting the body through the extreme stresses of physical contact on an almost daily basis.

These two processes seem to be mutually exclusive. How do you deal with the soreness produced in the body by the first few weeks of contact, while at the same time beginning an in-season program to maintain or in the case of freshmen and red shirts, improve strength?

A modified Russian peaking cycle is the most effective solution I found. The key to the modified Russian peaking cycle is that the athlete is only asked to lift 80% of the one-RM for sets of two reps. This is well below the expected seven or eight reps at 80%, and allows the players to feel a moderately heavy weight.

For the next four weeks—weeks two through five—the load does not increase and the player is simply asked to get one additional rep per week, ending with 80% for six reps. This is still below the athlete's actual capability and as a result is very achievable.

In weeks six through ten, the load is increased by 2.5% per week, while the reps are decreased by one per week. The end result has the athlete performing singles at over 90% in week 10.

If the athletes can stay with the program, they will have maintained a minimum of 90% of their preseason strength. This is done without ever exceeding six reps per set, and can be done with starters for as little as one heavy set per week. A little can go a long way in-season.

## *In-season Keys*

1. Get frequent workouts, ideally three per week, with higher intensities, but lower volumes. Intensity is the key to training, not volume. This applies even more in-season.

2. Begin with loads that are achievable even when sore in pre-season.

3. The first workout is a squat day. I love front squats, but whether you front squat or back squat, get your guys to squat on Sunday or Monday, whichever is the first lifting day. Squatting is mind over matter. Anyone can get 80% for two.

In-season is a great time for the safety squat bar. I never let my guys hold on to it, but the safety squat bar

allows a guy with a hand injury to squat. I also like belt squats in-season for guys with back issues. The key is to never let them avoid squatting. That's a slippery slope.

4. The second workout of the week is bench press. Never have them bench on day one. However, you may never see them again if lifting is not mandatory.

5. The third workout is hang clean. I like this on Thursday for a Saturday game. I also use this as a secondary upper body day. This is less muscular stress and more neural.

**The Russian peaking cycle modified for in-season**

* *The original called for up to six sets.*

*Week 1: 80%x2x2*

*Week 2: 80%x3x2*

*Week 3: 80%x4x2*

*Week 4: 80%x5x2*

*Week 5: 80%x6x2*

*Week 6: 82.5%x5x2*

*Week 7: 85%x4x2*

*Week 8: 87.5%x3x3*

*Week 9: 90%x2x3*

*Week 10: 92.5%x1x3*

## *In-Season Training for Soccer and Field Hockey*

In-season strength training for any sport should not vary much. The goals of any in-season program are nearly identical. For upperclassmen, you want to maintain the strength and power developed in the spring and summer programs. For the freshman and redshirts, the goal is to improve over earlier programs.

The article I wrote on in-season training for football presented some ideas on strength cycles that will be useful for any coach in-season. The only difference between in-season training for football and in-season training in any other sport is that football coaches and strength coaches place a great emphasis on in-season strength training. This shouldn't be unique—that should be the same for every sport.

Consistent training during the in-season period will form the backbone of the long-term success of the strength and sport program in sports like field hockey and soccer. It's much easier to get stronger in the off-season when you maintain strength during the in-season. It's a waste to spend off-season time regaining lost strength. I'm always looking at the training program as a four-year process whether I'm coaching at the high school or college level. In an ideal world, progress will be an upward progression of strength, power and speed every year.

I've used some of the same keys from the football training because the body does not change. The only thing that changes is the coach's perception.

**In-season Keys**

1. Get frequent workouts—realistically two per week—with higher intensities, but lower volumes. Intensity is the key to training, not volume, and this applies even more in-season. Never skip an in-season workout. A 15-minute, one-set workout is better in the long run than a missed day.

2. Work lower body strength and power in-season. Don't 'save the legs.' If you save them in September, they will fail you in November. See number one above: *High intensity, low volume*. One or two sets of an Olympic lift and one or two sets of a squat or variation will go a long way.

3. Only listen to workers, not whiners. Don't let the inmates run the asylum. Athletes hate in-season lifting. It's like going to the dentist—necessary and often painful. Most young people don't know what's good for them and will usually take the path of least resistance. No optional workouts, no choices of lifts, no phantom injuries that mean they can't work the lower body.

Sport coaches have to be convinced that if athletes are too injured to lift, they're too injured to play. You will be amazed how fast kids get healthy. Our policy, if you didn't talk to the trainer, you weren't hurt.

Field hockey specific issues—some may consider this sexist, but I'm going to say it anyway. Most of the female athletes I've worked with, and nearly every female field hockey player, find muscular legs unattractive. Muscular legs are unfortunately a necessary evil in sports. One way to compromise is to include more hip-dominant work and less knee-dominant work. Maybe one-leg squats once a week and either try trap

bar deadlifts, one-leg SLDL, or slideboard lunges the other day. This means you would prioritize glutes and hamstrings over quads.

## *In-Season Training Part 2: Days—Sets—Reps*

A recent post on in-season training in the *StrengthCoach.com* forum made me aware that in spite of writing three articles in the past year dealing with in-season training, I had left some ground uncovered.

**Consecutive Days**

One question that came up centered on training on consecutive days. I've always recommended two-day in-season programs. One reader took this to mean it would be okay to train two days, but to use consecutive days and do an upper-lower split. This defeats the purpose. Let me clear things up. In-season training should consist of two non-consecutive total body workouts. Doing a split routine is actually like training once, not twice.

**Sets and Reps**

Sets and reps are easy: I like to undulate reps every three weeks, and I like to keep sets low. Three sets of an exercise would be very high volume for us in-season. Most often we do one or two sets. We rarely go beyond 10 reps in-season. We also rarely do fewer than three reps. For power exercises we simply alternate between three sets of three and three sets of five. For strength exercises we will use 3x3, 2x5 or 2x10. Most assistance exercises will be done for two sets of 10 through the in-season period.

**Ladder, Plyometrics, Agilities**

Another question that comes up frequently is about ladder work, agility, plyometrics. The in-season program is a strength program. If we lift post-practice, we don't do any pre-workout, preparatory things. We come off the ice, we pick up our sheets and begin lifting. If we lift prior to practice we follow our normal pre-practice routine of foam rolling, static stretching and dynamic warm-ups. We rarely do any speed, agility or quickness exercises in-season. My goal is to use the time to work on strength.

| Boston University | In Season | 2006 | P-3 | | | | |
|---|---|---|---|---|---|---|---|
| Name | Bench | Squat | Clean | BW | Pullup | Close Grip | |
| Boyle | 250 | 315 | 250 | 205 | 267 | 180 | |
| | Tempo | | Wk 1 | Reps | Wk 2 | Reps | Wk 3 | Reps |
| Day 1 | | | | | | | | |
| Snatch | Exp | | 113 | x3 | 113 | x3 | 113 | x3 |
| *Yoga table 3x6 w/ 2 sec hold* | | | 119 | x3 | 125 | x3 | 131 | x3 |
| *Same Arm Same Leg 3-4-5x10 sec* | | | 119 | x3 | 125 | x3 | 131 | x3 |
| | | | | | | | | |
| Pullup | 1/0/1 | | BW | x5 | BW | x5 | BW | x5 |
| *Landmine 2x10* | | | 22 | x3 | 29 | x5 | 35 | x5 |
| | | | 22 | x3 | 29 | x5 | 35 | x5 |
| RFE 1 Leg Squat | 1/0/1 | | 107 | x5 | 107 | x5 | 107 | x5 |
| | | | 107 | x5 | 120 | x5 | 133 | x5 |
| | | | 107 | x5 | 107 | x5 | | |
| Bench | 5/0/Exp | | 225 | x1 | | x1 | | x1 |
| *Elevated Side Bridge 2x15-20-30* | | | 225 | x1 | | x1 | | x1 |
| | | | 225 | x1 | | x1 | | |
| *Lying Active Hamstring 2x8 ea,* | | | | | | | | |
| 2A 1 L SLDL | 1/0/Exp | | 38 | x5 | 41 | x5 | 44 | x5 |
| ( weight is for each Dumbell) | | | | x5 | | x5 | | x5 |
| | | | | x5 | | x5 | | x5 |
| Day 2 | | | | | | | | |
| Snatch | Exp | | 113 | x3 | 113 | x3 | 113 | x3 |
| *Yoga table 3x6 w/ 2 sec hold* | | | 119 | x3 | 125 | x3 | 131 | x3 |
| *Same Arm Same Leg 3-4-5x10 sec* | | | 119 | x3 | 125 | x3 | 131 | x3 |
| | | | | | | | | |
| DB Incline | | | 68 | x6 | 68 | x6 | 68 | x6 |
| *Elevated Side Bridge 2x15-20-30* | | | 68 | x6 | 70 | x6 | 73 | x6 |
| | | | 68 | x6 | 68 | x6 | 70 | x6 |
| 1 Leg Squat (1/2 Roller) | | | 10 | x6 | 10 | x6 | 10 | x6 |
| ( weight is for each Dumbell) | | | 2 | x6 | 8 | x6 | 15 | x6 |
| *3D Lat Stretch* | | | 2 | x6 | 8 | x6 | 15 | x6 |
| | | | | | | | | |
| DB Row | Exp | | 69 | x6 | 69 | x6 | 69 | x6 |
| *Rollout 2x10-12-15* | | | 69 | x6 | 72 | x6 | 75 | x6 |
| | | | 69 | x6 | 69 | x6 | 72 | x6 |
| | | | | | | | | |
| Slideboard Leg Curl | 1/0/1 | | | x8 | | x10 | | x10 |
| *Lying Active Hamstring 2x8 ea,* | | | | x8 | | x10 | | x10 |
| | | | | | | | | |

## *Step-Ups, Step Downs and One-Leg Squats*

There a lot of confusion about single-leg exercises in strength and conditioning and physical therapy. I've written extensively in my all three of my books about single-leg exercises and single-leg progressions, but sometimes things are worth repeating.

I often see the terms step-up, step down and one-leg squat used almost interchangeably in the literature. I also think many coaches think these three exercises are similar. The truth is, all three share similar movement patterns, yet the three are distinctly different.

Let's look at all three.

### Step-Up

Step-ups can be a great explosive exercise, but they're a bad choice as a strength exercise. However, for some reason they remain popular. I think the reason they stay popular is this is an easy exercise to cheat on. For most people step-ups are a true combination exercise. They're usually a combination of the extensors of the working leg and the calf of the non-working leg. The bottom line for me is that step-ups are hard to do well and easy to do poorly. That makes them a poor exercise choice in my book.

In addition, step-ups have another huge drawback. A step-up begins with an almost pure concentric contraction. In that way they're similar to chinups. For athletes with knee issues, particularly patella-femoral issues, step-ups can be an uncomfortable exercise that can cause problems. Without the preceding eccentric component of starting in extension loaded by gravity found in most squatting exercises, the knee can experience some discomfort that could otherwise be avoided.

Often athletes with patella-femoral pain will find one-leg squats or step downs relatively comfortable, but will get pain with step-ups. Step-ups begin in flexion with little to no eccentric load. Imagining asking someone with bad shoulders to bench press off the pins of a power rack. Anyone with shoulder issues would cringe at the idea. There's a clear benefit to eccentric preloads when it comes to the patella femoral joint.

### Step Down

The step down is not a step down at all, but rather a limited range one-leg squat. This is another example of the poor terminology we are often saddled with in our industry. I like step downs as they're an excellent progression to a one-leg squat. The key difference between a step down and a step-up is the step down begins with an eccentric contraction.

The other major difference is that although the toe or the heel may touch the floor, the eccentric load is never lost. In step downs, the free leg often goes behind or to the side, but is held relatively straight. In the step-up, the action is a concentric action of hip and knee extension with relatively no preceding eccentric contraction. In the step down, the concentric action is in effect set up by a preceding eccentric contraction. The key to patella-femoral health may be that the preceding eccentric contraction allows the patella to sit properly in the trochlear groove. The step down is most often done from a low, 12-inch box to a heel touch or a toe touch.

The step down is an excellent way to begin to develop both lower body strength and femoral control, but as mentioned above is a deliberately range limited one-leg squat.

### One-Leg Squat

The one-leg squat is the king of single-leg exercises and the gold standard in rehab. In a one-leg squat, the body is now unsupported and the range can be as large as is tolerated. Ideally, athletes can single-leg squat to a position where the femur is parallel to the floor.

In the one-leg squat, the free leg is carried in front and never touches the floor, unlike the step down. The pistol squat is a popular internet version that I'm not a fan of. In that, the free leg is held out to a parallel position and the spine is allowed to go into a posterior tilt. We have had problems with back spasms and cramps when we attempt this lift, particularly with taller athletes. The effort needed from the rectus femoris, psoas and iliacus can cause problems in the low back.

For this reason, we advocate that the free leg is held just high enough to clear the floor and there is a deliberate attempt to maintain a flat lumbar spine. We always use at least five pounds in each hand to create counterbalance. This allows a flatter back and eliminates the large posterior tilt of the pistol one-leg squat.

The key is to realize these exercises, although seemingly similar, have some significant differentiating points. Think of step-ups as an exercise to be used sparingly and with healthy athletes. Think of the step down as a rehab progression into a one-leg squat. I hope you can take a minute and try them for yourself.

## *Poor Shoulder Mobility Leads to Low Back Pain?*

I had an epiphany the other day, another ah-ha moment. Sometimes when these ideas occur, I can't decide whether I'm smart or dumb. Am I smart because I had this thought or dumb because it took so long?

A member of my staff and I were talking about wall slides. If you don't know, wall slides are a great exercise borrowed from physical therapy to develop the combination of shoulder mobility and scapular stability. Wall slides are one of my favorite upper body warm-up and correctives.

As the discussion progressed, my young trainer asked about the tendency of our athletes to have to arch their backs to get into a fully externally rotated position to perform the exercise. Strangely, up to that point I had not thought about the relationship between external rotation, shoulder flexion and lumbar extension.

I then realized the compensation for poor shoulder mobility was lumbar extension. This thought brought shoulder mobility into a whole new light. Poor shoulder mobility became a major causative factor in back pain. How could I've missed this for so long?

If I try to overhead press and lack shoulder mobility, what do I do? I extend my lumbar spine. If I try to position the bar to back squat and I lack shoulder mobility, I arch my back. If I try to get my elbows up in the clean or front squat and lack shoulder mobility, what do I do? As with the wall slide, I extend my lumbar spine.

Just as we know the hip and spine are linked, so are the lumbar spine and the shoulder. Next time you have an athlete with low back pain, don't just look at hip mobility, look at shoulder mobility and at exercise selection.

This might be why we have less low back pain when we dumbbell or kettlebell split-squat or when we deadlift instead of squat. The elimination of forced external rotation in those who lack it may cause a significant decrease in back symptoms. It's amazing what you learn when you listen and think.

## *Picking Set Three*

Our staff meetings, and the conversations in those meetings, always lead to great article ideas. One thing that comes up a lot is the idea of choosing weights for athletes. It's like the three bears. We don't want the weight selected to be too heavy or too light; we want it to be just right.

In the perfect heavy set, the last rep looks like, well, the last rep. In a perfect world, you know the athlete could not get one more rep. With the perfectly selected load, there is no need for a spotter and also no need to think, 'He could have done five more pounds.'

We always talk about the process of picking what weight to do next as the intersection of the science of strength training and the art of coaching. To envision what I mean, imagine you watched an athlete complete the first work set of a planned three-set workout.

**Note:** *Workouts for us are usually a warm-up set, followed by two work sets.*

After watching the set you have three choices.

—You can have the athlete **increase the weight,** rarely by more than five pounds if you're any good at selecting the first work set, and often by 2.5 pound using 1.25 plates.

—You can have the athlete **use the same weight** on the next set.

—You can have the athlete **decrease the weight.** If we decrease, I always go at least five pounds. I will rarely use the 1.25 plates in this case.

Hit it right and you're a genius. Hit it wrong and the athlete fails and is psychologically crushed.

When making the decision to go up, down or repeat, we keep the same vision in mind. The last rep should look like the last rep.

I've often said this is where experience as a lifter comes in, and for this reason I want my coaches to train themselves.

Experienced lifters instinctively know what that next set should be. They can tell if you need to go up, go down or repeat.

Remember, male athletes egos are often stronger than they seem to be. They will always say, "I can do more." You have to select based not on their desire or ego, but on your experience.

Female athletes can often be the opposite. Women may underestimate.

In the case of young men, the answer will often be repeat or go down. For young women, the answer might be the 2½-pound increase with 1¼ plates. The most important lesson is that slow and steady wins the race.

Any time you think you're being too conservative, remind yourself that five pounds per week for 10 weeks is 50 pounds. This will also remind you to not be greedy.

Also remember on the flip side that five pounds is 10 percent of 50 pounds. Five is to 50 as 30 is to 300. Think about that for a minute when you tell a young athlete to go up 10 pounds.

Choosing weights and creating a challenging environment for athletes may be one of the most important coaching skills a young coach can learn. Coaches need to develop a thought process that allows them to make the right decision to positively impact the long-term success of each athlete.

## *A Comeback for Lat Pull-downs?*

I never thought I'd be writing an article about lat pull-downs. I've championed chinups and pullups as superior in all of my previous writings, but as always, times change, people change and Mike Boyle Strength and Conditioning changes.

If you asked me today what to do for upper body pulling, I'd tell you to do bodyweight rows on the TRX or rings, and follow that up with one of the variations of the pull-down.

Think of the TRX or ring rows as the heavy horizontal pulling exercise and the lat pull-downs as the lighter vertical pull. From here on in, I think I'll call them pull-downs because pull-down exercises work a lot more than just the lats. Pull-downs work the lats, the lower and middle trapezius, the rhomboids and the serratus to name a few muscles. And please don't ever call these lateral pull-downs. Lat is short for latissimus—as in latissimus dorsi—not lateral.

Why the change of heart? To be honest we've found most people are simply not able to do vertical pulls like chinups or pullups very well. As much as I like them for elite athletes, I've been guilty of jamming a square peg into a round whole once again. As our client base moved from primarily athletes to a mix of athletes and normal adults, our thought process changed. The reality was the majority of our current clients are a long way from pullups and chinups. In addition, older clients or those with shoulder issues have trouble with bodyweight vertical pulls like pullups.

An exercise like the TRX or ring rows is far more scalable than the pullup. We can use bands, we can do isometrics, we can do eccentrics, but can we do these things well? What we see in our facility are people overusing the upper traps and biceps in vertical pulling exercises like chinups and pullups. I don't see this nearly as much in the TRX row or in rows with rings. In the TRX or ring row I see a fully scalable exercise I can progress or regress to my needs, something far more difficult to do well with a pullup or chinup.

We can use the bodyweight row as the primary exercise, and complement it with versions of the pull-down. In this way, we get the best of both worlds.

Another reason I like pull-downs is the invention of the Functional Trainer. No, not the person standing on the BOSU… I mean the machine with the two arms.

Think about this. Why did we used to do all our pull-downs with both hands on a fixed handle? Answer: Because everyone else did and we had no other choice.

For years, the lat bar or the V-handle or whatever handle you chose determined how the shoulder would work in the pull-down exercise. Suddenly companies like FreeMotion and Keiser developed units they call Functional Trainers with two independent arms and two independent handles. A whole new group of shoulder-friendly exercises were born in the process. We could now use both arms at the same time, but separately. Is that possible? It is now.

The functional trainer became like a dumbbell for the shoulder in pulling exercises. We could now select the best hand position versus having the hand position selected for us.

Why does this matter? How many lifters do you know with shoulder problems? Lots, right? Do you know what one of the primary causes of shoulder problems is? I'll tell you: It's the constant rubbing of the rotator cuff tendons under the acromial arch. The rubbing leads to attrition of the rotator cuff tendon, much like pulling a rope back and forth across a rock. If you pull with a fixed bar, you rub the same portion of the tendon under the acromion every time.

Grab the handles of a Functional Trainer. When most people do this, they try to mimic the position of the straight bar. This is dumb! We do an X pull-down and it's the ultimate shoulder-friendly exercise.

Our instructions are clear. Start thumb down—internally rotated at the shoulder. Finish thumb up—externally rotated at the shoulder.

If I move from a thumb down position to a thumb up position what action have I added to my pull-down? External rotation! I've made the shoulder move in a very joint-friendly spiral and diagonal pattern, and I've added a little rotator cuff twist. This exercise went from zero to hero in my book.

Another big teaching point comes courtesy of Michol Dalcourt: *Tell your clients to push the chest toward the machine.*

Guess what? You got them to retract the scapula just like you wanted them to, but you didn't need to cue them to pinch the shoulder blades. Michol made a great point. You can't push your chest forward and shrug your shoulders. Pushing the chest forward is retraction. Shrugging is elevation. Want to eliminate shrugging at the top of the pull-down? Cue chest to bar, not bar to chest.

Yet another great point Michol made: *There are no muscles that move the chest forward, only muscles that move the shoulders back.*

However, the result of the two cues— shoulders back vs chest forward—can be totally different. Try it. It works every time.

Want to add a shoulder stability component? How about alternating X pull-downs?

By holding the arm in the down position, I can get more low trap and rhomboid (think W from your Y-T-W series), while the opposite side gets its retraction, depression, extension, horizontal adduction and external rotation. Talk about bang for the buck. We can now combine a scapula stability exercise with our vertical pulls.

Want a little variety? Try alternating without the crossed grip. With these three exercises, we now have lots of great shoulder-friendly exercises for all our athletes and clients.

Did I mention that the reason I love the TRX Row is for the same ability to add that shoulder-friendly component of external rotation? If you watch videos of the TRX row, you'll see the movement from internal to external rotation.

Does this mean we don't do any pullups or chinups? No. What is means is we use the right exercise with the right client. If I have young athletes capable of doing pullups and chinups, you can bet they will do them. If I have older clients with neck and cervical issues or younger clients with strength issues, you'll see the bodyweight row and pull-down combo.

Either way, give these a try, your shoulders and your clients will thank you.

## *The Wisdom of Dan John*

I've to admit, I'm a big Dan John fan. Even before we met, I had a great appreciation for Dan's work. I read his first book *From the Ground Up* and his second book *Never Let Go* before we met. I had also read numerous T-Nation articles in between. Recently, I began listening to the audio of Dan's *Intervention* seminar and that was what prompted this article.

Dan John gets it. He has walked the walk as an athlete and as a coach for almost 30 years and it shows. I want to share with you a few pieces of wisdom I've taken from Dan's books and seminars. I also want to make it clear the key to being a great coach is never to think you're too good to learn and change.

**1. If It's Important, Do It Every Day**

Reading Dan John is a funny thing. Sometimes it takes a while to get the meaning behind his thoughts. When I first read this concept I thought, 'Dan is losing it.' You can't squat every day. As I continued to read, it became obvious he was talking patterns, not lifts. The message was, 'If a pattern is important, practice it every time you train.'

I took this to heart and now make sure we do some type of single-leg knee-dominant exercise every day, and some type of single-leg hip-dominant movement every day. In Dan's words, we do a squat and a hinge every day.

For us this may mean we split-squat or lunge and do reaching one-leg straight-leg deadlifts as warm-ups on a day we're doing primarily upper body work, but we make sure we are doing legs and core work every day.

**2. Loaded Carries**

I had Dan out as a guest speaker for our annual Mike Boyle Strength and Conditioning Winter Seminar recently. The one big thing I took from Dan's talk was the idea of loaded carries. Stuart McGill had already sold me on the idea that carries were just moving planks, but even though I liked the idea, we hadn't incorporated them.

When Dan was done, one of my staff members asked me what my big takeaway was and I said, "Loaded carries."

If I look at what Dan believes and what I believe—we were very close. The big gap was that we didn't do loaded carries. This year we added suitcase carries and farmers walks in as a 'rest' between our sets of sled pushes. Was it the perfect place? I'm not sure, but we had our athletes out on a long length of turf and it sure made sense to me.

This was a case of looking at another great coaches program, comparing it to ours and correcting an obvious weakness.

**3. Goblet Squats**

I'm not sure if Dan invented the goblet squat or named it the goblet squat. I only know he was the first person who exposed me to the concept.

One weakness in Dan's early writings was a lack of video or pictures. Dan would go on about goblet squats and I'd look at the page quizzically and think, 'I've no idea what he means.'

I'm not sure exactly when I got it, but I do remember trying goblet squats in the summer of 2010. Dan had raved about them and seemed to hold them in an almost mythical position, so I was determined to try them. I went into our facility and instructed our coaches to switch our worst squatters from whatever type of squat they were doing to goblet squats. Some were attempting to learn to front squat; others were just bodyweight squatting.

The addition of the dumbbell in the goblet position was nothing short of a miracle. Every single athlete, all chosen for a lack of squatting technique, improved dramatically. I was sold, so sold that we decided the first loading position for any athlete in any squatting movement would be the goblet position.

**4. Standards**

I love the idea of standards. This was another note I took from Dan's talk at our winter seminar that was reignited in my mind as I listened to the audio of *Intervention*. Dan has a way with words. In *Intervention,* he uses the line, "My standard standard." I thought it was funny. I also thought it was brilliant.

**Dan's standard-standard is simple—**
*Bench=Front Squat=Clean*

Many readers will take offense to this, but if you train athletes, this could not be more true. The reality is if you have the capability to bench press 300 pound, you also have the capability to front squat it and clean it. If you can't, the reason is simple. You aren't trying hard enough.

Dan goes on to provide a standard for high school football as follows.

*Clean 205*

*Bench 205*

*Squat 255*

*Clean + jerk 165*

Not exactly impressive numbers, but they add up to a good athlete who has spent some time in the weight room doing the right things.

Dan went on in *Intervention* to describe one more standard in the loaded carry category. If you can farmer walk your bodyweight split between two dumbbells for 50 yards, you're pretty strong.

Standards—you can argue if you want, but they make sense.

I know with my Boston University hockey players I want the same standard, slightly different.

*Bench 5 RM=Hang Clean 5 RM=Rear-Foot Elevated Split-Squat 5 RM*

If my guys can do that, I know we are working hard in all areas. If they're exceeding the bench 5RM in the hang clean and RFESS, all the better. I always tell my guys, "If you're going to stink at one lift, stink at the bench. It's the least important."

Our last standard?

*Bench Press 1 RM=Chinup 1 RM*

The chinup is the combination of bodyweight plus the weight on the dip belt. If you can do this, you're very unlikely to get a shoulder injury and you're pretty strong. Our average player will do one chinup in a test situation with 90-120 pounds.

**5. Reps**

The last bit of wisdom relates to the concept of reps. Dan has what he calls the Rule of 10. In Dan's world the rule of 10 applies primarily to the deadlift, clean and snatch.

To me, it applies to everything. In an 80/20 world, 80 percent of the time the workout should be 10-15 reps. Twenty percent of the time could be higher or lower.

Dan notes that most classic workouts tend to total about 25 reps. My feeling is that after warm-ups, it still comes down to about 10 good reps.

The big takeaway? Read some Dan John—there's plenty here. Whether you coach yourself or you coach others, 30 years of experience is a deep well to draw from.

## *Power Cubed*

Once again social media has produced an article idea. What would I do without Facebook?

Recently, my 12-year-old daughter published a YouTube clip of herself doing a set of hang cleans. Not only did the clip produce a technical discussion about Olympic lifts, it produced a theoretical discussion about training for power. One topic that came up was, "How do we train for power?"

I realized that although I knew the answer, I don't think I've ever written it down. At Mike Boyle Strength and Conditioning power development is generally a three-part process. In a perfect world with a healthy client, power training is done in three different ways.

**Method 1—Light-Implement Power Development**

Light-implement power is basically medicine ball throwing. Light implements are used to develop power in a number of patterns. The key here is that the weight of the implement can be chosen based on athlete or client's strengths and or needs.

For us, light implement power is generally divided into overhead throws, chest throws, slams and rotational patterns. For overhead work, we rarely exceed three kilos or six pounds. For chest throws we use 8- or 10-pound Dynamax balls. We generally use the same weight Dynamax balls for rotational power. The Dynamax balls are great as they emphasize the concentric part of the throw.

With light-implement power, the load is released from the hands. Everyone we train throws med balls. Young or old, everyone throws.

In this method light implements are thrown at high velocity. With medicine balls, we can more easily access the velocity end of the force velocity curve as the load is light and easy to accelerate. Light implements like the medicine ball can also be used for lower body power, although we rarely do that at MBSC.

**Method 2—Bodyweight power**

Bodyweight power is basically lower body plyometrics. In bodyweight power training we're dealing with a wide continuum, from the highly elastic athlete to the overweight personal training client.

With bodyweight, power training coaches and trainers must be far more careful than with medicine ball training. In bodyweight power training, the bodyweight becomes a difficult but not impossible constant that must be accounted for. Everyone throws medicine balls in our programs, and in a perfect world, everyone will also be doing bodyweight lower body power work.

Unfortunately, the client's bodyweight is a constant force that can be greatly magnified by gravity. Bodyweight power work will develop the power production of the hips and legs, but proper progressions are essential. It's important to note that what constitutes

warm-up in an athlete's program might be considered bodyweight power work for an adult client.

Bodyweight power—basically jumping and hopping exercises—must be used with great care. The MVP Shuttle is an excellent tool to work on power development for adult clients as the Shuttle allows power development work at gradually increasing percentages of the bodyweight. A Pilates Reformer or Total Gym can also be used for these purposes.

The big keys here are the speed component and the eccentric response to gravity.

**Method 3—Heavy Implement Power**

In heavy-implement power work, the implement used generally falls into two categories. Athletes or clients will use external loads in the form of kettlebells or Olympic bars. The vast majority of our clients will use this third method. The exclusion might be some of our older clients or those clients with chronic back pain.

In general, older non-competitive athlete clients won't perform Olympic lifts. I think Olympic lifting for adults is a poor choice on the risk-to-reward scale. Our healthy adult clients will use kettlebell swings for external load power development. There is a much smaller learning curve and lower loads with the kettlebell.

Power development is essential for both athletes and non-athletes. Athletes obviously need power work to improve performance, while adults need power work to offset the age-related loss of fast twitch capability. A case could be made for adults having greater needs for power work as science has shown us that adults lose power faster than strength.

However, the process must proceed logically. The key is to choose the right tool for the right job. As coaches, we often force square pegs into round holes in our desire to use a lift or exercise. What's good for a 20-year-old athlete may be a potential disaster for a 40-year-old businessman. As I've said many times, the question is not should we train for power, but how do we train for power.

## *Using Non-Bouncing Medicine Balls*

I love the Dynamax Medicine Balls, but I can't say I always did. I bought some heavy Dynamax balls to do upper body plyometrics about 10 years ago.

Primarily, we did medicine ball bench presses. We had one partner drop an 18- or 20-pound ball and the other athlete throws the ball back. I like this exercise for upper body power because it don't give the shoulders the stress that exercises like plyometric pushups do. The reason we use the Dynamax balls is they're softer and easier to handle when dropped.

A few years ago someone on my staff ordered some lighter Dynamax balls, probably for the younger athletes we train. The balls sat in the storage closet for years. I wondered if we would ever use them, and then one day I took them all out. We paid a lot of money for the balls and I was trying to think of a good use for them.

For the heck of it, I threw one of them off the wall in a side twist throw. Normally, this throw is our standard rotational core and plyometric exercise, but is done with a more conventional rubber medicine ball.

My first thought was, 'these balls stink, they don't bounce back.' In response I threw the ball as hard as I could off the wall to get it to bounce back. It did, but weakly. Suddenly the lights came on. What I had initially perceived as a drawback to the Dynamax ball became a positive.

Think about this: Initially we used rotational medicine ball throws for an explosive core exercise, a core plyometric. The fact that the balls bounced back allowed us to get a rhythmic pace and a plyometric effect. The ball coming off the wall forced us to use the core not only to accelerate the ball, but to create a deceleration and a switching effect.

For years I thought that was such a great idea. Then as I mentioned above, I threw the light Dynamax ball. I asked myself, "What are we doing rotational power exercises for?" I immediately answered my own question. The goal was shooting harder or hitting harder in sports like baseball, ice hockey, field hockey and golf. The next question I asked was, "Is the eccentric component of the ball recoiling off the wall important?" The answer seemed to be no.

The skill of striking seemed to be a one-rep-max type movement that was very powerful, but wasn't repeated multiple times.

All of a sudden these light balls were not a mistake, but a great new tool. I'd say now we use the lighter Dynamax balls for more of our throws than we use the rubber balls. Medicine ball slams and side throws are far better with the Dynamax balls than with a bouncing rubber med ball.

The exception to the rule might be on overhead throws. Here we still focus on light rubber medicine balls. We position ourselves further from the wall and catch the ball after one bounce.

My advice is if you have a med ball wall and like to use med ball throws in your program for core power, order a few Dynamax balls. I like the eight-pound ball for most athletes. Perform Better made a great suggestion by having Dynamax introduce Dynamax Minis. These are smaller in diameter, easier to handle and are great for kids. A six-pound Dynamax Mini ball works great for kids.

In addition, the softer ball saves on fingers. We have sprained a few fingers and even broken one or two with our med ball throws.

Yes, the Dynamax balls are expensive, but good tools are expensive. Try them, I think you'll like them.

## *Training the Warrior-Athlete*

Sergeant Harold Hill coined the term 'warrior-athlete' to describe the training needs of the modern-day soldier. The needs of the modern soldier have evolved from the endurance-based paradigm to a modern-day athlete model. The Special Ops soldier should be handled as the highly valued asset the training program has created. Instead, these warrior-athletes are often involved in training programs that have a high injury rate and actually decrease readiness.

What follows are suggestions for training the warrior-athlete based on what has been called by Master Sergeant Glen Mercer as the Professional Athlete Model.

**Two cautions**

1. I've never been a warrior. I haven't served in the military, so I can only offer advice based on what I *think* I know.

2. The professional athlete model does not fully apply to the military. No offense or disrespect meant to professional athletes, but my experience has shown that in the professional sports model, talent is most often inversely proportional to work ethic. Professional athletes are talented.

In the military work ethic and commitment will be outstanding. This means those responsible for the implementation of training must realize that a soldier will do what is asked no matter what the cost to the body. Where the professional athlete may slow down, stop or refuse to comply, the Special Forces soldier won't. The man with the Special Forces mind-set can and will be a danger to himself in a training situation and often will willingly produce the overuse problems we seek to avoid.

Special forces soldiers will have a task-completion mindset that will consistently put them at greater risk of overuse injury. The takeaway message here is training must be extremely well designed to avoid injury, and coaches must realize that pulling back is as important or more important than pushing. The work ethic of soldiers creates great opportunities for coaches to make progress, and great opportunities to create injury.

**Step 1: Evaluate**

A mission without intelligence and maps is doomed to failure. The same applies to a training program. To prescribe exercises without thought to the person completing the program is like going on a mission with no previous intelligence gathering. You're doomed to failure.

Sergeants Hill and Mercer, as well as others within the military, have adopted the Functional Movement Screen developed by physical therapist, Gray Cook. Gray's screen is simple and easy to use, and is now used by those who train elite athletes all over the world. Describing the Functional Movement Screen is beyond the scope of this article, but you can visit *functionalmovement.com* to learn the specifics of this vital evaluation tool.

The important thing to understand is that the FMS evaluates how the soldier moves at the most basic level. It's not a physical evaluation, but a screen. The screen will guide you as to what direction to pursue further.

Physical evaluation for Special Forces soldiers should focus on a broad range of quantities. Technique is the critical key in any physical evaluation. There must be a consistent system of testing if soldiers are going to be compared to each other.

Some areas of the military have advocated doing away with the pullup or chinup tests. I feel this is a major error that over time will lead to a significant increase in shoulder injury. It's critical that a proper ratio of pushing to pulling is maintained. Continuing to test pushing strength via pushups and discontinuing pullup testing is a prescription for shoulder injury. These two tests evaluate opposite abilities. If given my choice, I'd eliminate pushups before pullups or chinups as most soldiers or athletes will never lack for pushing strength.

Any pullup or chinup test must be strict with full extension of the elbows, chin above the bar and no swinging or kipping. Failure to follow these guidelines invalidates the testing and renders the results useless.

One overlooked testing area for the modern soldier is power. Standing vertical jump is a simple test of power that can be easily used in the military.

**Selecting a Training Program**

Many in the military appear to be looking for a 'canned' program. Some have adopted CrossFit-type training; others have moved in different directions. What is important in choosing a training style is that the correct tool is chosen for the job. I like the saying, "Chain saws are bad for trim work."

The point is tools are just that. The key is selecting the right tool for the job. I'm not here to indict CrossFit or kettlebells or any other system. My objective is to point out the need to develop a proper tool for the job, rather than trying to find an existing tool that can be modified for the job.

The key point is to understand the best tool is bodyweight. Bodyweight and set of adjustable Powerblock-type dumbbells may be the best and most effective choice for military training. The only real equipment needed are a chinup bar, a TRX or Jungle Gym suspension system for bodyweight rows, and an 18-inch box to be used for one-leg squats, rear-foot-elevated one-leg squats—often seen in the vernacular as Bulgarian lunges—and step-ups.

All of these exercises are simple, relatively easy to learn and have a proven safety record. In addition, only four pieces of equipment are needed. Multiply this by the number of trainees and you have a program.

**Circuit Training**

Although I'm not a fan of circuit training, circuits may be a fact of life in military situations. The key to using training circuits is to properly design them for maximum benefit. Circuits should alternate between the following.

*—Upper push—pushup or variation*

*—Knee-dominant—one-leg squat or variation*

*—Core—ideally isometric-type planks and sit-up-type movements*

*—Upper pull—chinups, rows and variations*

*—Hip-dominant—one-leg straight-leg deadlifts or bridges*

These simple five exercises can be done for strength or endurance depending on the need.

**Developing Strength Without Size**

The reality of physiology is that fat-free mass is best developed with heavier weights and lower reps. There's a misconception in the training literature that lighter weights and higher reps should be used when you don't want to gain size. The reality is that lighter weights and higher reps will cause more size gain than heavier weights and lower reps.

The key to training is to know the goal. Do you want strength? Do you want endurance? What's the goal? A Special Forces soldier needs both; training must be done for both strength and endurance. The simplest way to do this is to alternate strength days of six reps and endurance days at 15-20 reps.

**Training Program Goals**

The top goal of any good training program is to prevent injury in the training process. Some of the systems currently in use by the military, like CrossFit and kettlebells, can have a high in-training injury rate. This is completely unacceptable.

Goal number two is to prevent injury on the mission. This means training should improve things like balance and landing skills. A properly designed strength training program that focuses on single-limb actions is great for injury prevention.

It also makes sense to include basic plyometric training exercises to develop landing skills and the eccentric strength needed in landing from parachute drops and zip lines.

Goal three is to improve mission performance. Many authorities might see this as goal one, however, injured soldiers—particularly injured Special Forces soldiers—cannot go out on assignment. This is where the professional athlete model makes sense.

The military spends significant amounts of time and money to select and train a Special Forces soldier. It only makes sense to protect the asset as best possible.

**Training With Injuries**

The motivated Special Forces soldier will want to train while injured. We have few simple rules.

*If it hurts, don't do it. This seems simple, but it is not possible to work through pain.*

*Eliminate provocative exercises. In other words, if you know an exercise produces pain, find an alternative.*

*Eliminate repeating offending and contraindicated exercises.*

If you hurt your back squatting, squatting may not be a good idea—switch to one-leg squats.

Certain obvious exercises should be avoided. These include but are not limited to behind-the-neck presses, behind-the-neck pull-downs, kipping pullups, dips and upright rows. These are bad exercises that will produce pain in most people with any shoulder pathology.

**Tips for Instructors**

Instructors must demand perfect technique. Cheating will eventually cause the body to break down. In general, chinups and parallel-grip pullups will be less demanding on the shoulder joint than the traditional palms-forward pullup. It's critical in these exercises to demand complete ROM.

The same applies to pushups. Require trainees to go all the way up, and that they go down to a fist touch on the chest. The head should be neutral—don't allow the neck to extend in a 'look up' posture, and don't allow trainees to crane the neck to touch the nose first. Keep a neutral chin-tuck position.

Training must be done only to the point of technical failure, not failure. Technical failure is defined as the point at which no more perfect reps can be completed.

**Conclusion**

The highly trained Special Forces soldier may the most valuable asset in the armed forces. These men should be treated as such. This means training must be designed first with safety in mind.

In the qualifying procedure, it may be necessary to see who is willing to push beyond physical pain. However, once an operator has qualified, pushing beyond the technical failure point is ill-advised. These highly skilled and highly trained warrior athletes should be cared for and maintained as the high value assets they are.

## *Understanding or Misunderstanding Aerobic Training*

*"Successful endurance training involves the manipulation of training intensity, duration, and frequency, with the implicit goals of maximizing performance, minimizing risk of negative training outcomes, and timing peak fitness and performances to be achieved when they matter most.*
**—Stephan Seiler,** *International Journal of Sports Physiology and Performance*

We could take the word endurance out of the sentence above and still have a pretty good quote. The keys, in Seiler's words, are maximizing performance while minimizing the risk of negative training outcomes. Does that sound familiar?

Unfortunately, it seems like a week does not go by without another 20-something intern or young coach waxing poetically about the value of aerobic training. Most of this newfound fascination with the aerobic system is fueled by Joel Jamieson's *Ultimate MMA Conditioning* book.

Allow me to digress for a moment. Joel's book is an excellent read. Joel is a training expert who understands the context of his own writings.

The praisers, on the other hand, are often blissfully unaware and are rushing to apply concepts they don't fully understand to sports they don't fully understand, all the while talking down to successful coaches with decades more experience. In these cases, the inexperienced coaches only show their collective

ignorance and lack of historical knowledge as they seek to point out the mistakes of those who are far more experienced.

One point is critical to understand.

MMA, and all combats sports for that matter, are unique. The combat sports—MMA, wrestling, boxing—are negative work-to-rest sports. These sports require the athlete to compete at a high level for period of time that far exceeds the rest period. This is not present in any other field or court sport.

A history lesson is also necessary in order to fully understand why I feel so strongly about this topic.

For the past 30 years, those of us old enough to remember have campaigned vigorously against steady-state aerobic training. Thirty years ago, and even less than 20 years ago, athletes in all team sports were having their fitness evaluated via steady-state tests like a two-mile run or a 12-minute run or, worse yet, by a physiologist using an exercise bike.

Athletes were told whether they were in shape or out shape not based on any type of sport related performance, but rather by performance on standardized tests of aerobic capacity. I can remember our football linemen—yes, linemen—having to run a mile-and-a-half in 12 minutes in order to prove their fitness. I can remember our skill position players running two miles in 12 minutes.

For many of us in the coaching world, this never made any sense.

However, the scientists insisted we were wrong, even though they had little or no experience training team sport athletes. I personally watched athletes train themselves out of professional sports careers by attempting to raise V02-max to please a team physiologist. During those years, I watched my athletes do the opposite of what was recommended and instead train for speed, power and what Vern Gambetta called specific work capacity. Our athletes also began to take jobs from guys who were only trying to follow their team's program.

I know that neither Joel Jamieson nor Dave Tenney are recommending steady-state aerobic training, but I also know the message quickly gets diluted. These guys have been very specific in not recommending conventional steady-state work, but the second generation of praisers and sycophants won't be so smart. More aerobic work will mean more aerobic work, and the delivery system will be lost in translation.

I'm not a physiologist, far from it. I struggle to understand the difference between cardiac power and cardiac output. Those who write these pro-aerobic articles might view me as foolish, but I've always felt the idea of specific work capacity made a lot of sense.

In the late '80s and early '90s, Vern Gambetta said in effect, damn the physiologists, let's just watch the game and then train for what we see. Maybe that appealed to the simpleton in me, but I bought in lock, stock and barrel.

At that time, my main focus was on hockey and football, two very different sports. Hockey players back then were told they weren't fit and the solution was daily long bike rides of up to 60 minutes to develop aerobic capacity. They were told they needed more aerobic capacity to recover better.

I questioned this. Recover from what? A minor league game? I wanted to train my players to dominate the game, not recover from it. So we analyzed the game, and the best players seemed to be big and fast and not necessarily very fit.

In the case of a hockey forward, there was a rest-to-work pattern in the three-to-one range and shifts of approximately 45 seconds. We did the same analysis for football. Again, big and fast seemed to correlate with success. Fit in the conventional sense didn't.

In football, the play lasted less than five seconds with rest sometimes as high as 40 seconds. We began to target these patterns for our football and hockey players. Not surprisingly, we began to dominate college hockey and sent lots of players to the NHL. In football, we produced a bunch of first-round draft picks.

Also not surprisingly, these same players were often told they were unfit based on the physiological or performance tests administered by the teams. However, their speed and ability caused them to be successful in games.

Lately the aerobic proponents have argued for more low-intensity work to increase cardiac output. I'd continue to argue for more high-intensity work to increase specific work capacity. The key will be in analyzing your athletes. The truth is, most athletes

don't train hard enough—and I've coached thousands,. They get way too much low-intensity work and not nearly enough high-intensity work.

Kids today participate in hundreds of low to moderate intensity practices and never learn to push out of the comfort zone. For the players Dave Tenney gets to work with or for Joel's MMA guys, this may not be the case, but they're dealing with the exceptions, not the rule.

We're seeing the elite exceptions and then remaking the rules based on these exceptions. This is a critical coaching error. We have to be careful when we extrapolate from elite coaches or elite athletes. Elite coaches may have an innate sense of what to do next, while elite athletes may be getting by on something other than good training.

The truth is that almost every athlete needs to be bigger, faster, and stronger in every sport. Are there exceptions? Maybe. However, our job is not to isolate exceptions.

More importantly, our job is not to make rules based on exceptions. Just as there are very few who are big enough, fast enough or strong enough, there are very few who are fit enough, or work hard enough. To say we need more 'low' might be crazy in the 80/20 world. Maybe 20% need more low-intensity work, even at the elite level, but I believe that 80% need more high-intensity work.

Another area to consider is logistics. In NCAA conditions, you're given eight hours per week in the off-season. Can you budget half of this time to low-intensity cardiac output work?

How about in a privately owned performance center? Most athletes here have less than eight hours a week. Do we prioritize strength and power—two quantities not addressed in practice—or cardiac output if we know they practice their sport three times a week?

Kids play year-round at low to moderate intensity, never strength train, and never do interval work. More low or more high?

Read Seiler's quote again, minus the word *endurance.*

*"Successful training involves the manipulation of training intensity, duration, and frequency, with the implicit goals of maximizing performance, minimizing risk of negative training outcomes, and timing peak fitness and performances to be achieved when they matter most."*

People should work on their weakness as long as working on their weakness does not involve steady-state work. I've lived and died by these concepts, while helping athletes win Olympic Gold, National Championships and World Championships. Our players are often considered the fittest based on performance, but never based on tests of aerobic capacity.

Making coaches understand that being in shape for sport is different than being 'in shape' was difficult. It took years to steer both coaches and athletes away from steady-state aerobics. In effect, we didn't have great tests, but we trained the athletes for the tests anyway.

Alwyn Cosgrove is fond of saying that we overreact in the short term and under-react in the long term. Remember that history repeats itself—it took us a long time to swing the pendulum away from steady-state aerobics.

The next time you think the world needs more aerobic work, ask yourself this question: *When was the last time you saw someone drenched in sweat, panting after an interval workout and you didn't make them do it?*

Guys like Joel Jamieson and Dave Tenney understand their own work. If you saw what they did and how they did it, you might be surprised. As a young coach, pay attention, not just to terms, but to what they're actually saying.

And don't be too quick to jump on what you don't understand.

## *Why CrossFit May Not Be Good For You*

CrossFit is a controversial topic in the world of strength and conditioning. CrossFit gyms are springing up all over the world. They're cheap and easy to open, with only a weekend certification and a few thousand dollars worth of equipment. This appeals to many in the fitness business. You can be part of a rapidly growing trend and you can do it without great expense.

I'm not a CrossFit fan, so some might view this piece as yellow journalism. I will try to keep my personal opinions to myself and deal with what is generally agreed upon as safe in strength and conditioning.

First, a little background. I knew very little about CrossFit until I was contacted by representatives of SOMA, the Special Operations Medical Association, in 2005. CrossFit was their concern, not mine. I was asked to come to the SOMA meeting in Tampa, Florida, to discuss training Special Operations soldiers. At a panel discussion in 2005, I offered answers to questions asked about CrossFit…and the controversy began.

What follows is not from the SOMA meeting, but my thoughts since that time.

**Major Question 1**

Is planned randomization a valid concept? CrossFit is based on the idea that the workouts are planned, but are deliberately random. The term 'planned randomization' is an oxymoron. Workouts are either planned or random. I believe strongly that workouts should be planned, and that a specific progression should be followed to prevent injury.

**Major Question 2**

Is training to failure safe? Because CrossFit is at its heart a competitive or self-competitive program, it becomes necessary to train to failure. There are two layers or problems here.

One is the simple question of whether training to failure is beneficial to the trainee. Some strength and conditioning experts believe training to failure is beneficial; others caution against. I must admit I like training to failure.

However, this brings up the larger question of what constitutes failure.

Strength and conditioning coach Charles Poliquin, another CrossFit non-fan, popularized the idea of technical failure, and this is the definition we adhere to. Technical failure occurs not when the athlete or client is no longer capable of doing the exercise, but when the athlete or client can no longer do the exercise with proper technique. In training beyond technical failure, the stress shifts to tissues that were not and probably should not be the target of the exercise.

The third layer of the training-to-failure question relates to what movements lend themselves to training to failure. In the area of 'generally agreed as safe,' high-velocity movements like Olympic lifts and jumps are not generally done to failure, and never should be taken beyond technical failure.

Is it one bad rep versus multiple bad reps? How many bad reps is too many?

**Major Question 3**

Is an overuse injury—generally an injury caused by repeated exposure to light loads—different from an overstress injury, an injury caused by exposure to heavy loads? Both are injuries. The first is overuse; the second is trauma.

Injuries are injuries, period.

**Major Question 4**

Should adults be Olympic lifters? I don't think Olympic lifts are for adults. Most adults can't get their arms safely over their head once, much less 50 times with load.

The other question that begs to be asked is, should anyone do high-rep Olympic lifts? I know the best Olympic lifters in the world say no. My biggest problem is less with the actual workouts than it is with the false bravado and character assassination of the dissenters.

The community can be pretty venomous when you question Coach Glassman. The CrossFit community is also filled with people who tell you that injury is a normal part of the training process.

I've spoken up against endurance athletes who willingly hurt themselves, and to me this is no different than the current CrossFit controversy. I know this will generate more controversy, but CrossFit might be the biggest controversy in strength and conditioning since HIT training.

## *Do We Always Train Football Players Wrong?*

I spent the first 15 years of my career training football players. I still train them for the NFL Combine and in the off-season, although I no longer train a college team. I can't tell you how often I've the same conversation with high school and college strength coaches.

The conversation goes something like this. "Mike, I need a program. I need to get my linemen bigger and my skill position guys faster."

Seems like a logical request at first glance, doesn't it? Linemen need to be big and skill guys need to be fast, right? Let's look a little deeper.

Linemen are generally already big, correct? Skill position guys are usually smaller, but faster than linemen. Linemen usually like strength training, but dislike running. Skill position players often like to run, but sometimes don't enjoy strength training.

But wouldn't we want both groups faster? Wouldn't linemen benefit more from speed work? Don't linemen have a lot more room for improvement in speed? Wouldn't strength training be the first step to increased speed?

I look at the initial logic and see some real flaws. We have big, slow guys training to get bigger. We have small, fast guys training to get faster.

How about this? Let's get the slow guys faster. Even better, how about getting everyone faster? That would be good. How about bigger and faster? Wouldn't that be good?

Have you ever had a football player get bigger and faster and realize it was a bad thing? I don't think so. I think almost all football players should train about the same. Everyone should be trying to get as fast as they can and as strong as they can with a few exceptions.

The exceptions are based more on injury trends than on any other single factor.

## The Exceptions

### The extremely strong skill position player

We have all coached this guy. The fact of the matter is, this is the guy we are always trying to recruit and love to coach, a walking bundle of fast twitch fiber. This guy looks at weights and adds muscle. If this guy is at the top end of the weight scale for his position, minimize any extra work in the weightroom. Keep it simple for this guy.

Mr. Fast Twitch needs lots of stabilizer work. His global muscles—the big ones that create motion—are so good that his stabilizers are a bit lazy. Give this guy lots of stability oriented plyometrics, like one or two-second sticks, and lots of eccentric work. Do lots of postural work with this player—also work on hip rotators, rotator cuff and deep abdominals.

A basic no-frills strength program works for this guy as long as there is lots of single-limb work to attack the stabilizers. Also remember this guy could be a linebacker or a lineman in the modern NFL. When training pure fast twitch guys, you also need to remember they won't be good on a conventional rep-max chart. A pure fast twitch guy will do well at three reps and below, but may need some adjustment at higher reps.

Generally, these guys will be off by two reps with sets of 8-10. This means they will fatigue rapidly.

### Quarterbacks

I hate to tell you to train quarterbacks differently, but I'm going to anyway. The reality is, these guys are throwers and as a result are prone to injuries common to throwers. I'd train a quarterback similar to a baseball player or a swimmer. This does not mean light weight, high-rep crap, but it does mean avoiding overhead explosive work. No snatches or push jerks for quarterbacks.

Get them on a med ball throwing program and a rotator cuff program like those you use with pitchers. There's no problem with squats and cleans and similar lifts. These guys still need to be able to run and take a hit, but the arm is at risk.

Remember, these guys have a unique positional demand that places them at risk for injuries that won't occur to other players—labral tears, rotator cuff tendonitis.

### Offensive Linemen

These athletes are in a class by themselves. I see two major problems with the new breed of offensive linemen.

Offensive linemen's bodies look more and more like basketball players bodies. We are seeing more guys with long femurs who are not good natural squatters. Often because they're O-line, we try to bang square pegs into round holes. Be careful with offensive linemen and squats.

Many of the taller ones will contort themselves to attempt to squat heavy loads. This will lead to patella-femoral problems, to low back problems or both. My feeling is that the tall (6'4" and over) players may never be big number squatters. This is magnified when they're young.

My advice is, one lower back injury and you should permanently change to a single-leg oriented program. If they hurt their back once squatting it will happen over and over no matter how hard you work on technique.

It only takes one bad rep. Don't get caught up in the numbers thing.

Offensive linemen have something in common with gymnasts and dancers. Offensive linemen are the only guys on the football team who are forced into hyperextension of the lumbar spine. Most adult low back disorders are flexion related. Offensive linemen will have extension-oriented problems often unlike any of their teammates due to their unique positional demands. When an offensive lineman's back hurts think spondylolisthesis or a relative. An o-lineman with a dull achy low back should get imaging studies done to rule out extension-related spinal issues.

Offensive linemen also have one more unique characteristic. They move without a pre-stretch. Pause squats and hang cleans from boxes can help prepare offensive lineman for their unique positional demands.

Bottom line is, football comes down to speed and power. You can't have enough of either. The idea that one group needs more of one quantity than the other seems to be flawed. Every football player should train to be both big and fast. Some may be eventually be big enough, none will ever be fast enough.

## *MMA for Football?*

*"MMA training for an NFL athlete does not only NOT make sense, but would simply be counterproductive. The demands of the two sports clearly could not be any more different from each other. It makes as much sense as choosing to going to chemo therapy because you're sick of shaving your head. (Michael Jackson's doctor said that line, I believe.) Taking a multi-million dollar athlete and having him train in such a nonsensical way is foolish and irresponsible… and please realize I'm an MMA coach."*

**~Dewey Neilsen, Nationally Recognized MMA Strength and Conditioning Coach**

A couple of NFL strength and conditioning coaches have written to ask about NFL athletes using MMA training techniques to train in the off-season. I guess my reputation as a person with an opinion is following me. I can start the controversy right off: It's foolish and short-sighted for an NFL player to train like a mixed martial arts fighter.

I watched a recently released NFL quarterback engage in a sparring session with an MMA trainer on Youtube. Trust me, I don't want to get beat up by an MMA trainer, but I don't think this is a good idea. The only guys on the field who can't operate without their hands are quarterbacks and receivers. If I'm paying a guy a few million dollars, I would prefer he doesn't punch anything. I was surprised that one NFL general manager actually endorsed the idea.

Seems crazy to me.

To further draw on the controversy, let's ask ourselves, what is MMA training? The majority of what we see on the web as MMA training seems to be muscle-endurance stuff that doesn't appear to be good for anyone except combat athletes, and certainly does not seem appropriate for an NFL player.

I've seen guys training with snorkels in their mouths for oxygen deprivation. I've watched a guy literally throw rusty barbells in a field. So, I will qualify myself and say that if we view MMA training primarily as sparring with mitts or kicking, I still can't see how it has a place in training for a football guy.

Let's look at the basics. A football play lasts approximately five seconds. An MMA round lasts five minutes. Right away, do you see a problem?

The rationalization I listened to in the Youtube interviews revolved around the mental toughness developed in pushing through fatigue. I don't doubt this type of training is difficult; however, what they're describing never happens in football. Plays last five seconds, and the rest lasts about 30 seconds. This in no way resembles anything in the martial arts.

Moving on from the obvious energy system issue, an MMA fighter wears almost no equipment and is able to punch and kick his opponent. An NFL player wears pads on most exposed body parts and it's basically illegal to punch and or kick an opponent.

Running is a huge part of football. In MMA, running won't win many matches and too much running will damage an athlete's reputation as a willing opponent.

To add even more complexity, the best MMA strength and conditioning coaches probably train their

fighters more like NFL players than the opposite. Jon Chaimberg's and Dewey Neilsen's MMA programs are not typical MMA programs. Instead, they're scientific programs based on the current science of performance enhancement.

If an NFL guy told me he was going to train with Jon or Dewey, I'd endorse it wholeheartedly. But what they would do is train him like a football player. The best MMA strength coaches realize their athletes get plenty of work with their MMA coaches. Much like NFL strength and conditioning coaches, the good MMA strength and conditioning coaches spend lots of time on basic strength training and power work.

The truth is, training like an MMA fighter is cool and trendy and might get a player featured on ESPN. What it might not be is intelligent or effective conditioning for football.

Football players and MMA fighters are a lot like athletes and actors. MMA training means ringside seats at fights, pretty girls, nights out in Vegas. Sorry, it still doesn't makes training sense for highly paid athletes who participate in a physically violent sport six months out of the year.

If I'm an NFL strength coach, I'm not happy if my guys are missing workouts for sparring sessions. I'm less happy if they're using this type of training instead of the football specific routines I've taken years to develop.

If you're an NFL executive going along with this, you're undermining the credibility of your strength and conditioning staff and pretty soon your off-season program will be an MMA free-for-all you'll need to rein in. I know I'll get some negative feedback on this, but I owe it to my NFL colleagues to state an opinion when they can't.

Look at it this way: How would position coaches feel if a player said he wanted to skip practice to go to MMA? The position coach's feeling is, 'This is my time with you—we need this time to get better.'

The strength coach feels the same way. The off-season is the time to do his best work. If a player is off sparing in an MMA gym, that's time away from the important things that need to be done.

## *Summer Training Program for a Nine-Year-Old*

I received the following question from one of my former athletes and wrote a somewhat tongue-in-cheek response. With all the questions about training kids, I thought this might provide some perspective.

*Q*—I need to put together a summer plan for my nine-year-old hockey team. Obviously, I don't want to look like a crazy person, but it would be something I think could be good for my own kids as well. Is it too young?

*A*—First off, yes, it's too young, but here is a great plan.

**Step 1:** Play another sport. Lacrosse is highly recommended as it has similar skills to hockey, although baseball is also fine. This doesn't mean another sport in addition to hockey—summer is the off-season.

**Step 2:** Cancel all hockey camp registrations except one week. Pick your favorite that has the largest number of your friends attending and go to that one. Ideally, look for a camp that only has you on the ice once a day. No need to get blisters. You won't get better in a week anyway.

**Step 3:** Cancel any summer hockey leagues you've scheduled. The best players in the world never play summer hockey… and they never have. The only conceivable exception would be a weekly skill session lasting one hour. Another exception would be play. If ice is available and the kids can play, let them. Please remember play means NO COACHES or COACHING.

**Step 4:** Reread steps 1-3. Acknowledge that the key problem in youth sports is applying adult values to children's activities.

**Step 5:** Go to the nearest bike shop. Get nice bikes for everyone in the family.

**Step 6:** Ride the bikes not in a race, but for fun. Maybe put a few hockey cards in the spokes to make noise.

**Step 7:** Head to Walmart and buy fishing rods.

**Step 8:** Take the fishing rods to the nearest lake and fish.

**Step 9:** Repeat steps 5-8 while continually re-reading steps 1-3.

## *PRI For Dummies*

*"When the student is ready, the teacher appears."*
*~Buddhist Proverb*

If you haven't heard of the Postural Restoration Institute (PRI), get ready to be bombarded over the next months. Little bits about PRI have popped up on Kevin Neeld's blog, and in Eric Cressey's blog in recent months.

I got my first real exposure to the Postural Restoration Institute from some articles written by Lisa Bartels in the *Performance Conditioning Baseball/ Softball Newsletter.* The little bits I read were enough to peak my interest, so I went to the internet to look up PRI.

As it turns out, The Postural Restoration Institute, PRI for short, is a way of looking at human dysfunction that just makes sense. The problem is that even though the concepts make sense, they can still be hard to understand. That sounds conflicting because it is.

Think about this. The next step from creating symmetry—a goal of many of us over the last decade—may be combating our natural asymmetry. This is where the PRI steps in.

To add some background, the Postural Restoration Institute was founded by Ron Hruska in Lincoln, Nebraska, over 20 years ago. This information is provided only to illustrate that PRI is not a new concept. I will make no attempt to try to explain PRI in detail, but I will repeat that the concept makes sense.

PRI is based around the fact that approximately 85% of the world is right-handed and that the body is naturally asymmetrical. We have one heart, one liver and an asymmetrical diaphragm. This is not opinion; it's a series of facts.

The next logical steps from these facts form the essence of PRI. These anatomical differences cause very predictable changes in humans in both the skeletal and muscular system.

I debate with myself that what was an *ah-ha* moment for me might really be more of a duh moment.

My discovery of PRI is akin to Columbus's discovery of America. Columbus discovered something that was already there and had been discovered by many before him; he simply took the credit. I won't take credit for discovering PRI, I promise.

What I will try to do is what I think I do best—I'll try to simplify a very complex topic. I constantly tell people to KISS, *Keep It Simple Stupid.* I will now attempt to MISS—*Make It Simple Stupid.*

The reality is that most of PRI is probably the realm of physical therapy. However, much like we have incorporated things like Janda's upper-crossed and lower-crossed syndromes into the training world, I think we can incorporate PRI concepts, too. This will be my first attempt, but probably not my last. We'll surely refine these ideas, but for now, here goes.

Before we start, I want to thank Michael Mullin, ATC, PTA, PRC, for being our first instructor. Michael is a PRI certified instructor from Maine who has presented two in-service trainings at MBSC. Working from the proverb above, he was the teacher who appeared in our case.

Remember as we proceed, good info is only good info if you can use it. Here is how we plan to incorporate Postural Restoration Institute concepts into our programming.

**The Basics of PRI Applied to MBSC**

Michael Mullin, in collaboration with PRI founder Ron Hruska, was kind enough to provide us with a Janda-esque list of things to 'turn off' and 'turn on.' This will, in Ron Hruska's words, "make our existing program that we are very familiar with and feel very strongly about be more successful."

For us at MBSC this means we will do additional rolling and stretching for the things we need to 'turn off' and additional warm and activation for the things we need to 'turn on.' The simple solution for us to MISS, *Make It Simple Stupid,* is the concept of Right-Left-Right or Left-Right-Left. This means we take a deliberately asymmetrical approach to our warm-up based on our current understanding of PRI concepts.

In PRI, the right adductors are considered to be overactive. This means when we roll the adductors, we'll roll R-L-R. The right adductor—the overactive one—will get twice as much attention as the left. We won't neglect the left, but we prioritize the right. When we stretch, we do the same thing. We'll stretch R-L-R on the adductors.

In the same way, we want to 'turn on' the left hamstrings. This means our posterior chain activation will be done L-R-L. The left will now get twice as much work in the warm-up and activation phase.

Here it is in simple terms—

*If a muscle or muscle group is on the overactive list, it gets 100% more rolling and stretching.*

*If a muscle or muscle group is on the underactive list, it gets 100% more mobility or activation.*

I like the right-left-right or left-right-left idea for three reasons.

Moving from side to side and favoring one side shows our athletes and clients a change in thought process that creates a dialogue.

Moving from side to side will create more focus.

For warm-up and mobility, it allows a little rest between reps. I bet if we timed it, the switches don't eat up much time.

**Breathing**

Breathing is in. Breathing is cool. I can't tell you how many times in the last year I've read that a client, patient or athlete needs to work on breathing. What always followed this statement was a big silence. Everyone was saying do it, but no one had any suggestions for how.

Enter Michael Mullin and PRI. Michael presented the simple explanation of breathing that rocked my world back at least 10 years to Paul Hodges and the Australians, and Mike Clark and NASM. Over the past decade, we have had an ongoing 'who's right' debate about core stabilization, bracing and drawing in. The result until recently was that McGill's brace concept was superior to the Australian draw-in concept.

I have to admit I eventually adopted a 'whatever, just get tight' approach.

PRI turned on a whole new set of lights for me. Michael Mullin explained respiration as follows.

*On inhalation the diaphragm contracts concentrically.*

*On exhalation, specifically late in a maximal exhalation, the deep abdominals contract concentrically.*

In proper breathing, we have an interplay of eccentric and concentric contractions of the diaphragm and deep abdominals. Michael reinforced this concept with an article entitled *The Value of Blowing Up A Balloon,* and for the first time took us through real breathing exercises.

As has happened so often for me, the light bulb came on in a big way. What we used to call a draw-in can be viewed as the maximal concentric contraction portion of proper abdominal breathing. Suddenly, our old draw-in exercises from Functional Training for Sports began to look interesting again. We are back to teaching a draw-in type exercise, but now it's a way to reinforce breathing exercise and work the deep abdominals, not an artificial contraction manufactured out of context.

**PRI Overactive, Turn Off List**

*Courtesy of PRI and Ron Hruska*

| Muscle Group | Roll/Stretch Pattern |
|---|---|
| Right QL | R-L-R |
| Right Hip Internal Rotators | R-L-R |
| Right Adductors | R-L-R |
| Left Psoas, Iliacus | L-R-L |
| Left TFL | L-R-L |
| Right Latissimus Dorsi | R-L-R |

**PRI Underactive, Turn On List**

| Muscle Group | Activation Sequence |
|---|---|
| Left Biceps Femoris, medial hamstrings | L-R-L |
| Left Upper Adductors, flexor adductors | L-R-L |
| Left Hip Internal Rotators | L-R-L |
| Left Abdominal Obliques | L-R-L |
| Left Plantar Flexors | L-R-L |
| Right Glute Max | R-L-R |
| Right Low Trap and Triceps | R-L-R |
| Right Subscapularis | R-L-R |
| Right Iliacus | R-L-R |

The key is that now instead a symmetrical warm-up, we have an asymmetrical warm-up.

This might add a few minutes to our pre-workout sequence, but the dividends could be huge.

**Changes to a Typical MBSC Day**

**Rolling**

*Glutes and Hip Ext Rotators (both sides equal)*

*Adductors (Roll R-L-R)*

*Low Back (Roll R-L-R with attention to R QL)*

*T-spine (both sides equal)*

*Posterior Shoulder- (equal)*

*Anterior Thigh / TFL (Roll L-R-L)*

**Activation**

*Cook Hip Lift or Wall Hip Lift (L-R-L)*

*Psoas Holds or Valside Plank Hip Flexion (R-L-R)*

*Single Arm Wall Slide (R-L-R)*

*Mini Band Walk (stagger R foot for R 10, L 10, R, 10)*

*Split Squat or Alt Lunge (R-L-R, R forward stretches L)*

*Lateral Squat or Lateral Lunge (L-R-L, left lateral stretches R adductor)*

*Rotational Squat or Rotational Lunge (L-R-L as above)*

The key to incorporating PRI concepts comes right from founder Ron Hruska. I listened to Ron on Joe Heiler's Sports Rehab Experts interview. The key to using PRI is best said in Ron's own words to use PRI to "make your existing programs that you're very familiar with and feel very strongly about, more successful."

I can't say it better, so I won't try.

# Olympic Lifting

## *Why We Clean*

As I've said many times, I love *StrengthCoach.com* because it supplies me with a never-ending supply of article ideas. Recently, we had a forum discussion and then an article on performing rack pulls versus performing hang cleans as a power development exercise. Some coaches supported the idea of using rack pulls as a substitute for hang cleans.

However, at Mike Boyle Strength Conditioning, we remain 'clean people.' We teach all our young athletes to Olympic lift. If you're healthy, you will Olympic lift in our system.

**Athleticism**

The first thought that came into my head during the discussion was that an increase in vertical jump isn't the only reason we do hang cleans. The effect of hang cleans on vertical jumps might be the second or even third most important reason we do hang cleans. The number one reason we do hang cleans, or any other Olympic lift for that matter, is for the effect on coordination and athleticism.

I don't know if there is anything more beautiful to watch in the weight room than a well-performed clean or snatch. My eye and my 30 years of experience tell me the best athletes are also the best Olympic lifters.

You could ask yourself if this is a chicken and egg scenario—are better athletes better Olympic lifters, or do Olympic lifts make you a better athlete? I admit to being unsure. When I'm unsure, I stay the course. I think Olympic lifting enhances athleticism.

In a recent Body By Boyle Online Mastermind, *bodybyboyleonline.com,* I compared Olympic lifting to tumbling in relation to Olympic lifting developing athletic ability. I love that an athlete has to perform a jump—the lift—and then navigate a moving object to create the receiving position.

**Eccentric Strength**

Good athletes and good Olympic lifting seem to go together. But the number two reason we Olympic lift is for the development of eccentric strength. Pulling a weight is one thing. Actually catching and decelerating that same weight is another.

Teaching an athlete to produce a powerful concentric contraction and to then catch and decelerate a moving object *may* be the most difficult and beneficial skill we can do in the weight room. It also may be the best injury prevention work we can do. Learning not only to produce force, but to absorb force and decelerate load is a critical skill in contact sports.

I think there's tremendous injury prevention value in the eccentric strength developed in the catch portion of the Olympic lifts. In sports, injuries often come while absorbing contact, not while delivering a blow. This eccentric component is not present in pulls. I believe there are particular injury prevention benefits to the muscles around the shoulder girdle. I know in my years with BU hockey, shoulder separations and concussions were rare. I believe our Olympic lifting played no small part in that.

**Fun**

Fun? Yes, fun. Olympic lifting is fun.

Athletes learn to enjoy the grind of attempting to lift a heavy load. However, I don't think many people would describe a heavy set of squats or deadlifts as fun. Athletes seem to enjoy Olympic lifts much more. I've always felt Olympic lifts are the great equalizer in the weight room. In sports like football, the smaller, more explosive athlete rarely competed with his larger teammates in the bench press and the squatting movements, but in the Olympic lifts, the skilled athlete could often out-lift a heavier, larger teammate. This was both rewarding and fun.

**Conclusion**

Many coaches will argue the points above, but there is another thing I know: Very few coaches who have command of the Olympic lifts as a teacher and as a practitioner will argue these points.

Brijesh Patel may be the first coach I know who is a good teacher of the Olympic lifts who has elected not to use them. It makes me think, but it doesn't make me change. I will never say never, as both I and our programming have undergone great changes over the years. However, I will say I don't see Olympic lifts not being a part of our program for the foreseeable future.

## *Why The Rock?*

My daughter's video caused a little tempest in a teapot on my Youtube channel. She's proud of her strength and so am I.

To be honest, I'm more proud of the way she attacks the bar than of her strength. Every time we post a 'clean' video, we get the same questions and criticism. Some politely ask, "Why the rock?" Others are not so kind and call us out on the execution of the lift.

Because the topic comes up so often, I figure an explanation is in order.

First, let me explain the evolution of the rock, or the shift, or the scoop depending on your choice of name. My athletes have been performing the hang clean in this manner for over 20 years. To be honest, initially I never taught it; it just happened. Our better lifters soon realized that trying to hang clean a heavy weight from a dead stop was difficult. Many began to rock or weight shift. They also began to hang clean a lot of weight. For a few years I let the lift evolve and at numerous points in the '80s and '90s, we had 30 football players hang cleaning over 300 pounds—not bad for 1AA football.

A few years later, I made the foolish mistake of listening to my critics when they said rocking was wrong and we needed to stop. Like a good coach, I agreed and vigorously coached my athletes. I forbade them from rocking. The results were simple and obvious. Our numbers dropped…and dropped a lot.

One of my athletes came up and said to me, "Nice job. You've managed to make us all weaker."

His hang clean max had dropped from 370 to 340. *Please note:* This player's vertical increased 12 inches in four years, from 20 to 32.

I was conflicted. I wanted to do what was best for my athletes. However, no one had been injured rocking, and everyone could lift more weight. I began to do some analysis of the situation and came to the conclusion that rocking was a normal part of both athletics and of Olympic weightlifting.

I remember reading Carl Miller's *Olympic Lifting Manual* in the early '80s and reading about the double knee bend. My first reaction to the concept of double-knee bend was to think it was impossible. Do I wish I still had a copy!

After watching lots of good Olympic weightlifters on video, it became obvious it wasn't only not impossible, but every great lifter did it. Watch some video in slow motion and you'll see it. In order for the bar to clear the knees, the hips and knees extend. After the bar clears the knees, the knees flex or re-bend to move the hips into position. In the jump portion of the lift, the knees extend again. The cycle is extend-flex-extend.

This has been referred to as rocking, scooping or double knee bend. In any case, it's real and it happens.

The rock you see in our Olympic lifts is this same action. Weight shifts back to the heels, knees extend. Weight shifts forward, knees flex. Hips explode and hips and knees extend.

What we are doing is what every athlete does to create maximal explosive power. Watch the vertical jumps at the NFL Combine. What do you see? Rocking, pre-stretch, weight shift. Call it what you want, but it's the best way to produce a powerful, maximal effort.

I've always said, damn the critics, full speed ahead. I've lots of women cleaning 135 pounds for reps, and the majority of my hockey players hang clean between 250 and 320. Am I wrong? You be the judge.

Healthy athletes, great clean numbers, great speed improvement, great vertical jump. Where do I go wrong? As Lee Cockrell says in *Creating Magic,* what if the way we always did it was wrong?

## *Using Straps*

I love teachable moments. These are the times when I realize at Mike Boyle Strength and Conditioning, we have a philosophy that may not be familiar to everyone who works there. These are my continued words in the staff meeting: *I've said this over and over, but probably never to this group.*

I stole that quote from Coach Parker at BU. He would always say, "I've said _____ in team meetings for 30 years, but maybe not to this team."

As staff changes, I find I assume everyone knows everything about what 'we' believe. I regularly get snapped back to reality.

So…back to straps. A few days ago I watched a young female client struggle with a heavy set of hang cleans. I immediately said, "We need to teach her to use straps. Her problem is her grip, not her hips."

The athlete responded that an MBSC coach had instructed her to put the bar down between reps, rest and regrip.

My thought went to, 'Have we ever talked about straps at a staff meeting?'

My mind said, 'Probably not.'

Here is the policy: Straps are for advanced lifters.

You will see when athletes begin to struggle to hold the bar and seem to be concentrating as much on grip as on the lift. This is when we introduce straps. The bottom line is, we never want to limit lower body power because of a lack of grip strength. That makes no sense.

We don't teach a hook grip. We don't tell them they need to concentrate. We don't tell them they need additional carries to work on grip. We teach them to use straps.

Our primary goal is power development. Straps undoubtedly help that. Let's make sure we all learn how to use straps, and know how to teach an athlete to use them. They may initially regress, but they will thank you later.

## *Single-Leg Olympic Lifting*

This article might be close to 20 years in the making. The initial impetus for this article came from Jeff Oliver, strength and conditioning coach at the College of the Holy Cross. When Jeff was my graduate assistant at Boston University, we both attended Vern Gambetta's *Building the Complete Athlete* weekend course in the 1990s.

We both returned with a new appreciation for the concept of single-leg training, and we implemented much of what we learned with our athletes. Our programs were progressive and innovative in the 1990s and probably still better than what many coaches do today.

I still remember Jeff jumping on the platform to do a few single-leg hang cleans. His rationale was, "If single-leg squats make so much sense, why not single-leg cleans?"

My reaction was to call him crazy.

For the next 15 years we continued with a mix of unilateral and bilateral strength exercises, gradually moving more in the unilateral direction. In about 2008, I took the plunge and eliminated all bilateral squats. We now do only unilateral knee-dominant exercises.

As I moved in this direction, I became aware of a concept called bilateral deficit. In the simplest terms, the bilateral deficit is the difference between the sums of the actions of the right and left limbs and the amount of weight lifted bilaterally.

Max Shank's single-leg deadlift is the perfect illustration of the concept of bilateral deficit in action. In his video clip Max does five single-leg deadlifts with 315.

This works out to a one RM of about 365. Max's best deadlift is slightly less than 600—I believe at the time of the video he had done 585 for a single in the conventional deadlift. This would make his bilateral Romanian deadlift slightly less, I'd guess.

In any case, if we assume that Max is bilaterally symmetrical for the purpose of calculations, the sum of Max's single-leg deadlift equals 730 pounds. This is the bilateral deficit. In this case 730 minus 585 equals 145 pounds of bilateral deficit. You can argue the math, but the point stands.

How do we explain this? The scientific explanation relates to the hemispheres of the brain. In simple terms, the body likes to work one side at a time. We can take a run up, run and jump off one leg higher than two. We jump off the left leg and reach with the right arm. We understand the diagonal nature of the body and handedness. Scientists theorize that bilateral contractions are hemi-spherically confusing and result in less output.

As we explored this, we saw evidence over and over. The sum of right leg and left leg vertical jump are routinely higher than the combined bilateral jump. The sum of right and left hand grip is routinely higher than the bilateral grip. The evidence has been in front of us for years.

As we experimented with rear-foot-elevated split-squats, we found startling bilateral deficits as athletes became more comfortable with the lifts. The numbers were not even close. With my Boston University athletes, *our rear-foot-elevated split-squat maxes projected out very close to our bilateral front squat!*

So, why did it take so long to embrace single-leg Olympic lifts? I could come up with a number of rationalizations. They look weird. Athletes would react negatively to these bizarre new exercises. My resistance to single-leg Olympic lifts was like everyone else's reaction to single-leg strength work. The truth is I was acting like the people I was trying to get to change.

However, what created the change was seeing the concept in action. In the summer of 2010 Boston Bruin Patrice Bergeron was a visitor in our BU weightroom. I was intrigued as I watched Patrice effortlessly hang clean 135 pounds for five, and then proceed to do 180 for five in the same fashion. I went over and asked who had taught him this and he said his strength and conditioning coach in Quebec.

Patrice's demo showed me that the bilateral deficit I had spoken so strongly about in strength was also clearly evident in power. I don't know Patrice's one RM hang clean, but I can safely assume it was less than 300. However, his 180 for five single-leg clean clearly showed us another illustration of bilateral deficit.

I had one small problem. I needed a group of good Olympic lifters to test my theory on. Fast forward to 2013 when my US Hockey Women's National Team became that group and on day one they didn't disappoint. I asked the players to do five reps at 50% of their normal loads and they did so with ease. We did one-leg hang clean, one-leg hang snatch and one-leg, one-arm dumbbell snatch.

In all cases the bilateral deficit was evident. Athletes who struggled to do 135 for five easily did single-leg cleans with 70 for five. The snatch results were even more glaring. Molly Schaus easily single-leg snatched 55 pounds for five with a projected one RM of about 110.

I know you're doubting me, so check out the videos online, and think about this quote.

*"If you have not changed your mind about something in the past year, check your pulse you may be dead."*
*~Frank Gellet Burgess*

Mark Verstegen loves to use the term 'logic train.' Take the logic train with me.

We have embraced single-leg strength in our programs. For years we have seen the value of doing double-leg jumps and single-leg hops and bounds in our plyometric programs. Why has it taken us so long to embrace single-leg Olympic lifts? I can only say I wish I had listened to Jeff Oliver nearly 20 years ago.

I'll finish with one more quote: *When the student is ready, the teacher appears.*

Thanks Patrice, the teacher is finally ready.

### *Why I Don't Like Cleans From the Floor*

In our MBSC programs, Olympic lifts are for power and trap bar deadlifts are for starting strength. If I want to improve starting strength, we load the bar in the deadlift. If I want power, we Olympic lift from a hang above the knees position. The key is to choose the right tool for the right job.

At MBSC, and with any of my athletes, we have Olympic lifted from the hang above the knees position for going on 20 years. My feeling has always been the pull from the floor is a deadlift that gets the bar into the proper position to perform the hang clean. When we begin to Olympic lift for starting strength, we again begin to confuse issues or cross wires. We are, in effect, choosing the wrong tool for the job.

If we want power, we can get it in many ways. Swings, jumps and Olympic lifts are all acceptable power exercises in my book. If your facility is well-equipped, you can add Shuttle MVP jumps and hops or Vertimax jumps to your list.

If you ask me the best way, Olympic lifting always comes in first. Olympic lifting is how you incorporate the concept of progressive resistance into power development. With that said, the Olympic lifts are only for the young healthy athlete. Candidates for the Olympic lifts must be chosen with great care. Athletes must have proper mobility and stability and no history of back pain.

In our programs adults rarely Olympic lift. The changes seen in aging—loss of seated flexion and loss of shoulder mobility—make the Olympic lifts a poor risk-benefit choice.