

THE CrossFit JOURNAL

March 2011

TITLE	AUTHOR(S)
Girls Ride Horses, Too	Starr
Earn It	Martin
Hear Her Roar	Cecil
Burg's Eye View No. 4	Burgener
CrossFit Kids Community	Jeff and Mikki Martin
Stretch for Optimum Performance—Before the WOD	Patel
Strength and Character	Warkentin
Journal Club: Insulin and Exercise	Gary
Medicine-Ball Shuttle Runs	Martin
Bring Your A-Game	Daigle
Keeping It Clean	Everett
Raw Strength	Cecil
CrossFit Kids Tips and Tricks: Redirection	Patenaude/Martin
Fear and Loathing at the Arnold	Warkentin
IWCABTAMD	Platek/Porter/Walters
CrossFit Kids and Teamwork	Nichols
School of Fitness: Part 2	Beers

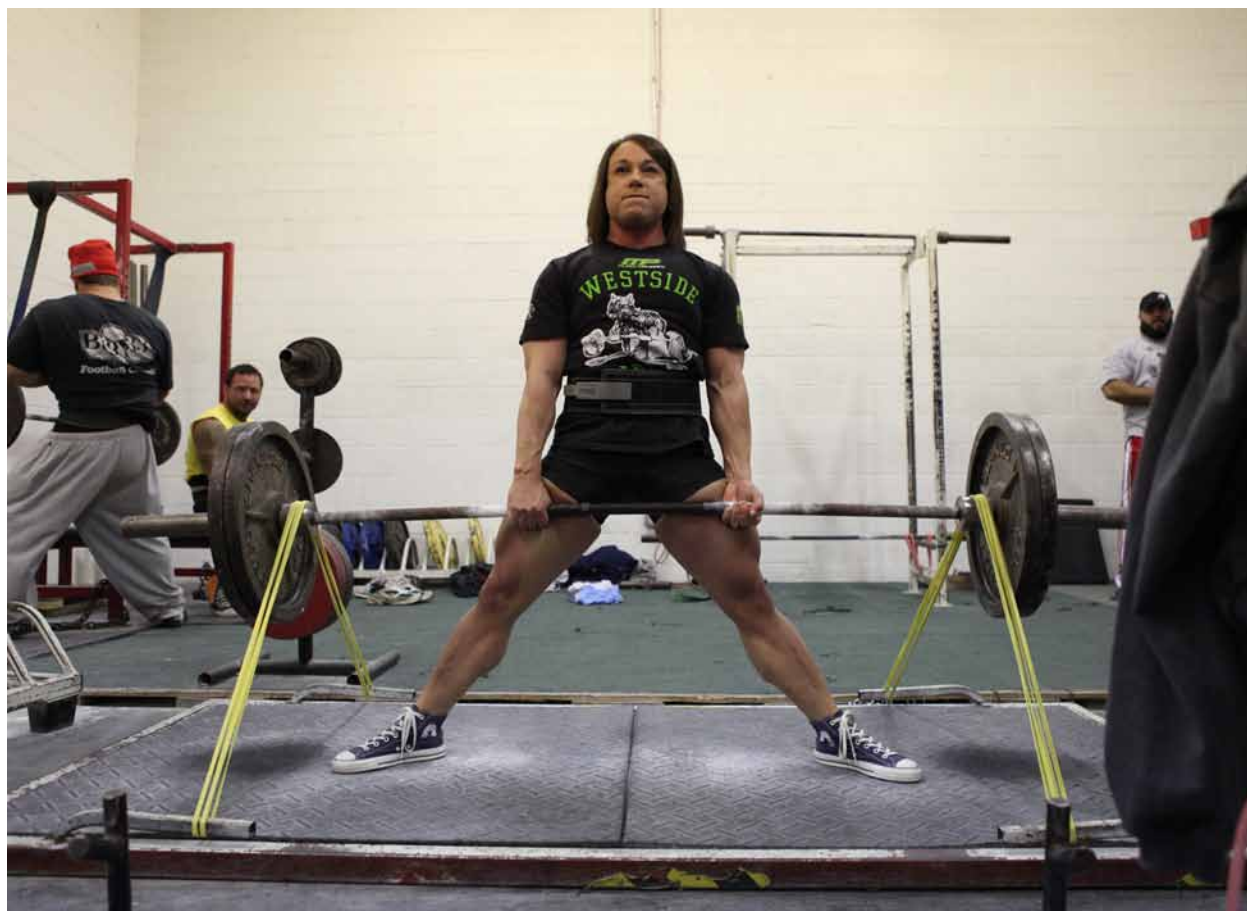
THE CrossFit JOURNAL

Girls Ride Horses, Too

Do women require a different approach to strength training? Bill Starr doesn't think so but offers a few tips for coaching female lifters.

By Bill Starr

March 2011



Staff/CrossFit Journal

I realize the origin of the idea that females are the weaker sex, but even at a young age, I knew it was false.

1 of 14



Women often come into lifting with stronger lower bodies and weaker upper bodies, but a good training program can correct any imbalances.

Damn the Double Standard

I grew up in a farming community and observed that women did a great deal more work than the men and often helped with the milking, plowing, haying or any other task that needed to be done on the farm. I also knew that when the wagon trains headed west, the women walked while the men rode horses or drove the wagons. In addition, the women took care of the children, fixed the meals, cleaned up and washed clothes. They were never idle.

But the notion that females aren't physically equipped to do manual labor or participate in grueling sports prevailed. Looking back, it seems rather absurd now, but that's how things were until recent changes came about.

For example, the International Olympic Committee ruled that women could not compete in races that were longer than 10,000 meters simply because running longer distances would be harmful to them. That precept was quickly shot down in 1984, when women were allowed to run in marathons—something a great many had already been doing quite successfully for years.

And look how long it took for women to be able to play by the same rules as men in basketball. When I was in high school, the women's game was tame—so tame that it

was boring. The offensive players couldn't cross over the mid-court line, and the defensive players had to stay on their side of the court as well. There are very few sports left that have separate rules for men and women. The only one that comes to mind is women's lacrosse, and I would like to see that changed as well.

Women compete in triathlon, soccer and softball; they have their own tackle football leagues; and female pole vaulters are soaring over the bar at heights that would have won the male version of the event in the '60s. In 2004, they even went to the mats in Olympic wrestling. And they rank higher in Olympic weightlifting worldwide than their male counterparts. Yet females had to scratch and claw to break through the male barrier in weightlifting.

I treated men and women alike and pushed them both equally hard, and they never grumbled or complained.

The administrators, naturally, were all men, up until when Mable Rader, wife of Peary Rader, who published *Iron Man Magazine* and *Lifting News*, got her card to judge meets. That opened the door a tad, and it wasn't long before the ladies wanted to take part in that hallowed sport. Powerlifting, being a newer sport, adopted the fairer sex more readily than Olympic lifting, but the barriers finally fell, and more and more females took to the sport enthusiastically—and many with great success.

Women have always been more figure conscious than men, and they in fact supported the health-club business for many years. But they didn't train at gyms. They went to the spa while the men did their lifting at the local YMCA or a black-iron facility in someone's garage. Rarely did a place allow men and women to train together. If a fitness facility did cater to both sexes, it was usually on an every-other-day basis and never at the same time.

In keeping with the concept that women can't handle extreme physical stress, the programs for women were always less demanding and usually built around very light weights and higher reps. Toning and shaping were the goals, and heavy weights weren't needed for that. Plus, who wants to look at a female with muscles? Obviously, as it turns out, a lot of people.

When I started training female athletes at the University of Hawaii in 1973, there was no information available on how to put together workouts for them. The routine that Tommy Suggs and I had devised and called the Big Three was created with males in mind. Yet I could not find a single reason why females shouldn't do that same program. The weight room at UH was small, with one pulling and squatting station, an incline bench, and two flat benches. So if an athlete wanted to join a group at, say, the squat station, she had to take her turn just like everyone else. I showed no favoritism one way or the other. I treated men and women alike and pushed them both equally hard, and they never grumbled or complained.



Muscles will respond to a good training program, and female lifters don't need very many special considerations.



Staff/CrossFit Journal

It took a while for women to be allowed onto Olympic platforms, and now that they are, females actually rank higher than male lifters in the sport.

Differences—But Small Ones

I was well aware many authorities at that time believed very strongly that because the two sexes are physically different, there should be two different approaches to strength training. I couldn't see the logic in that way of thinking. Male and female muscles, tendons and ligaments work exactly the same. Lung and heart action is the same, as are the rest of the ways in which the body functions in regards to getting stronger. If a certain exercise makes the legs stronger in a man, it will do the same for a woman.

There are, however, a few differences between the two groups at the beginning stage of training. The female is considerably weaker in her upper body than a male, but on the flip side, she is usually stronger than a male, relatively speaking, in her lower body. Yet that's no reason to alter a training program other than to spend more effort on the weaker area—which is the case for anyone just starting out. One area of the body is always going to be lagging behind somewhat.

I've also had sports coaches tell me that their athletes have special needs and should be doing a program specifically designed for that sport. They don't fully understand the concept of strength training. The first step in the process for any athlete is to make her total structure stronger and not worry about specific exercises for a certain sport. For until strength of the hips/legs, back and shoulder girdle has improved considerably, those specific movements will have little value. I've coached female athletes who participated in soccer, lacrosse, field hockey, swimming, fencing, volleyball, softball, basketball, and track-and-field events. Everyone did the basics until the foundation was solid, and then I added in some specific exercises that were pertinent to her chosen sport. To begin with, movements geared for a certain sport are much less effective.

Given a choice, I would much rather train a female athlete than a male. There are several reasons. None of the ladies I started on a routine had ever lifted weights before. Nearly every male had and brought with him his own ideas of

how a program should be assembled. The ladies followed my instructions to the letter and never entered into a debate over other exercises or sets and reps and so forth. Female athletes are much more flexible than the men, so they can learn the movements that require a high degree of adaptability—such as the power clean and even the two Olympic lifts, the snatch and clean and jerk—much more readily than men. I've also found that females have better foot speed and are more highly coordinated than men and, for the most part, are more intelligent, which enables them to make faster gains at the beginning of a strength program. And they smell a lot better, too.

While my female athletes never argued with me, they did have some concerns about lifting heavy weights, relatively speaking. The most common worry is that weight training will cause them to add body weight, and they don't want that. I tell them that lifting weight has little to do with how much a person weighs. That's a factor of diet. If a female athlete greatly increases her caloric intake, she will gain weight whether she's lifting or not. In fact, the exertions in the weight room are one of the best ways to maintain a certain body weight.

What will occur, however, is that a female will gain muscle and, because muscle is heavier than fat, there may be a slight increase in body weight. But because that new muscle is distributed evenly, all that happens is the female ends up with a more athletic, pleasing physique to go along with her new strength. I suggest to them that they pay more attention to their body image in the mirror than what the scale indicates.

Many have voiced their apprehensions about doing heavy squats, saying, "I don't want to end up with a big butt like those football players." My reply: "The only way you're going to get glutes like those guys is to eat like they do. And even if you weren't squatting, you would lay down lots of fatty tissue in your glutes. Just look at all the obese women waddling around the supermarket searching for more useless calories. They didn't get those huge dumpers from squatting but from overeating. What you will end up with if you watch what you eat is a firm, shapely derriere, which will greatly enhance your overall figure." End of discussion.



Training may result in a small increase in body weight for women, but the new muscle is usually distributed evenly, resulting in an athletic build.



Whether you're dealing with men or women, start light and work on proper technique.

The other concern is that they may injure their shoulders, back or legs by lifting heavy weights. Heavy, of course, is a relative term, and I explain that they will not start out with more weight than they can handle rather comfortably on all the exercises. Only after they learn the proper technique will they be allowed to add weight to the various movements in the program. And the set and rep sequence will further ensure that they are not overdoing it if they're unable to make the required number of reps on any exercise. They will stay with that same weight until they're successful. This slow but steady approach to getting stronger will ensure all the muscles of the body are improving at the same rate.

Weight training is one of the safest forms of exercising there is—when it's done correctly. There's certainly much less of a risk in squatting a weight than in driving to the basket for a layup with two or more defenders determined not to let you get the shot off.

Even Olympic lifting, which places the athlete in many precarious positions, is a safe sport, just so long as the lifts are done correctly. Faulty form in any athletic activity is dangerous, so learning the proper technique on all the lifts is a must.

Keep in mind that females have been lifting heavy objects throughout history. It is no more dangerous for a female to exert herself fully than it is for a male. If she has done the necessary work to prepare her body for the maximum effort and uses good form, she may not make that lift, but she will be fine. Keep in mind that the barbell doesn't know which sex is trying to lift it. Good form will be rewarded and sloppy technique will be penalized in a democratic fashion.

Keep in mind that the barbell doesn't know which sex is trying to lift it. Good form will be rewarded and sloppy technique will be penalized in a democratic fashion.

Getting Women Started With Weights

Now for the beginning program for the ladies. It consists of just three core movements, along with additional work for the abs and lumbar in the form of warm-ups. The three exercises I refer to as the Big Three are the power clean, back squat and bench press. For those participating in sports that require a great deal of vertical action for the arms, such as basketball and volleyball, I substitute the incline press for the flat version. However, so many of the athletes insist on doing flat benches because they believe that exercise will help them increase their bust size, so I allow them to make the final decision. I do encourage them to do both of those upper-body movements, stating that the two slightly different angles of those lifts will help develop the pecs more fully than just one.

Three sessions a week in the weight room are sufficient in the beginning, and maybe for a long, long time. Those days off will allow your body to recover from the new form of stress and, after the first few weeks, should be spent improving the aerobic base, enhancing flexibility and practicing the skills needed to be more proficient in a chosen sport.

The three exercises are aimed at improving strength in your three major muscle groups: hips/legs, back and shoulder girdle (or upper body). Until you learn the form and have started to establish a solid strength base, you will only do those three movements, plus some ab and lower-back work prior to lifting. But once you feel as if you're recovering from the load in the weight room, you should start adding in a few auxiliary movements for the smaller groups: calves, biceps, triceps and deltoids.

There are different set and rep formulas for the primary and secondary exercises. The primary, or core, movements will be done for 5 reps of 5. Research has established that the very best formula for developing strength for beginners is 4-6 sets of 4-6 reps. I stay with 5 times 5 because it makes the math much easier to do and I often had as many as 40 athletes to deal with at one time. But should you prefer 4 sets of 6 or 6 sets of 4, fine. You'll still get the desired results.

For the ancillary movements for the smaller muscle groups, I basically use the 40-rep rule using higher reps, which translates to 2 sets of 20 or 3 sets of 15 on exercises such as frontal and lateral raises with dumbbells, curls, straight-arm pullovers or triceps pushdowns. I realize 3 sets of 15 adds up to more than 40, but it's close enough. The only exception to this rule is for the calves. In order for them

to respond, they have to be brutalized: 3 sets of 30, and the final dozen reps should make your eyes water. Do no more than two auxiliary exercises a session even after you believe you are moving close to the intermediate level. Use your energy to improve the core exercises. As they get stronger, the smaller groups improve as well.

The Squat

I'll begin with the most important exercise in this routine: the full squat. All strength development originates at the center of your body where the hips, glutes, lumbar and legs join forces. So in the beginning you should prioritize the back squat by doing it first at every workout. But before I get into the form for this lift, I need to address the never-ending debate about the effect of full squats on the knees. I've been going over this since I first started training athletes in the '60s.



Staff/CrossFit Journal

***If you think women can't get brutally strong,
Google "Laura Phelps-Sweatt."***

When an athlete does a full squat—and by “full” I mean she goes way below parallel so that she is sitting in the deep bottom position—she is working her lower back, hips, glutes, hamstrings, quads, adductors and abductors so that they are all receiving equal attention. This creates a balanced strength. However, when an athlete cuts off the squat so that she is only going to parallel or even higher than that, she is neglecting many of the groups I just mentioned, especially the adductors and hamstrings. In a partial squat, the quads do the bulk of the work, which means they get considerably stronger than the other groups that make up the hip girdle. This will eventually lead to a weakness in those neglected muscles and end up halting progress in the hips and legs.

Now for the knees. When partial squats are done, the burden of halting the downward stroke falls on the knees. However, once the thighs break the parallel position during the squat, the task of halting the descending bar is now transferred from the knees to the much larger and more powerful hips, glutes, hamstrings and adductors, along with the quads and abductors. Thus, the knees are relieved of the stress and there are no problems. If you want to see how a proper squat should be performed, watch an infant. Young children do perfect squats over and over, and they go very, very low. That’s how they build up their leg strength so they can walk.



Staff/CrossFit Journal

Yes, squatting is OK for men and women.



Powerlifters use box squats to a variety of heights, and Bill Starr recommends you go very low when you squat to involve more muscles and take the strain off the knees.

Full squats result in a more equal development of the power pack and are much less risky to the knee joints. In fact, when squats are done right, they greatly strengthen the knees, so going low is really a no-brainer.

Nearly all the female athletes I trained have been small or have had slight builds, which means they didn't have a lot of muscle in their traps. The first thing to learn is how to position the bar firmly on your traps. This can be irritating, and many want to use some type of padding around the

bar to diminish the discomfort. Not a good idea. Eventually, that towel or rubber matting will twist or roll up and will hurt much more than the bare bar. You need to get used to having the cold steel against your skin from the get-go, and it doesn't have to be painful.

While you may not have much in the way of traps, use what you have. Lift your traps, lock them into a contraction and hold them that way until you complete your set. After a short while, you will not even notice the bar on your back.

Be sure to lock the bar tightly into your traps. If you merely lay it on the contracted muscle, it will move during the execution of the lift. This can be most disconcerting and can also affect the exercise because you may become more interested in what's happening with the bar than the movement itself. With the bar snug against your contracted traps, back out of the rack and set your feet at shoulder width with your toes pointed slightly outward. You may find that you can maintain your positioning better if your feet are a bit closer or wider, so do some trial and error until

**When squats are done right,
they greatly strengthen the
knees, so going low is
really a no-brainer.**

you discover the foot placement that suits your individual needs. Your eyes should be looking straight ahead, and every muscle in your body needs to be taut. Push your feet down into the floor. This will help you to tighten the rest of your body, from your toes to your neck.

With your back very flat and your chest up, lower yourself as low as you possibly can, but do so in a controlled manner. In other words, don't drop in to the bottom. Stay extremely tight as you descend, and when you are at the low point, hesitate for a 1-second count, then recover. That slight pause at the bottom is to keep you from getting in the habit of rebounding out of the hole. Constant rebounding, even with light weights is risky to your knees, so never do it. Rebounding also causes you to move out of the ideal positioning when coming up out of the squat.

While learning the form for the squat, do each rep as perfectly as you can and don't hurry through the set. At the finish, take a moment to make certain everything is as it should be before commencing the next rep. The two biggest mistakes beginners make is rebounding from the bottom and allowing their backs to round. Some rounding is OK, but if it becomes excessive, take some weight off

the bar and practice better technique. Constant rounding of the back will eventually cause problems in your middle and lower back. It also means that your lower and middle back are relatively weak and need more direct attention. At this stage of training, back hypers and reverse back hypers will be enough to remedy the weakness. Do one of these prior to lifting and another at the end.

Take a deep breath and hold it during the squat. Whenever you breathe during the execution of a lift, your diaphragm is forced to relax, and this diminishes your power base. There's no risk of blacking out because the up and down move only takes a few seconds. The very first time you squat, only do 3 sets of 5. It doesn't sound like much, but I guarantee you'll get sore. At your second workout, add a set, and at the final one for the week, do 5 sets of 5.

Stay with light to moderate weights while learning the squat, but once you feel confident that you're doing them right, don't be afraid to put more weight on the bar. The worst thing that can happen is you fail and—trust me—if you stay with the discipline for any length of time, you will learn that failure is necessary and a vital part of strength training.



**Elite lifter Laura Phelps-Sweatt demonstrates an ultra-wide stance for squatting.
Most athletes will be comfortable with a stance of about shoulder width.**



The power clean is one of the three main exercises Bill Starr recommends for women starting a lifting program.

The Power Clean

My exercise of choice for the back is the power clean because this is aimed at female athletes. The power clean is known as the “athlete’s exercise” because it requires that the lifter utilize a great many attributes which are beneficial in any sports activity: coordination, timing, flexibility, quickness, balance and, of course, strength.

There are two pieces of equipment that are invaluable when teaching females this exercise: a short Olympic bar, which weighs 30 lb., and training plates. There are several types of training plates, but the ones I prefer have a steel center and a bonded rubber edge. These are of the same diameter as the 45-lb. metal plates and allow the lifter to get in the correct starting position for any pulling exercise. They come in 5 and 10 pounders. With the shorter bar and five pounders, a beginner can learn how to power clean with as little as 40 lb.

However, before I teach a female how to do this high-skill movement, I first have her deadlift for two reasons. The deadlift mimics the start of the power clean, and I also believe it’s important for everyone, male or female, to know how to lift a heavy object off the floor. This is an

act every person will do countless times throughout his or her life, and knowing how to do it correctly can save a great deal of suffering.

Your feet should be at shoulder width or slightly more narrow. Grip the bar just outside your legs, flatten your back, lower your hips, and with your eyes directly ahead, think about pushing your feet down through the floor. The bar will glide up your body. The key points for the deadlift are keeping your back rigidly tight and making sure the bar stays very close to your body from start to finish.

Learning the correct technique for the deadlift can usually be accomplished with 2 or 3 sets, then the athlete can move right to the power clean. Same foot placement, same grip, same starting posture of the body—but now the bar is going to be moved from the floor all the way to your shoulders, where you will end up securing it across your frontal deltoids.

Just before you start the power clean, check two things: your frontal deltoids need to be out in front of the bar. Not much, just a bit. And the bar has to be against your shins. If it’s even an inch away, that will adversely affect the finish of the lift.

With your arms straight, pull the bar off the floor. Do not jerk it upward, for that will cause your arms to bend and your back to round. When the bar reaches mid-thigh, drive your hips forward, contract your traps, bend your arms, and climb high on your toes. This final sequence is critical to moving heavy weight in this lift. If you bend your arms before bringing your traps into play, you will not have a strong finish. The combination of traps, arms and calves will make the bar jump, and that's when you dip under it and rack it across your shoulders.

A power clean should resemble a whip: slow off the floor, picking up speed in the middle, and a blur at the top.

Try not to let it crash on your collarbones. Your triceps should be parallel to the floor when you rack the weight. Lower the bar in two stages: first to your waist, then on to the floor. If you lower it in one motion, more often than not, you will end up rounding your back, and you can sustain a ding if you do this often. Reset to make sure your starting position is correct, then proceed to the next rep.

The keys to keep in mind when power cleaning are pulling the bar very close to your body from start to finish, waiting till you have shrugged your traps before bending your arms, driving your elbows up and out rather than back when you do involve your arms, and keeping your torso erect when you rack the weight. Leaning back during the rack can also be troublesome to your lower back.

A power clean should resemble a whip: slow off the floor, picking up speed in the middle, and a blur at the top. This is a high-skill lift, so it takes time to perfect the form.

As with the squats, do 5 sets of 5 and stay with light to moderate weights until you get the rhythm of the movement. The great thing about this exercise is once you master the technique, you will not only become stronger, but you will also greatly enhance many other athletic



Staff/CrossFit Journal

A strong shoulder girdle is essential for any athlete.

attributes. Typically, females are the weakest in their upper bodies, so as soon as they have learned correct form on the three primary lifts, I quickly insert several auxiliary movements for the shoulder girdle, which includes the arms.



At the beginning, Bill Starr recommends keeping auxiliary exercises to a minimum so athletes can focus on the core lifts.

Flat or Incline Press

The core exercise that you decide to use for your shoulder girdle can be either flat or incline bench presses. Or, you can alternate those two lifts. Most want to flat bench because that is the current gauge for strength in the athletic community. Here are some guidelines that apply to both forms of bench pressing:

Make the bench a part of your body. Squeeze down into it and plant your feet solidly on the floor. These two things will help you create a firm base for when the bar hesitates through the sticking point. Grip the bar so your forearms are always vertical, and make sure you use a secure grip, one that has your thumbs around the bar.

Use a spotter. While this may seem like a tame exercise, it's really the most dangerous in all of strength training for the simple reason that the bar is directly over your face. Have the spotter assist you in taking the bar off the racks, take a moment to steady the weight, then take a deep

breath and lower the bar in a controlled manner to that point where your breastbone ends. Pause the bar on your chest for a 1-second count, then press it to lockout. As you're learning the form, the upward thrust doesn't have to be fast, but once you feel confident in your technique, explode upward. Do all your breathing while the bar is at the locked-out position.

The main difference between the flat bench and the incline is the incline will touch much higher, right where your collarbones meet your breastbone. If it touches lower than this, it will run forward and there's really no way for you to bring it back into the proper line. Two things not to do on either form of benching are rebounding the bar off the chest and bridging to bring it through the sticking point. One of the reasons I like the incline over the flat bench is that it's much harder to bridge or rebound the bar on that version of the press. Learn to do both lifts cleanly from the very beginning and you'll maintain that form all your life.

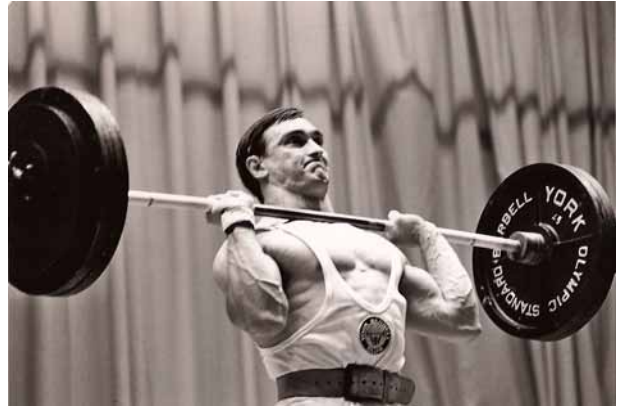
I've found that female athletes are just as enamored with their biceps as their male counterparts.

The primary movements will once again be done for 5 sets of 5, and the same rules apply as with the power cleans and squats. Stay with light weights until you have the form down pat, then start running the numbers up. After a couple of weeks, add in one or two auxiliary exercises for your upper body. There are several to select from, and you can alternate them every few weeks. The ones I like are dumbbell presses, either seated or standing; incline dumbbell presses; straight-arm pullovers; and lateral and frontal raises. I don't encourage strength athletes to do curls because their biceps are getting plenty of work with the power cleans, but if you want to do curls, that's OK too. I've found that female athletes are just as enamored with their biceps as their male counterparts.

Start Slow, Get Strong

Use this basic routine for two or three months, which is usually the time a sports team spends in off-season training. It will serve as a good foundation for future weight work. Then the next time you do a strength cycle, you will be able to add in other exercises, such as good mornings, deadlifts, lunges and perhaps even one of more of the Olympic lifts.

But the very first step is to get started. There is no doubt that a stronger athlete has a great advantage in any sport, if for no other reason than that it allows her to practice longer and harder and to recover faster.



Courtesy of Jody Foster

About the Author

*Bill Starr coached at the 1968 Olympics in Mexico City, the 1970 Olympic Weightlifting World Championship in Columbus, Ohio, and the 1975 World Powerlifting Championships in Birmingham, England. He was selected as head coach of the 1969 team that competed in the Tournament of Americas in Mayaguez, Puerto Rico, where the United States won the team title, making him the first active lifter to be head coach of an international Olympic weightlifting team. Starr is the author of the books **The Strongest Shall Survive: Strength Training for Football and Defying Gravity**, which can be found at [The Aasgaard Company Bookstore](#).*

THE CrossFit JOURNAL K I D S

Earn It

Mikki Martin offers up a workout with built-in play to motivate kids.

By Mikki Martin CrossFit Kids

March 2011



Staff / CrossFit Kids

A Kids trainer can take just about any highly valued activity and get young athletes to work very hard to earn the opportunity to do it. We have used 8-to-12-minute AMRAPs in this way, with one opportunity for the activity earned at the end of each round completed.

EARN IT

Run 100 meters

15 burpees

5 box jumps

Upon completion of each round:

- Earn a throw with water balloon to a target or bucket
- Earn a shot with Nerf machine gun to target
- Earn one minute on pogo stick
- Earn one minute on stilts

We have used these variations with great success.



Staff / CrossFit Kids

Hear Her Roar

By Andréa Maria Cecil

“She left a lot of men in her wake. A lot.”

—Mark Cohen

Karyn Marshall, the first woman to clean and jerk more than 300 lb., has joined CrossFit Shrewsbury in New Jersey as a member and coach. Like most endeavors in her life, she’s attacking CrossFit at nothing less than full force.

On Aug. 17, Karyn Marshall walked into CrossFit Shrewsbury without fanfare.

She had come to inquire about the training methodology; one of her chiropractic patients had told her about it, and it caught her attention.

So before her scheduled trip to Norway a few days later, she stopped in and “just introduced myself,” she said.

There, Marshall met Stefanie Hicks, co-owner of the affiliate in the New Jersey borough roughly 50 miles south of New York City and about a mile from the Atlantic Ocean.

“I told her who I was (and that I was) interested in CrossFit,” Marshall said.

But when she made the acquaintance, Marshall omitted some details.

“When she walked in the door, she had a presence,” Hicks said of the 5-foot-10, 175-lb. woman. “I knew she was somebody; I just didn’t know who she was.”

When Marshall left, Hicks hopped on the Internet.

“I looked her up and was like, ‘Oh my God!’” Hicks said.

Marshall mentioned she had an Olympic weightlifting background. What she didn’t say is she was a pioneer of women’s weightlifting: Marshall was the first woman to clean and jerk more than 300 lb.—an achievement forever memorialized by Guinness World Records in 1985.

A year earlier, in 1984, Marshall had made the Guinness World Records with a 289-lb. clean and jerk. For 73 years that record had been held by a Barnum and Bailey circus performer named Katie Sandwina, who had clean and jerked 286 lb.



Anthony Topper

“I was told, ‘Weightlifting is a men’s event. Why don’t you try something like synchronized swimming?’”

—Karyn Marshall

Marshall set 60 world and U.S. records in the 1980s and 1990s. In 1987, she was the first women’s world weightlifting champion. The inaugural event was at a different time and place than the men’s championships. Marshall’s gold medal made her the first American to win a world weightlifting title since Joe Dube—a man—in 1969.

Over the years, she has graced the pages of *Sports Illustrated*, *Glamour*, the *New York Times*, the *Los Angeles Times* and the *Chicago Tribune*. She made the covers of the *Guinness Sports Record Book* in 1986 and 1987, as well as World Weightlifting and USA Weightlifting publications. Marshall has appeared on the *Oprah*

Winfrey Show, *Regis and Kathie Lee, Live With Regis*, *The Joan Rivers Show*, ESPN and CNN. She also was flown to Japan to be on a TV show for Nippon Television Network Corp. called *Super People of the World*, and she appeared on a BBC show.

These days, Marshall’s accomplishments are no secret to CrossFit Shrewsbury’s 50-plus members

“Everybody knows who she is. I make it a point to tell everyone,” Hicks said. “They’re pretty psyched. They’re wowed.”

In March, Marshall will be inducted into the USA Weightlifting Hall of Fame during the Arnold Weightlifting Championships that are part of the Arnold Sports Festival held annually in Columbus, Ohio.

She is much more than ink in record books, however. Her story—like many in history—has its fair share of conflict.

A History Lesson

Marshall started training in 1978.

That year, Jimmy Carter was president; the Women’s Army Corps was abolished and women were integrated into the U.S. Army; Dianne Feinstein became the first female mayor of San Francisco; St. Paul, Minn., was the second U.S. city to repeal its gay-rights ordinance; and U.S. Senate proceedings were broadcast on the radio for the first time.



“When she walked in the door, she had a presence. I knew she was somebody; I just didn’t know who she was.”

—Stefanie Hicks



“I grew up in a different era. Women were not given the same opportunities in sport, or in life, that exist today,” said the 54-year-old Marshall. “Back then, women in weightlifting were not accepted.”

In 1979, she entered her first competition: a qualifying meet for the Empire State Games in New York State.

“I was told, ‘Weightlifting is a men’s event. Why don’t you try something like synchronized swimming?’” she recounted with a laugh.

Marshall was ultimately permitted to compete as an “extra.”

“I won my weight class, but I was not allowed to go on in the Games,” she said.

Winning her weight class meant out-lifting members of the opposite sex.

“She left a lot of men in her wake. A lot,” said Mark Cohen, Marshall’s lifting coach of 12 years. “She faced a lot of adversity.”

At that time, there were no state championships, no nationals, no worlds, no Olympics for female weightlifters.

“There were not sanctioned events for women,” Marshall said.

Mary Hyder remembered those days, too.

The 51-year-old started competing in Olympic weightlifting in 1980.

“We started out at first just lifting with the guys. We didn’t have a 15-kg bar,” said Hyder, a USA Weightlifting senior coach who lives in the Baltimore area. “Occasionally, they’d have another girl there and we’d weigh in each other. We would weigh in with clothes when the guys would weigh in.”

Although they were allowed to compete with men, women were not taken seriously, Marshall said. That’s where she said she found her motivation.

“Oh, the women want to have their little nationals and they’re going to lift their little weights,” she said, imitating comments from representatives of the U.S. Weightlifting Federation, the organization that preceded USAW, which is based in Colorado Springs, Colo. “They were humoring us. The higher-ups in weightlifting, they dismissed us.”

When a group of female weightlifters approached the federation hierarchy about creating a women’s division, representatives categorized it as an impossibility, Marshall said.

“(We) were told there would never be a women’s division in weightlifting. Never—that was their response,” she recalled.

“We were second class in how we were treated, so we fought really hard. There were ways you could do it. The way I chose to do it was to prove I deserved to be called an athlete and to prove that I was world class.”

She added: “That’s when I started training to break a Guinness World Record.”

An Olympic Lifter Becomes a CrossFitter

At 8:30 a.m. on Saturday, Jan. 15, the WOD at CrossFit Shrewsbury was a triplet.

Five rounds for time of:

- 8 ground to overhead
- 16 knees-to-elbows
- 32 squats



The first finisher recorded a time just over 17 minutes. Marshall finished in 22:33.

“Hard. It was hard. I was suckin’ wind,” she mustered between heavy breaths just after finishing the workout.

For her ground-to-overhead movement, Marshall chose to clean and jerk 95 lb.

“She’s pretty much pressing the same as some of the guys in here,” Hicks said.

During one of her first CrossFit experiences, Marshall did a workout that involved 10 rounds of 6 135-lb. hang cleans.

“She excelled incredibly. The only issue when she came in here was her endurance,” Hicks said.

But that’s changing.



“I love it. I absolutely love it. It’s so cool. It reminds me of the old days when I used to work really hard.”

—Karyn Marshall on CrossFit

“My endurance in three months has gone through the roof. I mean, I can run,” Marshall said. “I love it. I absolutely love it. It’s so cool. It reminds me of the old days when I used to work really hard.”

And CrossFit is a good fit with Marshall’s self-described obsessive personality.

“I have five pairs of CrossFit shoes,” she said, followed by her ever-present smile.

Each time she goes to the box, she brings four pairs with her: running shoes, Adidas Sambas, Inov-8 F-lite 230s and her Adidas weightlifting shoes.

“She wants to learn it all, do it all,” Hicks said.

Right now, Marshall does three to four CrossFit workouts a week and lifts two to three times a week.

“I really just wanted to embrace CrossFit to the point where I’m not just brand new, where I have some competency,” she said. “I’m really good at lifting one really heavy weight once, and now I’m trying to incorporate that. Everything is new. I’m trying to attack every workout. I just love that I can push myself in new ways.”

Three months after starting CrossFit, Marshall estimated she dropped about 10 lb.

“I know I’ve put on lean body mass, and I’ve dropped body fat,” she said.

Beyond the Bumpers

When Marshall isn’t lifting or working out, she spends time with her dogs—Jack Russell terrier Buster and English setter Hawk, both of whom she rescued from a pound.

“They’re both very athletic dogs,” she said. “I love them to death. They bring joy to my life.”

Marshall, who was born in Florida and grew up in the Yonkers and Bronxville, N.Y., areas, also has two cats from a pound.

During her summer, she spends five weeks volunteering as a coach with the 6 A.M. Club in Monmouth County, N.J. The outreach program incorporates speed, agility and strength training for at-risk youth who live in the county’s underprivileged areas. At its inception, it was for 11-to-18-year-old boys.

When Marshall discovered the program in 1999, she called founder Lt. Wesley Mayo Jr. of the county prosecutor’s office to ask why there wasn’t a girls’ program.

“I told him about myself and background, and we started a girls’ program that summer. I have been involved ever since as the girls’ coach,” she said. “It is a way for me to give back for all I have received from sports.”

In September 2000, the New Jersey Senate issued a resolution recognizing Marshall for her time and leadership with the 6 A.M. Club.

“She speaks to girls at my gym,” Cohen said. “I’d have her come speak to my kids anytime, anywhere. She stresses the importance of education. She’s a brilliant



Anthony Topper

“She’s a brilliant woman. She attacks anything she gets involved in. If she’s in it, she’s in it for a purpose and leaves no stone unturned.”

—Mark Cohen

woman. She attacks anything she gets involved in. If she’s in it, she’s in it for a purpose and leaves no stone unturned.”

Marshall earned her bachelor of science in nursing in 1980 from Columbia University. After that, she worked as a financial analyst for her father at Wall Street brokerage firm William H. Tehan Co. until 1990. She went on to study at New York Chiropractic College, graduating valedictorian, summa cum laude, in 1993. She opened her current practice, Champion Chiropractic, in 1994 in Shrewsbury, N.J.

“I was always working and training, and that was just my life,” she said. “I figured (weightlifting) was like my second job.”

In between those years, Marshall married and divorced twice. Her last name is a remnant of her most-recent marriage; she was born Karyn Bastiansen.

“I kept it because everyone knew me by that,” she said.

Marshall never had children.

“It was never a strong desire,” she said. “I just want to do so much. I love to just get absorbed into something and enjoy

it—I’ve done that with school; I loved college. I’ve been at a college for 10 years, soaking up everything like a sponge. I guess I get really into stuff. . . . Maybe it was my own wanting to do so much and seeing people with kids, realizing that they’ve given up their lives.”

At CrossFit Shrewsbury, Marshall is not just a member but a coach and has helped to elevate the affiliate’s offerings, Hicks said. “It has definitely taken this facility to a new level,” Hicks said. “Now I have a coach. She took me from a 65-lb. snatch to a 95-lb. snatch in one day. It was all technique based, not strength based. Karyn’s awesome.”

Arguably, Marshall’s coaching style mimics the way in which she has lived her life: when she sees barriers, she aims to destroy them.

On the afternoon of Jan. 15—a few hours after the morning WOD—Trevor James, the so-called CrossFit Shrewsbury intern coach, was attempting a 210-lb. snatch.

He missed twice.

“Relax. You got two minutes on the clock,” Marshall told him. “Don’t think about the past. Think about what you

want to do. Visualize your body doing what you want it to be doing.”

The 18-year-old James, who was not to be called off his efforts, tried and missed four more times.

Upset and defeated, he sat on the floor near the wall and said he realized before his final attempt that he had never even overhead squatted that much weight.

“OK. First of all, you never walk up to the bar with a negative thought in your head,” Marshall lectured him. “You have to think, ‘I own this. This is mine.’”



Karyn Marshall’s Athletic Achievements

- ▶ International Weightlifting Federation world champion.
- ▶ United States Weightlifting Federation nine-time national champion.
- ▶ Set 60 world and U.S. records.
- ▶ Won five gold medals in five world championships.
- ▶ First woman to clean and jerk more than 300 lb.
- ▶ Cited in *Guinness Book of World (Sports) Records* 1986-1998.
- ▶ Best official competitive lifts: 112.5-kg snatch, 137.5-kg clean and jerk, 247.5-kg total.
- ▶ Masters (age group) IWF two-time world champion.
- ▶ Masters (age group) USAW six-time national champion.



Anthony Topper

**Always a Fighter,
Always a Competitor,
Never Any Regrets**

Next up on Marshall's agenda: the 2011 National Masters Weightlifting Championships on April 1 in Savannah, Ga. "There's records to be broken," she said with absolute confidence. "I think I'm going to be setting national records at the nationals and personal records at the nationals."

Marshall added: "I think I'm stronger. I think I'm fit."

Cohen agreed, taking it one step further.

"I'd like to see her put records so far out of reach that no one will be able to touch them," he said.

Marshall is the most driven, competitive woman he knows, said Cohen, who has been involved in Olympic weightlifting for about 35 years.

"I once made a joke about playing tennis, and she jumped at the chance.... I kicked myself (later)," he said, jokingly. "Let's face it: When you're a superior athlete, you're a superior athlete."

Leo Totten, a USAW senior international coach, said Marshall was more than a pioneer in women's weightlifting.

"The fact that she was so good, she was a good representative of the sport. People kind of said, 'Huh, maybe there is something to this women's weightlifting thing,'" said Totten, who instructs, or has

instructed, every certification offered by USAW. "It really opened the door for women's weightlifting."

Marshall became a star in the Olympic weightlifting world, Hyder said.

"She was definitely the biggest thing in women's weightlifting back then," said Hyder, who still competes. "She was always a good athlete overall, a pretty intensive competitor. She, a lot of times, was a (weight) class ahead of me. Occasionally we were against each other. She always won."

By the time women were allowed to compete in weightlifting on the Olympic level, it was the year 2000. Marshall was 44.

"I feel that I did my part. I was a part of history. You need that. It was never going to go from nothing to (the) Olympics. There had to be a process and a journey. I was part of that journey."

—Karyn Marshall

"I was not competitive enough at 44 with the younger women. And that was good," she said. "If I was good enough it would tell me that the sport ... really didn't thrive."

People sometimes express sadness over the fact that Marshall—a living legend of sorts—never was able to compete in the Olympics.

She, however, said she doesn't it see it that way.

"There has to be that first generation to break the glass ceiling," she explained. "I'm a fighter. It made me train that much harder to somehow say, 'I'm good at this, I'm serious about it, and I deserve a spot on a world stage.' And that's kind of how we all forged our way into creating nationals, worlds and then ultimately the Olympics."

Marshall continued: "I feel that I did my part. I was a part of history. You need that. It was never going to go from nothing to (the) Olympics. There had to be a process and a journey. I was part of that journey. I was part of that first generation of women. We got weightlifting on the map. I was able to break down some barriers. ... I was the first woman to clean and jerk more than 300 lb. No one can take that away from me."



Websites

CrossFit Shrewsbury

Arnold Weightlifting Championships

USA Weightlifting (USAW)



About the Author

Andréa Maria Cecil, 32, is managing editor at the **Central Penn Business Journal** in Harrisburg, Pa. Andréa is a native of New Orleans who now lives in York County, Pa. There, she's been doing CrossFit since 2008 at **CrossFit York**. Additionally, she dedicates two to three days per week to training in Olympic weightlifting.



THE CrossFit JOURNAL

Burg's Eye View No. 4

Coach Mike Burgener analyzes Josh Everett's use of the split technique in the snatch and clean and jerk.

By Mike Burgener

March 2011



One of the original CrossFit stars, Josh Everett is a great athlete who's especially good at the Olympic lifts. At the recent CrossFit-USAW Open in Colorado Springs, Colo., Everett was able to showcase his CrossFit talents and his Oly skills on his way to victory in the 85-kilogram class.

Everett uses the split style for snatches and cleans, and in Part 4 of this series, Coach Mike Burgener breaks down Everett's technique in these rarer forms of the lifts.

Snatch—115 kg

I would have loved to have seen Josh's set-up before the pull. However, in this sequence Josh is right on. He is using his legs to bring the bar into the proper path. Note his hips are above his knees, and his shoulders are ahead of the bar with a strong back. Note the weight distribution on the feet—combined center of gravity between the bar and body. Josh is looking good!



Oops! When the arms bend, the power ends! His feet are looking good, and his torso is not bad, but you can see the premature arm bend beginning.



Wow! There's really a ton of arm bend now. Hey—Josh is a great athlete and can get away with the arm bend and still snatch a respectable weight. However, Josh could be, in my humble opinion, snatching 125 or 130 kilos if he did not pull with his arms.



Josh creates so much speed even while pulling the bar up rather than pulling the body down.



Burg's Eye ... (continued)

Note the good things here: the arms are high and outside in order to keep bar path close in the line of least resistance.



Great footwork! Josh is getting ready to press his body down into the split.



Wow! Off the ground, and then the power source changes from the ground to the bar. This change creates speed under the bar. Fast, fast, fast!



He's pressing under the bar. His hips are low and his footwork is perfect.



Good recovery!



Note the vertical position of the torso. The bones are stacked and the recovery is strong.



Step back! Torso vertical! Yup, yup, yup!



Good lift!



Outstanding athlete!



Clean and Jerk—150 kg

Great starting position for Josh: hips above knees, shoulders ahead of bar.



Starting the first pull can be difficult, but here Josh keeps the back angle similar to the starting position. Also note the feet: he's back on his heels and pulling the bar back to his mid-thigh. A combined center of gravity between the bar and the body is important here in order to keep the bar in the line of least resistance.



The back could be tighter. It looks like he has softened it a bit—but I like his feet.



Burg's Eye ... (continued)

Josh is starting the second pull a tad early, but you can see his explosion ready to happen.



Knowing Josh, what I am really impressed with is that his arm pull is minimal. It has to be because when the arms bend, the power ends.



Note that Josh is beginning his shrug under the bar. Look at his left foot beginning its move back into the split position. The back foot will actually hit a tad before the front.



Can you imagine pulling 150 or so up this high? Great rack position!



Burg's Eye ... (continued)

Great recovery!



Nice rack for the jerk! Note the elbows slightly down so he can get more drive from the triceps to push his body down. The bar is not pushed up. The speed on the drive of the legs and hips is critical, but just as critical is the drive out of the arms to push the body down into that split position/receiving position.



I would like a bit more of chest-up position on this dip, but what I do like is that the drive is straight down with the weight on the full foot.



Note that Josh's weight is still on his full foot on the way up out of the drive, and the arms have not come into play yet. Great job, Josh!



Burg's Eye ... (continued)

Note the feet. The back leg is beginning its move. As in the clean, the back leg will hit before the front leg.



The back leg has hit, and Josh is now pushing his body under the bar.



Not bad! However, I would rather have a more vertical chest position here. Josh is a tad forward with the torso. He gets away with it, but if he had 160 on the bar he might not have been able to support it by what I call "stacking the bones."



Note the knee ahead of the ankle. I want the knee stacked over the ankle. Josh is a bit forward here.



Burg's Eye ... (continued)

His recovery is actually better. This is where his receiving position should be.



With the weight forward, Josh's recovery is slightly forward, which can make for problems with max attempts.



Good lift! Great athletes want the heavy weight, and Josh Everett is a great athlete!



About the Author

Coach Mike Burgener is the head coach of CrossFit's Olympic Weightlifting Seminars. *Mike's Gym* in Bonsall, Calif., is a USAW Regional Training Center, and Coach Burgener regularly works with top athletes and beginners there in the company of his unflappable dogs. Coach Burgener's son Casey is a top American lifter and national record holder, and his daughter-in-law Natalie, also a national record holder, competed in the 2008 Beijing Olympics, finishing 12th. Anyone who's worked with Coach Burgener will tell you that his enthusiasm and expertise are always worth a few more kilos on any lift.

THE CrossFit JOURNAL KIDS

CrossFit Kids Community

Jeff and Mikki Martin talk about the CrossFit Kids exhibition at the L.A. Fitness Expo.

By Jeff and Mikki Martin CrossFit Kids

March 2011



Staff / CrossFit Kids

CrossFit Kids had the opportunity to make a presentation at the recent L.A. Fitness Expo at the Los Angeles Convention Center on Jan. 29 and 30. There was an obstacle course and some challenges and games. Additionally, we featured a demonstration competition workout by two 12-year-old male athletes from CrossFit Kids at CrossFit Brand X and two 13-year-old female athletes from CrossFit Kids Monrovia.

The demo WOD was as follows:

AMRAP in 10 minutes of:

5 power cleans (45/35 lb.)

10 box jumps (24 inches)

5 pull-ups

These youngsters were amazing, and the boys just barely nosed out the girls.



Staff / CrossFit Kids

THE CrossFit JOURNAL

Stretch for Optimum Performance— Before the WOD

The right kind of stretching and warm-up can give you an edge. Gus Patel suggests both non-specific and specific movements for use prior to your workout.

By Gus Patel Element CrossFit

March 2011



All photos courtesy of Gus Patel

Research and experience have established that flexibility and a proper warm-up are essential components of all sporting fitness.

1 of 8

Most programs—whether for a college, semi-pro or pro athlete—begin with a warm-up and stretching routine before progressing to the main training exercises. To stretch or not to stretch within this warm-up has been a controversial question leading to many anecdotal reports supporting both views.

Stretching is often less popular today for a variety of reasons, the main ones being that research on stretching is not as definitive (i.e., physical changes in the body are not always easily apparent from stretching) and has additionally produced mixed reviews.

Adding an additional specific and non-specific warm-up has proven to be an effective means to not only prepare athletes for their sport-specific task, but also to help improve performance.

However, what we do know is that although the outward physical changes resulting from properly warming up and stretching are not as apparent, the benefits of a proper warm-up and stretching program will help to reduce injury and, if done correctly, improve athletic performance.

I believe athletes can benefit from a non-specific and specific warm-up to help improve athletic abilities and reduce injury while simultaneously helping meet the need for an increase in range of motion to an appropriate level required in all CrossFit fundamental movements. To help support that belief, I have done some research that will give some empirical evidence.

Ask the Experts

In Dr. Melvin Williams' book *Ergogenic Aids in Sport*, Dr. B. Franks gives an extensive point-form review on warming up:

- *Athletes in high intensity, short duration events such as weightlifting and shotputting can improve performance by warming up*
- *Vigorous warming up can decrease performance in endurance sports*
- *Direct warm-ups (using activities directly related or similar to that of the sport) of moderate intensity and duration before explosive sports enhances the performance of trained athletes, but not necessarily of untrained athletes*
- *Indirect warm-ups (using activities not directly related to the sport, such as cycling and stretching) can often enhance performance if kept at an unstressful level*
- *Strenuous, indirect warm-ups can interfere with sports requiring motor skill*
- *Selection of a suitable warm-up depends on personal experimentation with various methods.*

In his book *Facts and Fallacies of Fitness*, Dr. Mel C. Siff says:

"An active warm-up which includes intense exercises is an effective means for successfully executing speed-strength exercises and explosive exercises, in particular. Thus, it was found that women basketball players increased their jumps from 1.0-4.5 cm; and long jumpers up to 10 cm. The punching strength of boxers increased an average of 400-700 Newtons, and the striking time decreased by 0.02-0.04 seconds. It is interesting that, during the rest period between strong and rapid punches, there is no significant relationship, whereas after a warmup, there is a moderate correlation. It has often been observed that a 100 m sprint or a 4 x 100 m relay sprint enhances subsequent long jump results."

Siff continues:

"Therefore, preliminary work which is similar to the subsequent work, diminishes significantly the time taken to complete a given motor task. However, it chiefly enables the muscles to withstand a large load without injury and execute powerful or rapid contractions. The movements included in the warmup should be appropriate for the special exercise, not only in their coordination pattern but also in the intensity of the neuromuscular activity. The latter circumstance is particularly important for speed-strength exercises. In other words, specificity of warm-up, like specificity of training, is also important."

Using stretching as a preparatory phase for a WOD, dynamic stretching—along with synchronized breathing—will help tune your nervous system, increase kinesthetic awareness and increase blood flow to the muscles.

As for the nature of the warm-up, in *Super Training* Siff recommends movements progressively take a joint through its full range of motion, and he makes two distinctions:

"A *general warm-up* uses a wide variety of actions to prepare the body as a whole for exercise, to increase muscle temperature and to stimulate the right pre-exercise mood. A *specific warm-up* relies on the actual exercises of the training session performed easily with lighter loads to provide a highly specific warm-up and neuromuscular preparatory phase."

What to take away from all this?

The good news is CrossFit is already helping with training every joint through full-range-of-motion functional activities. However, adding an additional specific and non-specific warm-up has proven to be an effective means to not only prepare athletes for their sport-specific task, but also to help improve performance.

Nevertheless, time and duration are often key factors, as a proper warm-up should be short and efficient enough to produce the necessary results without driving an athlete into any sort of muscular fatigue that would be a detriment to performance in a WOD.

Synchronizing Your Breathing With Stretching

Using stretching as a preparatory phase for a WOD, dynamic stretching—along with synchronized breathing—will help tune your nervous system, increase kinesthetic awareness and increase blood flow to the muscles.

Athletes should breathe at a slightly faster tempo—quickly once through each position of the stretch. This helps to stimulate the sympathetic nervous system, enabling optimal muscle-fiber recruitment.

Below are examples of my non-specific and specific warm-up protocols.

Non-Specific Dynamic Movements

Warm up 5 minutes with jump rope, Airdyne, rower, light running, etc.

Toe Touch

Start with feet double shoulder-width apart.



Stretch ... (continued)

Circle and touch from the left foot, tracing the floor to the right foot.



Finish at starting position. Work in each direction.



Spider Crawl

Start in a push-up position.



Bring one foot to meet your hand.



The advanced form of the stretch would be to bring your elbow to the instep of your foot.



Move the leg back to the starting position, and repeat with the other leg.



Forward-and-Back Leg Swings

With a hand for support on the wall and feet shoulder-width apart, keep the upper body perpendicular to the floor and swing one leg forward and backward; repeat with the opposite leg.



Advanced: don't use a wall for support. If you aren't using a wall, use arms to counterbalance the leg swings.

Side-to-Side Leg Swings

With both hands on the wall and feet shoulder-width apart, swing one leg from one side to the other.



Be careful not to produce too much force, causing the supporting foot to lift off the ground.

Advanced: don't use a wall for support.

Sumo Squat to Stand

Standing with your feet approximately double shoulder-width apart, grab the insides of your feet with your hands, being sure to keep your arms straight.



Squat as low as possible and hold for a brief moment.



Stand, keeping your arms straight and hands still touching your feet; hold briefly at the top.

Knee Tuck to V-Sprawl

Lying on the ground, tuck your knees to your chest, wrapping your arms around your legs.



Gently roll backward and then briskly forward into a seated V-sprawl position. From here, reach and touch your foot.



Reverse pattern, rolling back, tucking in your knees, and rolling backward and forward again.

In the V-sprawl position, reach and touch the opposite foot.



Prone Scorpion

Lying prone with your hands stretched out and legs straight, proceed to bring one foot off the ground by bending at the knee (it should look vaguely like a scorpion's tail).



Twisting to the opposite side and bringing the leg over to the opposing arm (as close as possible).



Hold briefly, then reverse the pattern. Continue the same pattern with the opposite leg.



Arm Rotations



With your thumb facing the ceiling and arms straight as much as possible, make a big circular motion—first backward for a few repetitions, then forward.



Continue with this same pattern with the opposite arm.

Example WOD: Fran

Specific Warm-Up:

A warm-up set of 3-5 reps of thrusters at a light weight (45 lb.) and pull-ups. If you are worried about doing too many pull-ups, do jumping pull-ups or use a resistance band.

Then, complete one more set of 3-5 thrusters at the prescribed weight and pull-ups. Rest briefly, and once you feel ready, 3-2-1 ... Go!

When Am I Ready?

People often ask me, "For how long do I warm up or hold a stretch?" My response is usually, "Stop when it feels right."

To help explain, I'd like you to take a moment to perform this basic body-awareness exercise:

For the sake of simplicity in this example, treat the muscle groups in sections: feet, calves, legs, "lower" and "upper" abs, lower and upper back (this last one might be easier to flex by retracting the scapulae), left and right chest, left and right arm forearm, left and right upper arm, and neck plus head.

Stretch ... (continued)

Simultaneously inhale and gently tense each specific muscle group for 1-2 seconds. Then relax, exhaling and releasing the tension from that specific muscle group.

Continue through each of the muscle groups until you've completed all listed parts. Finally, inhale and tense the entire body (all muscle groups). Then exhale and relax.

This simple exercise helps to demonstrate that through proper breathing and simple tensing of the muscles, you can observe in yourself the ability to assess your current body state. (Hopefully, you're a little more relaxed after this particular exercise.) In my opinion, nothing different occurs when stretching. Rather than hold the dynamic position for an arbitrary number of seconds, just taking the time to focus inward on the body and the specific muscle groups being stretched will be far more effective.

If your duration or intensity of the stretch or warm-up in general has yielded discomfort or tightness afterward, then chances are you either stretched or warmed up too intensely or were not breathing properly.

CrossFit is all about creating body awareness and giving athletes the ability to perform in all aspects of life, and with aid of a proper preparatory phase and recovery phase, I'm hopeful that athletes will experience both a reduction in the risk of injury as well as an improvement in overall performance.



About the Author

Gus Patel lives in Ontario, Canada, and is interning and training at [Element Crossfit](#). His previous experience includes working at the Sherdian College Athletics and Recreation Centre for three years, two of them as the head trainer. As well, he briefly worked for a year as a trainer at Canadian CrossFit. Gus' education includes a certification through the International Sports Sciences Association, as well as a Crossfit Level 1 Cert. He holds a degree in electronics engineering through Southern Alberta Institute of Technology Polytechnic and is working toward a degree in business management (majoring in accounting and finance) at Ryerson University. He hopes to be able to blend his talents and skills by spreading his passion for fitness in a career where he can connect, teach and affect as many people as possible in the future.

THE CrossFit JOURNAL

Strength and Character

Mike Warkentin explains how one athlete overcomes a mis-load to put forth an impressive CrossFit performance.

By Mike Warkentin Managing Editor

March 2011



Mike Warkentin/CrossFit Journal

The bar came off the floor funny.

Even from across the gym, it didn't look right when Tyson Takasaki pulled his first deadlift in the Intergalactic Throwdown. One side came up faster than the other, and when Takasaki locked it out, the bar wasn't horizontal.

It looked strange, but after competitors did three rounds of 30 double-unders, 20 chest-to-bar pull-ups and 10 burpees, I didn't expect 10 deadlifts at 315 to look pretty, even from the guy who had won all the events on his way to overall victory in another throwdown a few weeks prior.

On the next set, the bar looked better, so I figured Tyson had recovered and was moving the weight better. He certainly wasn't slowed down by the 10 185-lb. clean and jerks that concluded the Superbeast workout programmed by CrossFit Subzero's Funbobby Kwasny as part of a cross-Canada fundraiser.

Takasaki finished the workout in 11:40 and was the only person to do so.

And then his judge told me we had a problem.

Mistakes Happen—Unfortunately

I didn't have a venue in which to host what would be the second CrossFit competition ever held in the city. I was originally planning to run the event in a buddy's garage until it grew too big too fast. Thankfully, the crew at Focus Fitness came through for me in a big way and opened up their gym, which is where local NHL and CFL players train in the off-season.

The night before the event, we had trucked a collection of gear—some mine, some borrowed from other affiliates—to the venue, and I had handed out the loads and plate combinations for each bar in each heat in each event. With five divisions and a motley collection of bumper and iron plates in both kilograms and pounds, I made sure I had calculated everything right.



Mike Warkentin/CrossFit Journal

Takasaki prepares to lift a bar loaded with five 45s and one rubber 10.

With five divisions and a collection of bumper and iron plates in both kilograms and pounds, I made sure I had calculated everything right.

Then we taped surgical tubing between the handles on the facility's rack-mounted pull-up stations so athletes could actually do the chest-to-bar pull-ups programmed in the first workout. I was most worried about someone doing butterfly pull-ups and tearing the tubing off, but that MacGyver move turned out OK in the end.

Instead, we mis-loaded a bar with a rubber 10 instead of an iron 45. That made it 280 instead of 315, with 135 on one sleeve and 100 on the other. It seems unbelievable, but I've mis-loaded my own bars several times while delirious after a heavy lift, let alone in the thick of a competition with heats running back-to-back and bars that featured kilos mating with pounds and pieces of skateboard-ramp coping that weighed half a pound each.

I felt like I had been punched in the stomach when I realized what had happened, especially given that Takasaki had a chance to be one of the top athletes in a competition that was going to be scored across the country via video footage. I felt awful, as did all the volunteers.

Tyson didn't really seem to mind.

"Don't worry about it," he said.

After taking a few minutes to suck it up, I gave Tyson a few options, none of which seemed good enough for a guy who had just crushed a brutal workout no one else had finished under the 17-minute cap: he could do it again at the end of the day, or we could ask permission to do it the day after and send in that video for verification.

Tyson said he'd see how he felt, and then he went on and won the next two workouts. He rowed 1206 meters in 4 minutes and then locked out a 330-lb. front squat 6 minutes later for a combined Event 2 total of 1536. Then, in 7 minutes, he did 45 handstand push-ups (worth 2 points each) and 81 squats (worth 1 point) for a total of 171. The next closest men's score was 113.

It was a beastly performance, and I felt like we had let Tyson down in a big way. Again, he seemed unfazed and said he would do the workout again the next morning. Local affiliate Prairie CrossFit offered to open their space for his second attempt at Superbeast, but Tyson decided to redo the workout at the University of Manitoba, where he's a slot receiver on the football team.

I gave Tyson the Spirit of CrossFit award and told him I'd meet him in the gym the next morning.



Mike Workentin/CrossFit Journal

Takasaki finished Superbeast in 11:40, then redid it the next day in 11:17.

Rules and Redemption

I should have called Sevan Matossian when the facility attendant denied me access to the university gym because I hadn't been cleared to film by the media-relations department. Matossian has talked his way into all sorts of facilities while working for the *CrossFit Journal*, and I could have used his advice. Instead, I got mad and stomped into the parking lot, feeling again like I was letting an athlete down.

**“My back’s a little tight,
but I’m good to go.”**
—Tyson Takasaki

I called Tyson, who came up from the basement gym.

“How are you feeling today?” I asked, knowing several competitors were in mortal agony following a hard day of competition.

“My back’s a little tight, but I’m good to go,” he said.

I detailed the incident with the facility attendant. Rules are rules, I suppose, even if they seem petty and stupid. Tyson was again unfazed.

Things got a bit CrossFit after that.

Forced to adapt to the situation, we came up with a new plan. Without going into the details, I went and had a cup of coffee with my girlfriend. Tyson found some space, set up my camera on a tripod and did the workout on his own, without a single person cheering him on or any other competitors to push him.



Mike Warkentin/CrossFit Journal

Takasaki finished 16th in last year’s Canada Regional and will be looking to improve on that performance in 2011.

He was still sweating when he got to the coffee shop.

"How'd it go?" I asked.

"Better than yesterday, I think."

It was.

I watched the video later that day to time the workout and make sure all the reps were there. They were, and Tyson had called himself out and done extras when he needed to. The final time: 11:17, 23 seconds faster than the day before. That was good enough for 11th place when the competitors were ranked across Canada.

Tyson's scores in the other two workouts from the day before stood up as well, putting him in fourth place overall, just ahead of two-time CrossFit Games competitor D.J. Wickham, and two places behind Dan Rogers, the 2010 Canadian champion.

Takasaki also took first place overall in the local competition to complete an unbroken string of seven first-place finishes in the only two competitions ever held in Winnipeg. Given the difficulty of the Superbeast workout—try it—and the fact that he did it twice in 24 hours, I'd say his performance in that event was the most impressive.

And so was the character he showed in doing it.

"Mistakes happen," he wrote in an e-mail after the event. "This whole thing really put me in the right mind space to get my training in gear for sectionals."

It did the same for me, and I'm really looking forward to seeing more great exhibitions of physical fitness and strength of character as we go through the sectional and regional events that will lead up to the 2011 CrossFit Games.

For videos of Takasaki's performances, visit: <http://tinyurl.com/4suu4bt>.



Sandra Benz

About the Author

Mike Warkentin is the managing editor of the CrossFit Journal and the owner of *CrossFit 204*.

THE CrossFit JOURNAL K I D S

Journal Club: Insulin and Exercise

Dr. Jonathan Gary offers an introduction to the cell biology behind increasing glucose uptake into cells.

By Dr. Jonathan Gary

March 2011



Staff/CrossFit Journal

For readers who previously subscribed to *CrossFit Kids Magazine*, this article will be another in the series I've written trying to explain the basic scientific research that supports the benefits of exercise, both for the mind and body.

1 of 5

I call this series “Journal Club” from my time in graduate school. The closest thing I can compare it to is a book report. Perhaps a dozen students would get together every week, and it was the responsibility of one of us to present a paper (or perhaps a couple linked by a common theme). We could present the paper as something imaginative or groundbreaking in order to let everyone else in on the cool science, but it could also be a paper that was a bit questionable, either in its experimental procedures or conclusions. In either case, it was a great learning tool for critically reading papers. It was also a great way to disseminate knowledge to the rest of the group. I have the same purpose here: to present papers that I think are pretty interesting in the hopes that it starts a dialogue, opens some eyes or even makes you do a bit of research for yourself. These papers are not presented as the end-all be-all on topics but a point from which further consideration and research can begin.

A Look at GLUT4

I think I can take it as a given with this audience that we are all aware of the obesity epidemic that is affecting many nations around the world. And we understand that it is not limited to adults but is also quite pervasive among younger generations. With obesity comes a whole host of health problems, not the least of which is insulin resistance. The primary result of insulin resistance is an inability to properly maintain optimal blood-glucose homeostasis. Elevated blood glucose means cells are not getting the energy they may require (because it's not being imported as effectively without the sensitivity to the insulin signal), and the continuous presence of excess glucose in the blood can also lead to many detrimental health effects.

There is essentially only one way to reduce the amount of glucose in the blood: import it into cells. Once out of the bloodstream, glucose can be converted directly to energy (via glycolysis and the Krebs cycle), stored for later use (as fats and glycogen), or utilized for the formation of other cellular building blocks (pentose phosphate pathway, nucleotide and amino acid synthesis). To date, at least 12 different proteins are responsible for the transport of glucose into cells. All these proteins belong to the same general family. They sit within the cellular membrane, creating a pore that makes the membrane specifically permeable to glucose. Without these transporters, the cellular membrane is a pretty good barrier to the exchange

of soluble molecules between cells and their surrounding milieu. Our interest for this article is the transporter called **GLUT4**. GLUT4 is the primary glucose transporter present in skeletal muscle (and adipose tissue) and therefore the most relevant one for our discussions here.

Both insulin and exercise are capable of lowering blood-glucose levels, but surprisingly, at the level of cellular biology, they do it through two different modes. How do these signals affect the increase in glucose transport across GLUT4-containing membrane? It turns out that a significant reservoir of GLUT4 is actually stored in the membrane of the lipid vesicles that sit just inside the cellular membrane. Signals that result in an increase in glucose transport actually cause the fusion of these GLUT4-containing vesicles with the cellular membrane, thereby increasing the number of glucose transporters performing their function. As the signal diminishes, regions of the cellular membrane that contain GLUT4 invaginate and pinch off to reform the vesicles, readying them for the next round. The papers I'd like to go over in this article examine how the reservoir of vesicles that are insulin responsive are different from the set of vesicles that are induced to fuse with the cellular membrane in response to exercise.

Examining the Research

Douen et al. (1) confirm an observation they made a year earlier that there might be two distinct pools of GLUT4-containing vesicles, one responsive to insulin and one to exercise. Their work was done using skeletal muscle removed from rats. In one case, the rats were dosed with insulin; in a separate experiment, the animals ran on a treadmill for 45 minutes at a 15 percent grade; and a third set of rats were left untreated (controls)(1). A mixture of cellular and internal membranes were isolated from these muscle preparations and then subjected to separation on a density gradient (1). This particular procedure allows the separation of membranes based on the unique properties of what they contain (density). Resident proteins specific to each type of membrane were used to assess the separation (1). Cellular membranes migrated to the 25 percent layer, while the intracellular vesicles remained in the 35 percent layer (1). Once these membranes were separated and isolated from each other, assays were done on the samples to quantitate the amount of GLUT4 present compared to samples from untreated control animals. Their results show that upon insulin treatment, a significant amount (33 percent) of GLUT4-containing internal vesicles disappear

and there is a concomitant increase (150 percent) in GLUT4 at the cellular membrane (1). Exercise treatment showed a 250 percent increase in GLUT4 at the cellular membrane, while only an 8 percent decrease in the vesicle fraction (1).

Incorporating the results from previous studies, Douen et al. conclude that insulin causes the fusion of some of the intracellular vesicles to the cellular membrane, thereby increasing the amount of active GLUT4 on the cell surface (1). Exercise shows an equally large increase in GLUT4 at the cellular membrane. However, this GLUT4 comes from a different source, presumably located in an unidentified portion of the density gradient (1). Brozinick et al. (2) subsequently confirmed the idea of separate insulin- and exercise-sensitive GLUT4 vesicles. They went a logical step further and showed that both treatments actually lead to an increased uptake of glucose by rat muscle cells, not just an increase in the protein itself (2). Using four different isolated muscle preparations, the average increase in the rate of glucose uptake after insulin treatment or electrically induced contractions was 9.75- and 8.47-fold, respectively (2).

At this point, the two populations of GLUT4 vesicles had only been differentiated by their densities. Lund et al. therefore conducted experiments to determine the nature of the signaling pathways controlling the trafficking of these two vesicle populations (3). Comparing insulin treatment and electrically stimulated contractions, the addition of the compound wortmannin only inhibited the glucose uptake following insulin treatment (3). Wortmannin is a fungal metabolite that primarily inhibits a subclass of signaling proteins called phosphoinositide 3-kinases (PI3Ks). One of the many roles PI3Ks fulfill is the control of intracellular vesicle trafficking; therefore, the specific effect of wortmannin on insulin-induced GLUT4 vesicle fusion is quite significant. It is not only consistent with the evidence that the two membrane vesicle populations are distinct, but also that they are controlled by separate mechanisms.

Indeed, the quantitative evidence supporting two pools of GLUT4 is significant, but there's nothing like qualitative verification—seeing is believing. Using isolated rat muscle, Ploug et al. (4) conducted several light and electron microscopy studies on tissue that was untreated (basal state)(4); the images are pretty amazing. Using immunofluorescence techniques to specifically visualize the location of GLUT4 in the preparations, it becomes apparent that the protein is arranged in very interesting patterns at the muscle cell surface, just below it and in the core of the fiber. At and near the surface, GLUT4 is

arranged in either quite regularly spaced string-like structures parallel to the long fiber axis or in more amorphous arrangements depending on the point of contact of blood vessels (4). The parallel structures are maintained in the core as well, though perpendicular strings can also be seen with equivalent spacing as a sarcomere (the single actin/myosin muscle unit)(4). Upon higher magnification the GLUT4 can be described as being present on either large, intensely stained structures or finer, punctate and tubular elements (4). Using electron microscopy and immunogold labeling procedures, the localization of GLUT4 was further characterized. The larger structures correspond to the Golgi, while the other features appear to be endosomal membrane vesicles and tubulovesicular bodies (4).

Upon exposure to a mixture of insulin and glucose or electrically induced contractions, GLUT4 can be seen to accumulate at the cellular membrane and the tubules at the expense of material from both the large and small intracellular stores (Golgi and endosomal membranes) (4). Additional characterization of the small endosomal membrane vesicles by Ploug et al. revealed that they fall into two subclasses: those that have the transferrin receptor (TfR) and those that do not (4). The TfR is another protein that resides within membranes, and it is often observed to cycle between the endosomal and cellular membranes. For the purpose of this article, it is only important to use TfR as a molecular marker for a specific type of membrane vesicle rather than focus on what TfR is doing biologically. Double-labeling experiments further show that the endosomal membranes containing the TfR partially overlap with those containing GLUT4 in the basal state (4). Interestingly, the TfR only accumulates at the cellular membrane after muscle contractions, not insulin treatment (4). In fact, quite the opposite occurs after insulin treatment: the endosomal co-localization of GLUT4 and TfR increases (4).

This paper has a couple of significant conclusions. First, the confidence with which the intracellular compartments containing GLUT4 can be identified has moved from the realm of fractionation to actual visualization. Second, the two distinct intracellular pools of GLUT4 that fuse with the cellular membrane after different stimuli are molecularly defined as TfR positive or negative. Combined with the previous papers, we are coming to a greater understanding of what differentiates the two pathways and the membranes involved. However, how does a cell establish and keep these two populations separate?

Within a cell there are numerous compartments, each separated by distinct lipid membranes. The compartments are defined for not only their contents, but also for the constituents of their respective membranes. The study of how these specific compartments arise and are maintained despite a significant shared flux between them is a field called “membrane trafficking.” This is a vast area of study, with researchers around the globe doing experiments to answer these questions in even finer detail. For this article, suffice it to say that each compartment contains within its membrane protein tags that help to define it as well as target its movement and fusion to other compartments.

Randhawa et al. (5) looked at the role two such protein tags have on the insulin-dependent appearance of GLUT4 at the cellular membrane. Rather than using excised rat muscle as in the above studies, Randhawa et al. used rat muscle cells grown on tissue culture plates (5). These L6 myoblasts were used because of the simplicity with which they can be manipulated. Treating the L6 myoblast cells with tetanus toxin prevented insulin from triggering an increase in GLUT4 at the cellular membrane (5). Tetanus toxin is a neurotoxin that degrades the membrane-embedded protein tags. In order to figure out which tag is responsible for the insulin-dependent GLUT4 trafficking, genes for toxin-resistant tags were added back to the cells and the experiment was repeated (5). In those cells receiving the tag called vesicle-associated membrane protein 2 (VAMP2), the translocation of GLUT4 was rescued; the presence of a different tag, VAMP3, did not have the same result (5).

Acknowledging the results of Ploug et al. (4), Randhawa et al. hypothesize that the insulin-sensitive membrane vesicles are defined by the presence of VAMP2 and perhaps the absence of TfR, while the contraction-sensitive TfR membrane vesicles have a different resident tag, maybe VAMP3 (5). This hypothesis was not directly tested by Randhawa et al., and indeed VAMP3 appears not to be absolutely required for contraction-induced GLUT4 trafficking (6). A strain of mice was genetically altered to be lacking VAMP3, and in these animals, exercise-stimulated glucose uptake was not significantly different from normal mice (6). This type of experiment can be misleading, however; animals with genetic alterations often engage compensatory mechanisms that do not relate to what exists in normal animals to overcome the deficiency. Perhaps another VAMP family member takes over for the loss of VAMP3 in this extreme scenario. Final elucidation as to the differences between the vesicles will require more research.

The Human Angle

The papers I have chosen above used rat muscle (or cells) in their studies. Although the rat-to-human connection in many studies is taken for granted, I want to include at least one article demonstrating an overall similar phenomenon in human muscle cells. Thorell et al. (7) used human subjects in their experiments and showed exercise and insulin treatment caused an increase in GLUT4 transporters at the cellular membrane in humans as well (7). In their study, seven males and two females underwent exercise and/or an insulin and glucose infusion followed by experiments on muscle biopsies from the vastus lateralis (7). In humans as well, exercise and insulin treatment caused an increase in GLUT4 transporters at the cellular membrane (7). Subsequent research with human muscle biopsies or human-derived cell culture will hopefully someday match the detailed conclusions concerning GLUT4 trafficking that have been found in rats.

Although the elucidation of the intracellular trafficking of GLUT4 is basic research, knowing it can inform everyday decisions we make. For instance, from these results it becomes more apparent why post-WOD carbohydrate does not produce as large an insulin spike as you might expect and yet the sugar is still efficiently imported into cells. Similarly, it now may be clearer why self-management of diabetes prescribes regular aerobic and resistance exercises with a general goal of increasing lean muscle mass. Muscle contraction is an alternate way of getting glucose out of the bloodstream rather than relying solely on a prescription drug (like thiazolidinediones) that may have negative side effects.

References:

1. Douen AG, Ramlal T, Rastogi S, Bilan PJ, Cartee GD, Vranic M, Holloszy JO and Klip A. Exercise induces recruitment of the “insulin-responsive glucose transporter.” Evidence for distinct intracellular insulin- and exercise-recruitable transporter pools in skeletal muscle. *J Biol Chem.* 265(23): 13427-30, 1990. [PubMed PMID: 2199436](#).
2. Brozinick JT Jr., Etgen GJ Jr., Yaspelkis BB 3rd, and Ivy JL. The effects of muscle contraction and insulin on glucose-transporter translocation in rat skeletal muscle. *Biochem J.* 297(Pt. 3): 539-45, 1994. [PubMed PMID: 8110191](#).

3. Lund S, Holman GD, Schmitz O and Pedersen O. Contraction stimulates translocation of glucose transporter GLUT4 in skeletal muscle through a mechanism distinct from that of insulin. *Proc Natl Acad Sci USA* 92(13): 5817-21, 1995. [PubMed PMID: 7597034](#).
4. Ploug T, van Deurs B, Ai H, Cushman SW, and Ralston E. Analysis of GLUT4 distribution in whole skeletal muscle fibers: identification of distinct storage compartments that are recruited by insulin and muscle contractions. *J Cell Biol*. 142(6): 1429-46, 1998. [PubMed PMID: 9744875](#).
5. Randhawa VK, Bilan PJ, Khayat ZA, Daneman N, Liu Z, Ramlal T, Volchuk A, Peng XR, Coppola T, Regazzi R, Trimble WS, and Klip A. VAMP2, but not VAMP3/cellubrevin, mediates insulin-dependent incorporation of GLUT4 into the plasma membrane of L6 myoblasts. *Mol Biol Cell* 11(7): 2403-17, 2000. [PubMed PMID: 10888677](#).
6. Yang C, Mora S, Ryder JW, Coker KJ, Hansen P, Allen LA, and Pessin JE. VAMP3 null mice display normal constitutive, insulin- and exercise-regulated vesicle trafficking. *Mol Cell Biol* 21(5): 1573-80, 2001. [PubMed PMID: 11238894](#)
7. Thorell A, Hirshman MF, Nygren J, Jorfeldt L, Wojtaszewski JF, Dufresne SD, Horton ES, Ljungqvist O, and Goodyear LJ. Exercise and insulin cause GLUT4 translocation in human skeletal muscle. *Am J Physiol* 277 (4 Pt. 1): E733-41, 1999. [PubMed PMID: 10516134](#).

All Web links last accessed Feb. 22, 2011.



Image courtesy of DanelMarks

About the Author

Dr. Jonathan Gary is a CrossFit Level 1 and CrossFit Kids trainer and satellite BrandXer. He is also a member of the CrossFit Kids HQ staff and the CrossFit Kids Training Course presentation team. Jon received his B.A. in biology from Northwestern University and his Ph.D. from UCLA in molecular biology. He is a principal scientist at a biotech company in San Diego, where he lives with his wife and dog. He has been CrossFitting since late 2003 after being introduced to it by Jeff Martin.

THE CrossFit JOURNAL KIDS

Medicine-Ball Shuttle Runs

Jeff Martin describes a workout/game for young CrossFit athletes.

By Jeff Martin CrossFit Kids

March 2011



Staff / CrossFit Kids

Medicine-ball shuttle runs were originally used as a WOD in the CrossFit Kids Teen classes. When the workout was introduced to the Kids class (5-to-12-year-olds), they asked to continue doing it rather than switching to a game.

1 of 2

Medicine-Ball Shuttle Run (Teen Class WOD)

The workout is 6 rounds for each athlete, with four athletes in each line (for adequate recovery). The med-balls weigh 10, 14 and 20 lb. and are arranged in a straight line 10-15 meters apart, 10-15 meters from the start position. The start position and each ball location are marked by a cone.

Explain to the athletes that this is an all-out sprint. Optimally, a minimum of two teams of four will race to have each athlete complete 6 rounds.

Upon "Go!" the first athlete sprints to first med-ball and runs it back to the start position, then immediately sprints to second med-ball and runs it back to the start position. He or she immediately sprints to third med-ball and runs it back to the start position. The second person returns the med-balls to their original placement, one at a time, in the same way.

The third athlete begins exactly as the first athlete, and the fourth athlete begins exactly as the second athlete.

Medicine-Ball Shuttle Run (CrossFit Kids Version)

This version is AMRAP in a given time. We used 10 minutes, but we do not tell the kids how long the AMRAP will be or they will game the clock.

The workout is AMRAP for each athlete, with four to six athletes in each line (for adequate recovery). The med-balls weigh 4, 6 and 8 lb. and are arranged in a straight line 5-8 meters apart, 5-8 meters from the start position. The start position and each ball location are marked by a cone.

Explain to athletes that this is an all-out sprint. Upon "Go!" the first athlete sprints to the first med-ball and runs it back to the start position, then immediately sprints to second med-ball and runs it back to the start position. He or she immediately sprints to third med-ball and runs it back to the start position. The second person returns the med-balls to their original placement, one at a time, in the same way. The third athlete begins exactly as the first athlete, and the fourth athlete begins exactly as the second athlete. The WOD continues in alternating sequence until time is called.



Staff / CrossFit Kids

The med-ball shuttle run is a great way to encourage all-out effort in a team-oriented setting.

THE CrossFit JOURNAL

Bring Your A-Game

CrossFitter and 2010 regionals competitor Kevin Daigle offers a few tips to first-time competitors as competition season approaches.

By Kevin Daigle CrossFit New England

March 2011



All images Staff/CrossFit Journal

Competition is the fire in which character is forged. It's also the crucible where weakness is overcome, enemies are defeated and victory is won with a resounding "how ya like me now?"

1 of 7

As it pertains to CrossFit, competition is also the ultimate expression of our community, and it's at the heart of CrossFit and its continued growth. Since very early in my CrossFit career, it's been my view that everyone should participate on some level in competition. In a way we do, as the competitive aspects of our beloved group-training model are in large part responsible for the movement we've created.

As the details of the 2011 Games season come out, it looks like the competition will be more accessible to more athletes than ever before. Clearly, new athletes are a little nervous to compete and have a lot of questions, especially because we've all seen the quintessential CrossFit badasses in thousands of competition videos and perhaps felt intimidated. We shouldn't feel that way, though.

Here, I'll provide some insight on how to go out there and be that badass—knee socks and inappropriate T-shirt optional.

Why Compete?

Why not? Be aggressive: take your newfound capacity and ability to task. Test it out.

I'm not saying that each and every one of you should be training to win the CrossFit Games. However, "forging" elite fitness and not testing its mettle on the field of sport is like building a 1,000-horsepower race car and never taking it out of the driveway. Or it's like making Megan Fox fall madly in love with you and then taking a vow of chastity.

There's also host of other reasons—some universal and some individual—why you should foist yourself upon a CrossFit event. It gives a laser focus to your training and in my opinion makes it more fun.

You'll also meet awesome people at a CrossFit competition, and sometimes this alone is worth the struggle.



When the organizers are explaining the schedule, pay close attention. You don't want to miss your heat.



Standards are different in each competition, so listen carefully to the pre-event briefing.

You'll also meet awesome people, and sometimes this alone is worth the struggle. Through this competitive environment, you'll experience a strengthening of the bond we all share as CrossFitters. You'll discover these bonds are deeper than you imagined.

In competition, you'll find yourself standing miles beyond where you believed your limits to be. You will become a better CrossFitter.

I could go on for days about this, but I'll stop here: be cognizant of the boundless benefits—and zero drawbacks—of competing in our beloved sport. Competition will not only allow you to showcase your stuff but will also show you what your A-game really is.

**If you don't have a coach,
find an affiliate whose
programming fits your
needs and follow it.**

How Do I train?

This can be difficult to answer. What are you training for? The CrossFit Games (and the qualifiers beforehand)? A local throwdown? Do you know the events, or are they secret? All of these are important questions to ask.

Once you have the answer to your questions, talk to your coaches, if they're not already programming for you. Here at CrossFit New England, we're fortunate enough to have Ben Bergeron specifically programming for those of us who are competing. Listen to your coaches. Follow their programming; they know more than you think.

If you don't have a coach, find an affiliate whose programming fits your needs and follow it. CFNE's Games-competitor programming is posted on our blog along with our regular class WOD, and quite a few athletes outside our box follow Ben's programming.

That being said, you need to train—hard. Get after it like it touched your sister. You're in it to win it now. CrossFit your fucking face off. And trust me—this is the fun part. This isn't where most questions originate, however. Athletes generally feel comfortable pushing themselves into Chernobyl-esque meltdowns in workouts. The big questions come the week before a competition, when the shitting of yoga pants and board shorts begins.

How Do I Prepare?

"What to do the week of? How many days do I take off? Should I do Eva and Murph the night before?"

The answer is simple: relax. I believe everyone should follow some sort of taper, but what's optimal will be different for each athlete. You'll have to play with this a little to get it just right. Once again, listening to your coach is paramount. Your preparation will change depending on the specific competition. Do you know the events? Are you nursing any injuries? All of these things matter.

Let me use my preparation for the 2010 New England Sectionals as an example. We knew the first three events in advance, so we had an opportunity to practice them. It's always a good idea to know how it's going to feel on game day. No one goes to prom night without taking the equipment for a few test drives. Here's what I did:

Saturday—Rest day

Sunday—Skills/met-con/normal training

Monday—Skills/met-con/normal training

Tuesday—WOD 1, half of WOD 2

Wednesday—WOD 3

Thursday—Rest/mobility

Friday—Rest/mobility

Saturday—Game day

If you don't know the events beforehand, this might look a little different. You might want to do some short met-cons in place of the practice WODs and supplement with some skills and drills to stay sharp. As I said, what's optimal here is something you'll have to find for yourself. Just don't stress too much about it.

Game-Day Nutrition

So now it's time for the big dance. You're cocked, locked and ready to rock. You've trained hard, chewed concrete, worked your skills like they owed you money, and ate clean. It's the morning of the event, and you've probably slept about as much as Tyler Durden. You're wondering what to have for breakfast.

This answer is much simpler than people want to make it. If it ain't broke, don't fix it. Hopefully, you've been eating clean, and you can just continue with that. Obviously, the timing of your meals will be dictated by the schedule of



Once the event starts, it's time to give it your all.

the competition, but the substance isn't hard to figure out. I'm going to directly quote my coach, Ben Bergeron, on this one: "Game day isn't the time to try new things." You don't want to pick today to try some funky new supplement or have some fried rattlesnake (unless that's what you've been wolfing down for months). Choose foods that you're comfortable with and you know are easily digestible. Being a little "rumbly in the tumbly" before the start of a WOD is not a place you want to be.



Between events, make sure you have the right food and drink with you to ensure you recover for the next event.

Between events, hydrate. The importance of this can't be overstated. Make sure you take in plenty of water not only for safety but also to optimize your potential performance. Between workouts, your nutrition should refuel you and help you recover.

**Between events, hydrate.
The importance of this
can't be understated.**

Personally, I always slam a whey-protein shake after a workout. Some people like to eat grilled chicken or something else. It's up to you. Just stick with what you normally do. More important here than in your everyday training is replacing lost muscle glycogen. I love me some sweet potatoes for that, but some prefer applesauce or other foods. Just keep it familiar, light and refreshing and you'll be fine.

Your post-workout recovery meal after the final event can pound sand. Go have a cheeseburger and an ice-cream cone to celebrate. You earned it. Tell them Daigle sent you, and they won't be surprised.

On the Clock

As the workout approaches, you're going to have to start preparing to tear the roof off. Keep in mind, there is no group or defined warm-up at a competition like there is at your box. It's up to each athlete to be warm, loose and ready to punch Godzilla in the face at the 3-2-1.

Listen to metal.

There will generally be a designated warm-up area for athletes to prepare. Same thing applies here as to nutrition: keep with your routine. Get loose the same way you would back home. Stretch, practice movements, load up barbells, etc. This is also the time to get your game face on. Become

that person who destroys workouts and lays waste to all in the way. Be a "prick-face." Not to other competitors, but to the WOD. Crank up the attitude and the swagger. Listen to metal.

Now's the time to engage in some visualization. If you've never done this, you'll be shocked at how calming, focusing and effective it is. Take some time, close your eyes, and do the entire WOD in your head. See it in perfect clarity and detail. Imagine yourself performing each stride, each clean, each pull-up, etc., perfectly. Be flawless in your mind. Make peace with the pain you'll be feeling, and then it will be only an expected visitor when it arrives. Now you're ready to breath fire.

Pay attention to the scheduling and know when your heat is. As someone who's helped run a competition, I can tell you how close people come to missing their heat because they weren't paying attention or weren't there when the time came. Be early, check in with your judge and remain focused.



Competition is one of the best parts of CrossFit. Enjoy it!

3-2-1 ... Go!

This is it! Let loose the dogs of war!

Everything has led up to this moment, and now all you have to do is what you love to do: have fun. Compete with honor, and relish every second you're in the fiery maw of CrossFit competition, because I promise you will long for it when it's over.

All of us should compete in CrossFit, whether in an in-house team challenge at your box or the CrossFit Games. It's crazy to love something so intensely and not experience it fully. Self-denial never won any awards. And there are no downsides to competition. You will only gain from throwing your hat in the ring. You'll grow as a person and as a CrossFitter. It's the big payoff. This is where everyone gets what he or she is after. Yes, competition is the "third date" of training.

Participate in the open sectional qualifiers this year. Competition is more accessible than ever with the new format and looks like it will prove to be more fun than a six-pack of Four Loko and giant potato gun.

As I said before, having a deadline of competition adds a sharp focus to your workouts you can't imagine. Even if your personal goal is just to be in better shape, this will dramatically accelerate your progress. You should have no worries about not being able to do muscle-ups or clean and jerk 300 lb. It doesn't matter. All that matters is that you show up and give it bloody hell. We'll all be right there, just outside the caution tape, screaming at you to pick up that bar.

Now go do work.



About the Author

*Kevin Daigle is a 29-year-old football player and coach turned CrossFitter from Dracut, Mass. He trains at CrossFit New England under the tutelage of Ben and Heather Bergeron and competed in both the 2010 New England Sectional and the Northeast Regional. Kevin was a roving reporter for the **CrossFit Journal** at the 2010 CrossFit Games and runs the blog [Daigle Breathes Fire](#).*

THE CrossFit JOURNAL

Keeping It Clean

Strength and conditioning coach Josh Everett offers up his advice for any athletes who plan to compete in competitions with drug testing.

By Josh Everett

March 2011



Staff/CrossFit Journal

The overwhelming majority of the CrossFit community supports and wants drug testing of the athletes who participate in the CrossFit Games, but what does this really mean for our athletes? And how do CrossFitters prepare for any other events where drug testing is in place?

1 of 4

Having worked about a dozen years as a strength and conditioning coach at the NCAA Division 1 level, I became very familiar with the drug tests, the banned-substance list and the strategies for avoiding accidentally consuming a banned substance. At the universities I worked for, our student athletes were subject to random testing for street and performance-enhancing drugs two to three times a year. In addition to those random tests, NCAA athletes are also tested at NCAA championship events should they or their team make it that far.

At the collegiate level, there is a continual education and awareness campaign for the student athletes regarding supplements and drug testing. I'm going to share some of these strategies and some ideas of my own that will help CrossFitters avoid consuming a banned substance and having an embarrassing positive test that could cost placement, prize money, sponsorships, etc.

It's All on You

The main idea I want to drive home is this: you alone are responsible for anything and everything that goes into your body.

If you're going to take anything beyond normal food items, you need to put in some footwork. Do your due diligence. Read labels. Do an Internet search. Compare the ingredient list to the banned-substance list. For the CrossFit Games, the banned-substance list is provided on the Games website. Other events will have their own lists.

**You alone are responsible
for anything and everything
that goes into your body.**

Even identifying the banned substances can be problematic at times as substances can have multiple names and forms. If you're not sure, don't take it!



A CrossFit veteran and an experienced strength coach, Josh Everett knows you have to be careful what you put in your body.

A big advantage collegiate and professional sports organizations have over the CrossFitter (for now) is the major sporting institutions have access to agencies that will help identify products with banned substances. For example, when I worked in college athletics I could go to Drugfreesport.com, type in our school's password, enter a product name or ingredient, and access if the product had been reviewed and if it was in the banned class or not. As college coaches, we repeatedly asked our athletes to bring in any supplement they wanted to take so we could approve it before they took it.

CrossFitters don't have this luxury, so what can they do? I'd suggest contacting an NCAA strength coach or athletic trainer (sports medicine) and ask for help. They have access to these databases, and you can offer to pay them for their time. Along with finding and asking for help from professionals in major sporting organizations, you may also try consulting with a naturopathic doctor. Many have strong backgrounds in supplementation, but some are pure snake-oil salesmen.

Another word of warning: not all banned-substance lists are the same from one sport organization to another. For example, the product that cost CrossFit New England a top spot in the 2010 CrossFit Games Affiliate Cup was not specifically banned by the NCAA even though it contained a banned substance. Generally, these banned-substance lists are more than 95 percent the same across organizations, but you are also responsible for the 5 percent of the list that might be different.

For the CrossFit Games policies on performance-enhancing drugs, visit Games.CrossFit.com.

The quality of the products you take should be another concern. A big problem with the supplement industry is the ingredient labels don't always match what's in the bottle. The supplement industry can be both shady and sloppy. Manufacturers will omit items that are on the label to save money, they are often sloppy in processing and create cross-contamination of products, and they will even go so far as to purposely put a banned substance in a product to increase its effectiveness. Choose your supplement company wisely. A few well-known and respected brands guarantee their products. Stick to those products.

Furthermore, beware of supplements that make outrageous claims. CrossFitters laugh at the outrageous claims made by infomercials selling goofy fitness products and programs, but many of those same CrossFitters fall hook, line and sinker for the same outrageous claims when they're made in bright, shiny colors on a supplement package.

Another big concern is that just because a product is sold at 7-11, GNC or in the corner-store vending machine doesn't mean it's legal for competition. Supplement stores are packed with products containing substances banned from many competitions.

Perhaps less obvious but just as important are the ingredients in "energy" drinks. These are everywhere. At one time, the athletic department I worked in had a SoBe vending machine not 20 feet from the weight-room door, and the vending machine contained two drinks that had banned substances!



Staff/CrossFit Journal

Drug testing was introduced at the 2009 CrossFit Games, and now it's just a standard part of the CrossFit competition season.

CrossFit athletes generally run into drug testing at the CrossFit Games, but the CrossFit Performance-Enhancing and Banned Substances Testing Program states athletes can be tested at any time. Most of the banned substances contained in energy drinks and stimulants in general clear your system very quickly, but you're still running a risk. It might be best to avoid "energy" products altogether, but you should definitely stick to water or Gatorade-type products during competition.

Do Your Research!

Keeping up with all the various supplements and energy drinks can be daunting, but if you're an elite CrossFitter entering competition, it is now part of the process.

Be responsible for what you put in your body. Never randomly eat or drink a product, particularly at competition. Dial in your nutrition and supplement plan early on in the training year. Plan, practice, and dial in your competition nutrition, hydration and supplement strategies. Nothing should be left to chance in competition. This requires some research at the front end, but research is what elite athletes do.

An elite athlete's nutrition, hydration and recovery plan doesn't rely on what the event host provides, what is being given out as free samples at booths, or what is at the store on the corner. It's researched, planned and practiced in advance with the help of knowledgeable advisors.

**Nothing should be left to
chance in competition.**

And if you put in your work ahead of time, at competition it will help with stress and mental preparation as you'll have one less thing to think about and you'll have a routine to fall back on.



Staff/CrossFit Journal

About the Author

One of the original CrossFit stars, Josh Everett has competed in three CrossFit Games, reaching the podium in both 2007 and 2008. Everett is a coach at Level 1 Seminars and CrossFit Olympic Lifting Seminars, and he is a strength and conditioning coach employed by the U.S. Navy.

THE CrossFit JOURNAL K I D S

Raw Strength

CrossFit athletes—half of them teenagers—from CrossFit Brand X head to their first powerlifting meet and almost all come home with first-place medals. Andréa Maria Cecil reports.

By Andréa Maria Cecil

March 2011



Alfia Tellez-Hernandez

Twelve competitors.

Nearly all at their first powerlifting meet ever.

Eleven first-place medals.

Twenty-eight state records broken.

All CrossFitters.



At 17, Keegan Martin lifted 358 lb. in the deadlift.

"It obviously shows we're good at what we do," said 15-year-old Cole Dick, one of the 12 from CrossFit Brand X who competed in the Feb. 19 USA Powerlifting California State Powerlifting and Bench Press Championships in Santa Clarita, Calif.

Dick, weighing in that day at about 190 lb., won his division with impressive displays of strength:

- 276-lb. back squat
- 171-lb. bench press
- 430-lb. deadlift

Editor's note: The loads listed here have been converted from metric, with all numbers rounded to the closest pound.

Keegan Martin, a 17-year-old weighing 143 lb. that day, recorded a 303-lb. back squat and a 358-lb. deadlift. He was disqualified on his bench press.

"Those are typical numbers you see from adult CrossFitters. Adult CrossFitters would be proud of those numbers, and these kids have another 10, 15 years of development. (They) are already adult strong," Keegan's father, Jeff Martin, said about his son and Cole.

With his wife, Mikki, Jeff co-owns CrossFit Brand X in Ramona, Calif., and is the co-founder of the CrossFit Kids program.

**"Adult CrossFitters would
be proud of those numbers,
and these kids have another
10, 15 years of development."**

—Jeff Martin

Cole and Keegan were among six teenagers from the affiliate who competed in the meet organized by USA Powerlifting, known as USAPL.

Keegan's brother, 19-year-old Connor, placed first in his division with big lifts at 158 lb. that day:

- 375-lb. back squat
- 215-lb. bench press
- 358-lb. deadlift

"I feel great," Connor said. "I feel like I did a really, really good job."

But the teenagers didn't just have a strong performance for CrossFitters or adults; they had a great performance for powerlifters.

Powerlifter Strong

"For a 165-er I'm very impressed with that squat number," Niko Hulslander said of Connor Martin, referring to his weight class.

Hulslander is a USAPL Pennsylvania referee, former USAPL Pennsylvania chairman and a national competitor. He has been powerlifting for 17 years.

And the squat was raw. In other words: just a singlet and a weightlifting belt; no squat suit, knee wraps or even wrist wraps.

"That's very impressive for 165 lb., especially as a teenager," Hulslander said. "As a side note ... there's adult men in my gym that can't squat that."

Hulslander owns Vision Fitness in southern York County, Pa., and has his own powerlifting team called Garage Ink Power Team.

Russell McDonnell, who has been powerlifting for 21 years, said Connor's lifts were "good numbers."

"Nothing astounding, but good numbers for a teenager in that (weight) class," said McDonnell, who runs a private strength-and-conditioning facility in Lancaster County, Pa.



Connor Martin, 19, has been doing CrossFit for seven years and reports no injuries to his growth plates. He can also squat 375 lb.



At only 112 lb., Alison Patenaude got 298 lb. off the floor.

**“There’s adult men in my gym
that can’t squat that.”**

—Niko Hulslander

Also of note is the fact that the meet was run by USAPL, Hulslander and McDonnell said.

The organization based in Columbia City, Ind., is known for its strict rules: back squats must be below parallel, no belly benching, no dropping the bar on deadlifts, and drug testing.

“In powerlifting, there are so many organizations, and it’s so hard to keep track of who’s who and who’s where. There are thousands of people who can claim to be national champions,” McDonnell said. “Anybody and their brother could start up an organization.”

The Adults

The CrossFit Brand X powerlifting team’s adults also performed well.

One of the highlights was Alison Patenaude, a 34-year-old middle-school physical-education teacher who weighed in on Feb. 19 at a mere 112 lb.

Her lifts:

- 193-lb. back squat
- 99-lb. bench press
- 298-lb. deadlift

**“Those are really good
numbers raw. That’s
something to talk about.”**

—Russell McDonnell

"I felt good with the numbers I pulled," she said.

"We had a great coach and great training," she said of Jeff Martin.

Her lifts impressed both Hulslander and McDonnell.

"That's almost a double-body-weight squat, which is really good for a woman," McDonnell said.

And Patenaude was close to bench pressing her body weight.

"For women ... that's huge," Hulslander said.

Her deadlift might be the most impressive—more than two and a half times her body weight.

"I weigh 315," Hulslander said. "I'd have to deadlift—just to make it kind of equal—787 lb. My best pull is 738. So I'm kind of like 50 lb. behind her in ratio."

Patenaude received the distinction of best female lifter at the meet.

"Those are really good numbers raw," McDonnell said. "That's something to talk about."

Last Name	First Name	Weight Class (lb.)	Body Weight	Age	Category	Best Squat	Best Bench Press	Best Deadlift	Total
Dick	Cole	198	190	15	Men Raw 14-15	276	171	430	877
Edelman	Dan	165	159	45	Men Raw 40-49	303	226	424	953
Martin	Connor	165	158	19	Men Raw 18-19	375	215	358	948
Martin	Jeff	165	162	51	Men Raw 50-59	254	204	408	866
Martin	Keegan	149	143	17	Men Raw 16-17	303	0	358	0
Martin	Mikki	132	128	48	Women Raw 40-49	165	110	215	490
McKay	Kyle	149	134	15	Men Raw 14-15	215	143	265	623
McKay*	John	198	198	38	Men Raw Open		364		
Patenaude	Alison	114	112	34	Women Raw Open	193	99	298	590
Rakos	Debbie	115	114	46	Women Raw 40-49	138	83	187	408
Ross	Alyssa	149	145	17	Women Raw 16-17	187	116	276	579
Ross	Matthew	165	157	14	Men Raw 14-15	254	138	303	695

*Only competed in bench press. Source: USA Powerlifting

The impressive results from the CrossFit Brand X team at the USAPL California State Powerlifting and Bench Press Championships.



Bob Guere

Cole Dick sets up for a squat attempt in the 198-lb. class.

First-Timers

It was only about a month earlier that the group decided it was assembling a team and heading more than 150 miles north to compete in Santa Clarita.

"It was just for fun, to see how we would do," Patenaude said. "We were all nervous and didn't know what to expect."

And the fact that nearly all the beginners placed first in their division speaks volumes, Hulslander said.

"First-timers stepping on the platform—that's a huge thing," he said. "The first time you step on the platform, you're just trying to get experience on the platform and trying to get lifts in."

He added: "It's a lot harder to compete in a contest versus in the gym in front of your buddies."

The meet ended up being ideal, mostly because of the powerlifting community that was there, Jeff Martin said.

"They were extremely nice to us," he said. "They took the time to go through the lifts with the kids. It was a great environment for the kids to walk into. They did a good job, made us feel welcome."

**"First-timers stepping
on the platform—
that's a huge thing."**

—Niko Hulslander

Connor Martin described the powerlifters at the meet as "super inviting to us."

He said: "My spotter on my last back squat was really encouraging. He was actually behind me saying, 'Put the bar up, put the bar up.'"

Specialization? Still for Insects

Cole, Connor and Patenaude said they'd be up for competing in another powerlifting meet.

Specializing in powerlifting, however, wasn't of interest.

"I'm a CrossFitter first," Connor said. "It's a little too much rest for me, personally, to lift once and to rest for 20 minutes and then lift again."

“If there’s lifters coming from a certain CrossFit gym that are coming up with those numbers, they’re doing something right. They know about training methodologies. There’s some credibility to what they’re doing and probably some good coaching there as well.”

—Russell McDonnell

CrossFit requires power, Cole said.

Powerlifting is “just strength,” he said. “You don’t have to move anything fast; you just have to pick it up or squat it.”

Unlike Olympic weightlifting, there isn’t as much of an influx of CrossFitters competing in powerlifting, said McDonnell, who also has been Olympic weightlifting for 10 years. He attributed that to the plethora of powerlifting organizations that can be a maze for novices.

Like Hulslander, McDonnell praised the CrossFit Brand X athletes for big lifts as first-timers.

“It’s their first meet, they’re rookies, and they’re putting up decent numbers. That tells me they had lifting in the past,” he said. “If there’s lifters coming from a certain CrossFit gym that are coming up with those numbers, they’re doing something right. They know about training methodologies. There’s some credibility to what they’re doing and probably some good coaching there as well.”

He added: “They’ve got a lot of potential.”

For teenagers, the CrossFit Brand X’s CrossFit Kids programming purposely focuses on strength, Jeff Martin said.

“We lift at least twice a week with the kids, and it showed up (at the meet),” he said.



Bob Guere



Alfonso Telles-Hernandez

At 17, Alyssa Ross has a 187-lb. squat, while 14-year-old Matt Ross pulled a 303-lb. deadlift in the 165s.

“The general physical conditioning raised the foundation for specialty. My kids can walk into a powerlifting meet, they can walk into an Olympic weightlifting meet, they can walk into triathlons ... they have the general physical conditioning to do well.”

—Jeff Martin

Their workouts comprise four met-cons a week and two lifting days—both the Olympic lifts and powerlifts are incorporated—with a focus on form and technique, Martin said.

And leading up to the meet, not much was different, he noted.

“It was the standard teen programming. We didn’t change anything,” Martin said. “Except for the last week, we did a mock meet and we tapered off before the meet.”

It’s another testament to the effectiveness of good CrossFit programming, he said.

“The general physical conditioning raised the foundation for specialty,” he said. “My kids can walk into a powerlifting meet, they can walk into an Olympic weightlifting meet, they can walk into triathlons ... they have the general physical conditioning to do well.”

And, he said, “They are all planning on competing in the CrossFit Games.”

For a short video from the USAPL meet, click [here](#).



Courtesy of Andr a Maria Cecil

About the Author

Andr a Maria Cecil, 32, is managing editor at the *Central Penn Business Journal* in Harrisburg, Pa. Andr a is a native of New Orleans who now lives in York County, Pa. There, she’s been doing CrossFit since 2008 at [CrossFit York](#). Additionally, she dedicates three days per week to training in Olympic weightlifting at [McKenna’s Gym](#).

THE CrossFit JOURNAL KIDS

CrossFit Kids Tips and Tricks: Redirection

Alison Patenaude and Mikki Martin suggest ways to keep energized kids focused and on task.

By Alison Patenaude and Mikki Martin CrossFit Kids

March 2011



CrossFit Kids suggests a format for 30-minute Kids classes (ages 5-12) as follows:

Whiteboard (3-5 minutes)

Warm-up (3-5 minutes)

Focus (5-8 minutes)

WOD (5-10 minutes)

Game (5-10 minutes)

We generally use focus time to work on two alternating elements of movements or nutrition topics for a 4-to-6-week period. However, in the case of a start-up program, or just as a reminder when needed, focus time can also be spent streamlining redirection. The focus work portion of your Kids class can be used to reinforce redirection techniques, such as Freeze, Look at Me (the trainer) or Quiet.

At CrossFit Brand X, we implemented this by explaining to the kids that we were going to ask them to get busy running, skipping or jumping any way they wanted in the designated workout area, and then we would ask for their attention in a particular way.

For instance: "We are going to practice responding to the trainer today. When I say, 'Go!' run, skip or jump around the mat until I say one of the following things: 'Freeze!' 'Look at me!' or 'Quiet!'"

Don't forget to allow "silly time" when kids have excess energy. We see this often on holidays or rainy days. Thirty seconds of "jump around and make faces" can work wonders, or 2 rounds of Tabata Tantrums will help get the energy leveled out so the kids can focus.

Tabata Tantrums

Using a Tabata interval, ask the kids to lie on their bellies and pound the floor with their fists and legs—"throw a tantrum." They'll do this for 20 seconds, then rest quietly for 10. Alternate rounds of standing tantrums (stomping and pumping fists) with floor tantrums.

(Parents may appreciate a reminder to the kids that they shouldn't do this anywhere else!)



THE CrossFit JOURNAL

Fear and Loathing at the Arnold

Mike Warkentin ventures into the savage heart of the Arnold Sports Festival.

By Mike Warkentin Managing Editor

March 2011



All images: Staff/CrossFit Journal

People are lined up for the Arnold Fitness Expo long before it opens.

The line stretches almost from one end of the Columbus Convention Center to the other. It passes the gymnastics hall, the powerlifting and Oly platforms, the boxing and MMA rings, as well as the CrossFit Kids station and the Grand Ballroom that's home to the CrossFit competition.

Further away are the fencers, the cheerleaders, the table-tennis players and the dancers. At other venues are the skateboarders, the track-and-field athletes and the hockey players.

They're all here under Arnold's banner—but the hub of the whole weekend is the Fitness Expo freak show in the main concourse.

Biceps and Breasts

"Oh my fucking god," a puffy bodybuilder exclaims as five bikini-clad figure competitors walk past.

They look a little like greyhounds in high heels: long and lean and all ribs. They're tanned and sprayed an unnatural shade of warm brown, and the sequined fabric of their bikini tops is straining to hold the silicone in. They smell funny, kind of like perfume and chicken.

Everything is bulging inside the expo. If it's not the breasts, it's the biceps, or it's bags filled with as many free T-shirts and samples as possible. I'd guess you could leave the Arnold with 30 new shirts if you put in any real effort.

Near the entrance, people are chanting "Vitamin Shoppe" as loudly as they can, and a burly dude with a microphone is urging them on with the promise of free products. The people, mostly wiry kids, scream louder, and some of them jump up and down like rabid beasts.



There's an average Joe hiding somewhere in the pile of Barbies. He paid to be there.



What's at the end of this line? Most people don't know, but they want it badly.

I suddenly remember Bourbon Street in New Orleans. But the people in Columbus haven't come for booze and parties. They've come for freaks and free shit.

**The people at the back
literally have no idea what
they're lining up for, but it
must be something—either
a celebrity or a badly fitting
T-shirt or a protein bar.**

The lines of people in the Expo are almost impenetrable at times, snaking for hundreds of meters to nowhere and back again. The people at the back literally have no idea what they're lining up for, but it must be something—either a celebrity or a badly fitting T-shirt or a protein bar.

Some intersections between the booths are impassable and become lobster traps that let you in but won't let you out.

"We were waiting in line for nothing," one woman says as a line suddenly disperses for no apparent reason. A new line starts forming somewhere else. If more than three people gather together and look in the same direction, a crowd swarms around them in seconds. Something must be happening.

I ask one guy what's at the end of the line he's standing in.

"Supplements and girls," he says. "It always leads to something good. The bigger the line, the better the stuff."

He confesses to sometimes lining up without having a clue what he might find at the head of the trail. One time, he says, the line ended with an "ugly chick with a voice lower than mine."

I know the booth he's talking about. It's packed with what might be transvestites, and—male or female—they're massive.



As seen on TV.

"We need to find a place that's giving out bags!" a man says as he pulls his wife into the fray.

"I feel like we need to be in line waiting for something!" another woman says, looking frantic and wringing her hands.

In one display, an average schmuck walks onto a platform filled with Barbie dolls. Their breasts are literally falling out of their tops, and their asses have devoured most of the fabric that's supposed to be covering them. The schmuck strikes a pose, and the girls quickly cluster around him like metal filings around a magnet. A picture is snapped, and they scatter just as quickly. He pays for the shot and leaves. A new schmuck steps onstage, ushered in by pro bodybuilder Andy Haman. Haman is the spitting image of Guile from the Street Fighter video game, and he is jacked.

I make the mistake of locking eyes with a guy near a booth. He lunges toward me and hands me a brochure featuring a "thermogenic workout enhancer" that's supposed to increase sweating in "problem areas." I ask him how it works. He tells me what's in it. I ask him again how it works. He hands me another brochure. I take it, walk away and drop it on the floor.

I see an old 173-lb. Thomas Inch dumbbell in one supplement booth. It looks completely out of place among the sleek, shiny labels, so I ask the exhibitor if anyone actually knows what it is.

"Not really, but a couple of farm kids have lifted it," he says as he hands me a can of protein pudding and sends me on my way.

Another booth over, a ripped-up guy is using the Shake Weight, and he's really trying to feel the burn. He's probably training to use some of the new and improved shaker cups on display in a massive pyramid at the center of the Expo. Apparently new technology has revolutionized the cup.

I overhear a tattooed guy asking an exhibitor how to use Jump Stretch bands for benching. The answer is ridiculous and would make Louie Simmons spit fire. I'm pretty sure Mr. Tattoo is going to be injured under a bar in a week.

At some booths, thick, thuggish exhibitors have made a critical mistake: they have no women hawking their wares. They stand glaring over their protein products, but the crowds bypass them for the booths packed with perfect 10s.

Other booths use celebrities as bait. Randy Couture is doing an interview with Lauren Abraham at one, while UFC ref Big John McCarthy is at another. Brian Stann is here. Four-time Arnold champ Flex Wheeler is pushing products elsewhere. Mr. Olympia Jay Cutler is turning heads. Arnold himself is around somewhere, too. Lou Ferigno, the Terminator's old nemesis, is selling photos for \$20. Lou occasionally pulls a fat bankroll out of his pocket and shuffles through it, but no one seems to want to add to it. A pic with tiny blond *Oxygen* cover girl Jamie Eason is a more prized commodity these days.

**Product is being moved
on an epic scale. Most of it
probably doesn't do anything.
But it might, and that's good
enough for most.**

"My fiancée will kill me if I get a picture with her," one guy says as he walks past a model whose skin is the color of barbecue sauce.

All the other big names are here: protein, casein, arginine, glutamine, L-carnitine. And all the initials, too: ABB, GNC, MHP, BSN, MRI, ISS, HCG, EST, EFX This list is almost endless.

On the main stage, arm wrestlers are battling it out, and bikini girls wait in the wings for their turn.

Product is being moved on an epic scale. Most of it probably doesn't do anything. But it might, and that's good enough for most.

I ask a group of kids if they want to be as big as the freaks.

"I'd love to be that big," one says earnestly. "I want to be Mr. Olympia."

Another tells me he thinks bodybuilders are "gross," and he'd rather look like a fitness model. I ask him how he trains. He says he works out for three hours a day—bi's and tris

I ask him if he's heard of CrossFit.

He says he's heard the name but doesn't know anything about it.

I tell him to check out the CrossFit competition in the Grand Ballroom.

Beyond Thunderdome

Down the hall outside the Expo, a 130-lb. woman is squatting my max for an opener on the powerlifting platform. Over in the Oly area, I can see CrossFit T-shirts peeking out from behind singlets. One of the people at a booth near the door is wearing a CrossFit Savannah T-shirt.

Coach Mike Burgener is announcing. He tells the crowd the loaders are doing CrossFit because they're constantly working to change the weight on the bar. I hear laughs. I look around and see Matt Chan, Spencer Hendel, Austin Malleolo, Camille Leblanc-Bazinet, Jason Khalipa and Rob Orlando sitting in the audience. They watch Chad Vaughn narrowly miss an American-record clean and jerk. Kendrick Ferris and Casey and Natalie Burgener are here, too.



Based on his performance at the Arnold, Graham Holmberg looks more than ready to defend his CrossFit Games title in 2011.



On the rings, this kid can do most of the stuff you can't. He's about 7.

The CrossFit Kids—including original and very successful experiment Connor Martin—are doing demonstration workouts with near-perfect form, even at high intensity. Connor can beat most of my numbers, too. He's 19.

Inside the Grand Ballroom, things are relatively peaceful in spite of the crowd and the loud music driving the team competition. I look around and see the de rigueur CrossFit T-shirts and recognize a lot of people. Almost no one is carrying a bag of free shit from the Expo.

Between events, I ask Rich Froning Jr. if he's been through the chaos in the main concourse.

"It's like the county fair on steroids," he says, shaking his head.

I tell him I couldn't take it for very long, and he understands.

"It's almost like we're on our own little island here ...," he says. "We don't really fit in with the meatheads. It's like a spectacle to go in there."

Free spirit Dave Lipson is having fun with the whole thing.

"Let me see if you can read through my sarcasm: I think these people are the picture of health here at the Arnold, and they're role models for children."

He's got more: "I think this completely exposes what the world of fitness is, and it's completely flawed ... This is not health. This is sickness. That's what we're fighting against. That's what makes CrossFit special and different."

**"It's like the county
fair on steroids."**

**—Rich Froning Jr. on the
Arnold Expo**

Lipson has talked to several people who have wandered in from the rest of the Arnold to check out the CrossFit thing. He says they want to know if the program has curls in it and why CrossFitters are so skinny. He says he told them they just need to try CrossFit.

Christy Phillips called the Expo “overwhelming” even though her Rogue teammates warned her ahead of time about what she’d encounter.

The excess of the Expo aside, people are watching top Games competitors, and while some of them are already members of the choir, others are seeing CrossFit for the first time. That’s a good thing, and it’s one of the reasons why CrossFit is at the Arnold.

“I looked out during one of the heats of Grace and thought to myself, ‘I can’t believe this is a spectator sport,’ Phillips says. “I was at the Games and could acknowledge it then too, but ... this isn’t the Games, but it’s still going to draw people that are here to watch ... I think that’s kind of the turning point for a sport when you start getting spectators who don’t necessarily do the event that they’re watching.”

2009 Games champ Mikko Salo summed up the whole Arnold Festival with one word: “Awesome.”

He added: “I’ve never seen something like this. This is really awesome.”

Over at the CrossFit Kids booth close to the powerlifting event, Jeff Martin talks about his second year promoting CrossFit Kids at the Arnold.

“Last year we spent a whole lot of time talking to people about what CrossFit was, but this year there are an awful lot of people who already understand what CrossFit is and they come by and they go, ‘Oh, there’s a kids section.’ On the flip side, we’re having people come by and say, ‘Is there an adult section to CrossFit?’ which is kind of cool.”

Martin also says the kids are having a blast. He explains the rings are a hit with little female gymnasts who aren’t allowed to touch the rings at their gym. Apparently the rings are only for the boys. Not so in CrossFit.

I look over Martin’s shoulder, and a young girl in a sequined singlet is doing a muscle-up.

“You watch their faces light up, and it’s one of the greatest things,” he says.

He’s right.



Small med-balls are a thing of the past. These ones weigh 100 lb.

What Is Fitness?

The Arnold Sports Festival is an incredible event that brings a host of truly amazing athletes together in one place. But they compete in their various sports around the periphery in assorted rooms and facilities. Hardcore fans and parents might stay the whole day to watch a powerlifting meet, a gymnastics competition or a fencing match, but most festival-goers just drop in and out from time to time to watch the occasional 800-lb. squat, 430-lb. clean and jerk or 2:15 Fran.

The real hub, the core of the Arnold, is the Expo, with its supplements, its girls and its pumped-up freaks. The festival brings the elite of sport together for a weekend, but it also brings the elite salesmen and marketers. They know how to make people buy their stuff, and they create the ultimate spectacle to designed to whip consumers into a froth that will move units fast.

An impossibly large bodybuilder tells a scrawny little kid that a beverage will jack him up beyond his wildest dreams, so the kid buys it, does some curls and keeps dreaming. A spectacularly beautiful woman with huge breasts smiles and hands out samples. What she's really selling is sex, but she'll throw in a case of protein bars and an autographed picture for 100 bucks. Lazy people eye the one-person saunas that claim to help you "burn 600-800 calories in 30 minutes" and "clear cellulite." Desperate workout kings suck down anything and everything that might help them get bigger and stronger faster.

Everyone's looking for a shortcut.

Outside the Expo, the athletes—both CrossFit and otherwise—are earning it the old-fashioned way. They're loading a bar and picking it up. They're working out instead of searching for something that works. The clanging they make comes from bumper plates rather than cash registers, and their heavy breathing is inspired by hard work rather than hard bodies. They've earned the sweat on their shirts and singlets, and they didn't need to use some cream to generate it. They're getting results.

And most of them look pretty good, too.



Sandra Benz

About the Author

Mike Warkentin is the managing editor of the CrossFit Journal and the owner of [CrossFit 204](#).

THE CrossFit JOURNAL

IWCABTAMD

Dr. Steven Platek and co. offer up data analysis showing increased performance in Fran, Angie, Cindy and the CrossFit Total.

By Dr. Steven M. Platek, J. Ryan Porter and Tia Y. Walters

March 2011



Staff/CrossFit Journal

Constantly varied functional movements executed at high intensity—this is CrossFit.

Creating functionally fit individuals is a primary goal of CrossFit, and an efficacious way of measuring or operationally defining fitness is in an athlete's ability to do more work faster and across variable domains over time—increased work capacity across broad time and modal domains, or "IWCABTAMD."

For those of us who are embedded in the culture and the workouts, there is little skepticism about this method because we have loads of anecdotal evidence to draw on. For example, we have one athlete at CrossFit Gwinnet who could not run more than about five steps at one point. About six weeks later, he ran 1.6 miles. After this accomplishment, he informed us the distance was the greatest he'd ever run.

Anecdotal evidence, however, is just that: anecdotal. In order to show the efficacy of any treatment program, one must devise an experiment where progress is tracked over time. Individuals outside the CrossFit community often question the metric for measuring the efficacy of CrossFit. For instance, they'll ask, "Where's the data?" We've seen posts like this quite a few times on CrossFit.com.

In an effort to demonstrate evidence-based increases in performance, we conducted two small-scale post-hoc studies. In Experiment 1, we analyzed main-site posts for a benchmark CrossFit workout: Fran. These initial data, even in light of the myriad scientific and methodological limitations associated with our approach, still revealed statistically significant increases in performance (decreased Fran times) over time.

In Experiment 2, we contacted Bill Patton, the owner of LogItAll, an online repository for CrossFitters to log their times, loads and performance and keep track of their progress over time. Bill was kind enough to provide us with a nameless version of his database, from which we extracted data for four benchmark workouts: Fran, Angie, Cindy and the CrossFit Total. These data confirm the preliminary data from Experiment 1 with a larger sample size. In other words, people get quicker Fran and Angie times, complete more rounds of Cindy and lift heavier loads from doing CrossFit. Interestingly, this effect is not correlated with how frequently they encountered the WOD or their age!

Pilot Study: CrossFit.com Analysis of Fran Methods

We perused the archives of the main-site blog and found six instances of Fran going back to September 2008. We then combed the blog for athletes who consistently posted a time for the workout. To do this, we compared blogs across dates to identify individuals who consistently reported times. In the end, we were only able to use three instances of Fran—September 2008, December 2008 and February 2009—because the number of athletes who posted across time points fell off quickly after February 2009. In fact, for the three instances after February 2009, we were only able to find 15 athletes who posted consistently. This, we felt, was too small a sample size to include in the analysis, and the period was therefore eliminated. After excluding the time points for which there was too small a sample size, we ended up with 45 athletes who posted for the three time periods that we included in our analysis.

For reasons of individual variability in posting strategy, almost all demographic information for the athletes was unavailable or unusable for analysis. For example, some athletes posted in a standardized fashion that included, age, sex, height, weight and the time it took to complete the workout, while others simply posted a time. Many posts do not bear on the workout at all, and those posts were not analyzed. However, the plethora of qualitative data in those posts is astounding and worthy of future research.

We ended up analyzing times on 45 athletes who posted on the September 2008, December 2008 and February 2009 instances Fran.

(We all know Fran is 21, 15, 9 reps of 95-lb. thrusters followed by pull-ups, for time. As a way of trying to make sense out of the variability in performance we noted the workout that preceded Fran. For the September Fran, the preceding workout was The Chief: max round in 3 minutes of 3 135-lb. power cleans, 6 push-ups and 9 squats. For the other two instances of Fran, December 2008 and February 2009, the preceding day was a rest day.)

Analysis

In order to investigate whether there was an increase in Fran performance as measured by decreased Fran times across these three time points, we employed a three-way repeated-measures analysis of variance (rmANOVA). (The repeated measures ANOVA allows you to investigate changes in "effect" in the same participants across time or treatment.) In order to standardize the units, we converted all times into seconds.

Results and Discussion

The analysis revealed that Fran times decreased in a statistically significant way over the three time points ($F(2,88) = 4.048, p < .05$; see Figure 1). The greatest extent of change was seen when directly comparing times posted for February 2009 with September and December 2008:

$M^{\text{difference}} (\text{Sept. 08} - \text{Feb. 09}) = 44.33, \text{S.E.M.} = 17.827, p < .05$ (S.E.M. means "standard error of the mean")

$M^{\text{difference}} (\text{Dec. 08} - \text{Feb. 09}) = 41.393, \text{S.E.M.} = 15.486, p < .05$

The difference between September and December 2008 was not significant:

$M^{\text{difference}} (\text{Sept. 08} - \text{Dec. 08}) = 2.40, \text{S.E.M.} = 19.073, p > .05$

Analysis of Four Benchmark WODs

Methods

The data for this larger study were kindly provided by [LoggItAll](#) (LIA) in a fashion so that identity could not be determined. LIA has an enormous database of repeat posters that also includes demographic information such as sex and age. This allowed us to make sex comparisons as well as conduct the analyses on a much larger data set. One of the issues inherent in posting to websites, apparently, is attrition, and for that fact we used athletes' first four posts to LIA. The sample size of athletes who continued to post after their fourth post dropped precipitously, and even for those who post on four instances, females tend to do so less often.

We extracted the relevant data (time, number of rounds or weight) from the LIA database and utilized SPSS to analyze the data. All data were processed using a 2 (sex) X 4 (time point) repeated measures ANOVA. In some cases, we reduced the number of posts to the first three posts in order to help increase the female sample size; those data are not reported here but confirm the findings detailed here and are available upon request to Dr. Platek (see below).

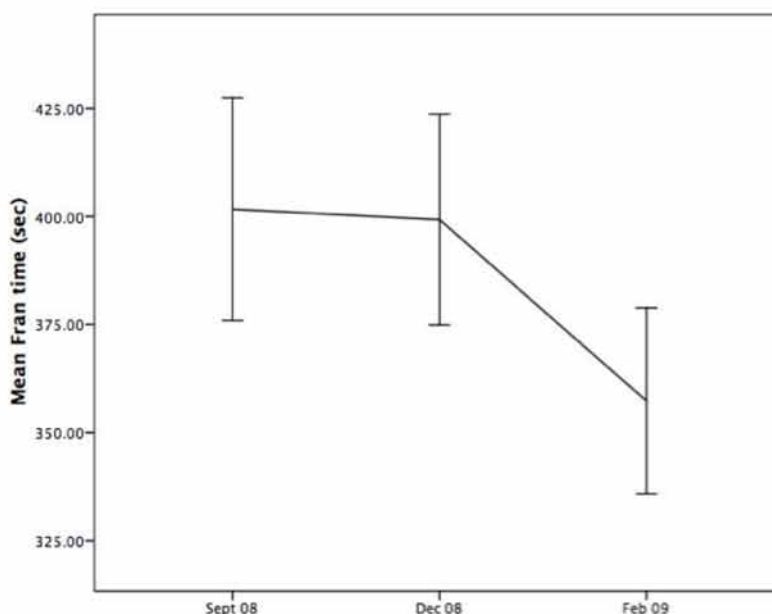


Figure 1: Mean (+/- S.E.M.) decreasing Fran times over five months in 45 athletes who repeatedly posted to the CrossFit main-site blog. (S.E.M. means "standard error of the mean.")

Fran Sample

A total of 232 athletes (206 males, $M^{\text{age}} = 33.82$; 26 females, $M^{\text{age}} = 35.33$) reported data for four time points of Fran. All data are reported in seconds.

Fran Results

When collapsing across all time points, there were no statistically significant differences between males ($M = 434.35$, S.E.M. = 11.55) and females ($M = 450.42$, S.E.M. = 32.53). There was, however, a significant effect for time ($F(3,690) = 19.25$, $p < .05$). Interestingly, there were significant decreases

in Fran time for all time points except between time points two and three. There was no interaction between time point and sex of the athlete (Figure 2). Mean time between Fran occurrences and the mean performance increase between time points was also calculated. A correlation revealed no relationship between time occurrences of Fran and increases in performance (decreased time). There was also no correlation between age and increases in performance.

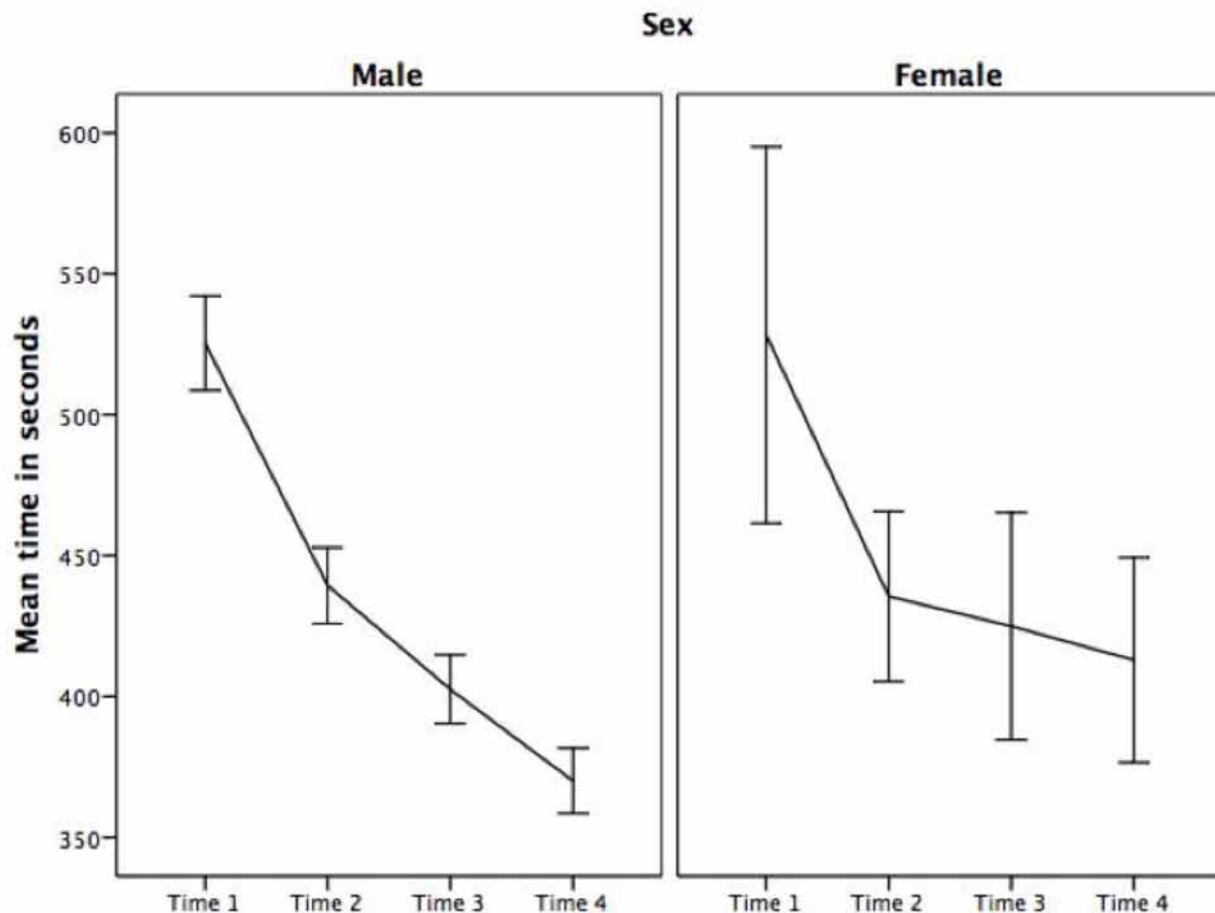


Figure 2: Mean (+/- S.E.M.) Fran times across our time points in 232 athletes. There was no overall difference between men and women.

Angie Sample

The sample consisted of 102 athletes (90 males, $M^{\text{age}} = 34.7$, 12 females, $M^{\text{age}} = 35.77$) who completed four time points. All data are reported in seconds.

Angie Results

There was no difference in Angie time between males and females (this needs to be interpreted with caution because of the low sample size for women), but there was

a non-statistically significant trend toward an effect for time point ($F(3,300) = 2.325$, $p = .075$). Post-hoc analysis did reveal that Time Point 1 was significantly slower when compared directly to Time Point 4 ($p < .05$). (Figure 3). There was no correlation between time of Angie occurrences and performance increases and also no correlation between performance increases and age.

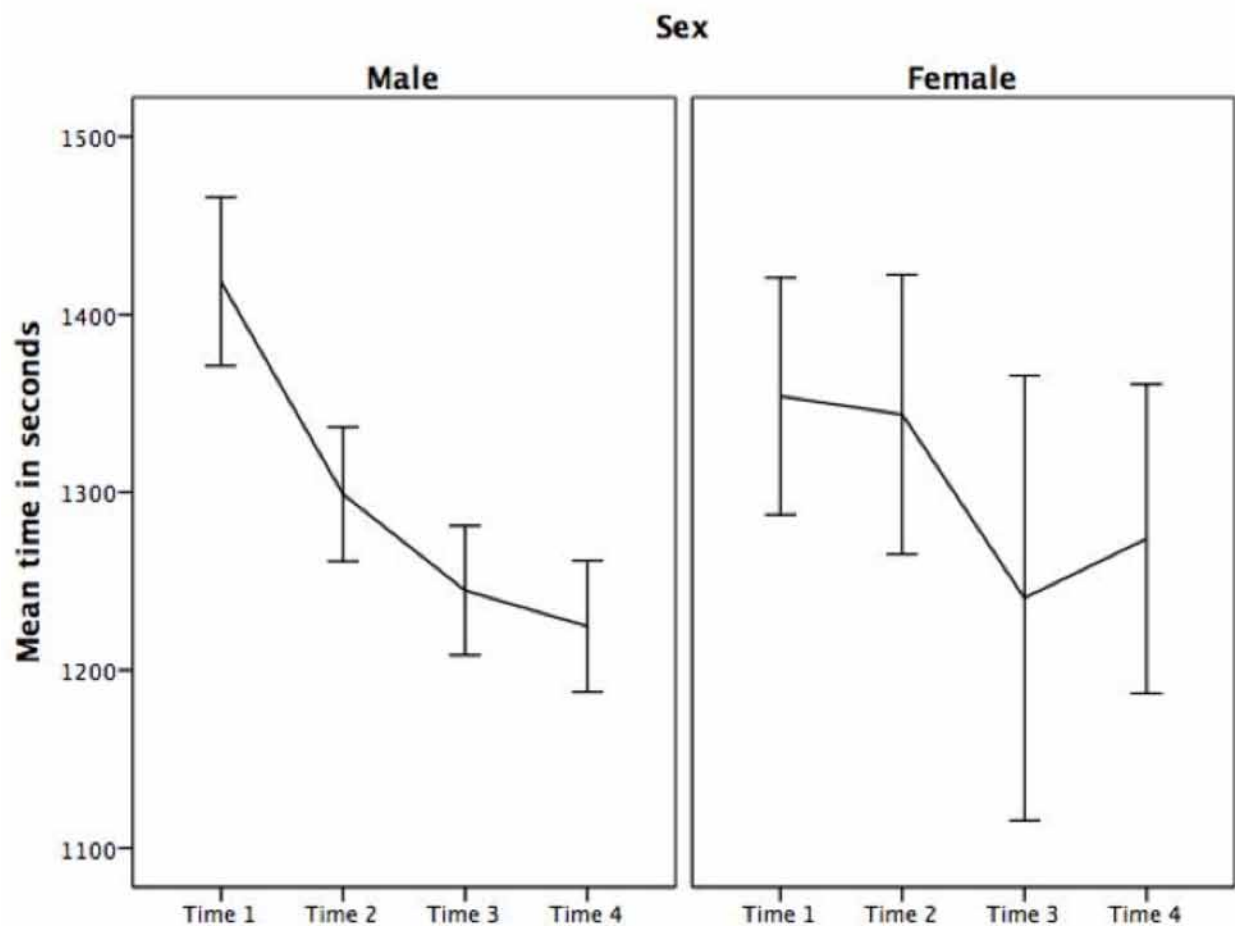


Figure 3: Mean (\pm S.E.M.) Angie times across four time points in 102 athletes.

Cindy Samples

The Cindy sample consisted of 101 athletes (89 males, $M^{age} = 36.02$; 12 females, $M^{age} = 39.33$).

Cindy Results

There was a significant difference in number of completed rounds of Cindy between males ($M = 17.66$, S.E.M. = 0.457) and females ($M = 14.24$, S.E.M. = 1.24) ($F(1,99) = 6.70$, $p < .05$) (again these data need to be interpreted with caution because of the low sample size for women).

There was also an effect of time point ($F(3,297) = 2.67$, $p < .05$). There was no interaction between time point and sex. Post-hoc analyses revealed that more rounds of Cindy were completed at Time Point 4 when compared directly to time points 1 and 2 (Figure 4). For Cindy, there was also no correlation between age and performance increases and also no correlation between time between Cindy occurrences and performance increases.

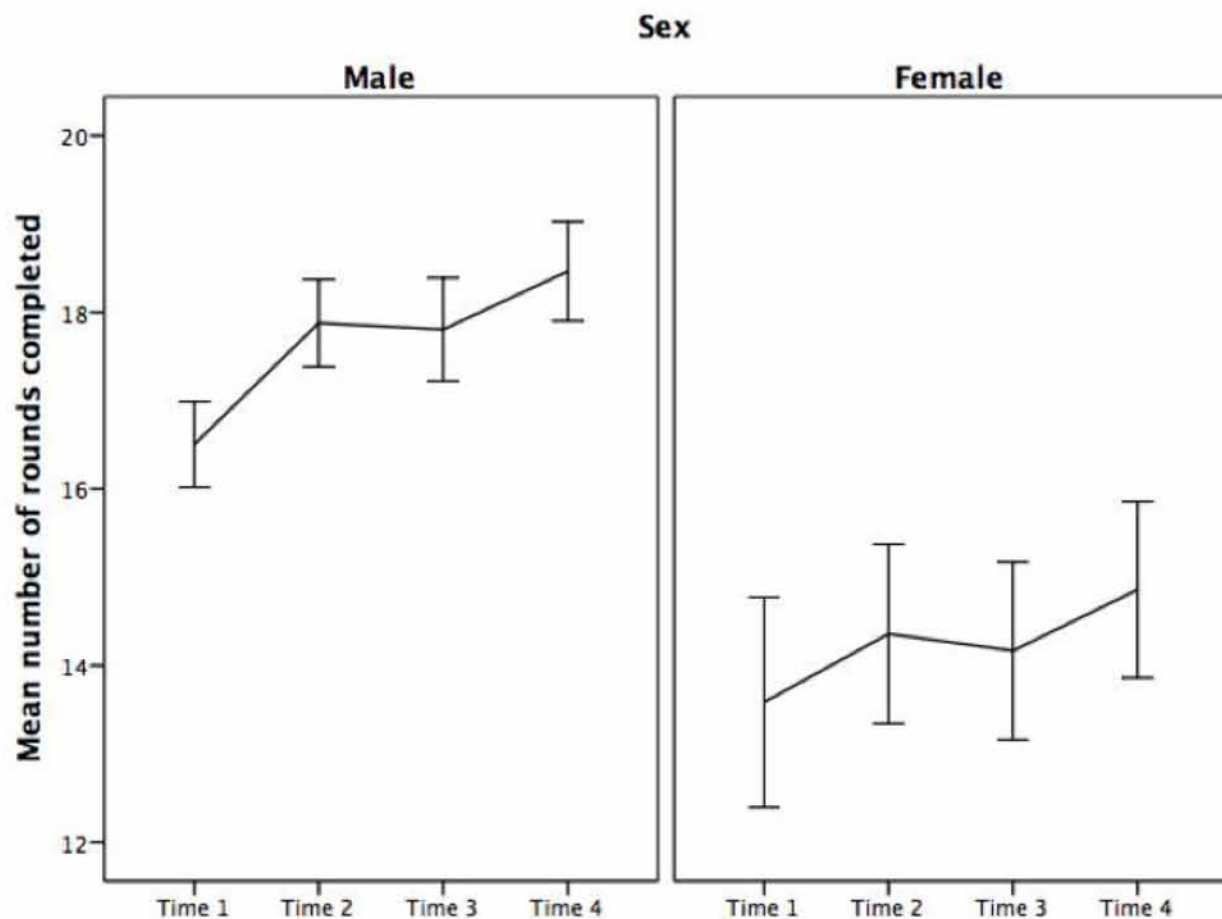


Figure 4: Increases in the number of Cindy rounds over four time points in 101 athletes.

CrossFit Total Sample

Eighty athletes (72 males, $M^{\text{age}} = 34.42$; 8 females, $M^{\text{age}} = 34.40$) posted their CrossFit Total loads at four time points.

CrossFit Total Results

There was a large, as expected, sex difference (males $M = 742.20$, S.E.M. = 15.70; females $M = 484.22$, S.E.M. = 47.10). There was also a large effect for time point ($F(3,234) = 13.25$, $p < .001$). There was no interaction between time point

and sex. Post-hoc analyses revealed that all loads were heavier after Time Point 1, but that there was no difference between time points two and three (Figure 5). There was also no correlation between age and performance increase and no correlation between performance increases and time between CrossFit Total occurrences.

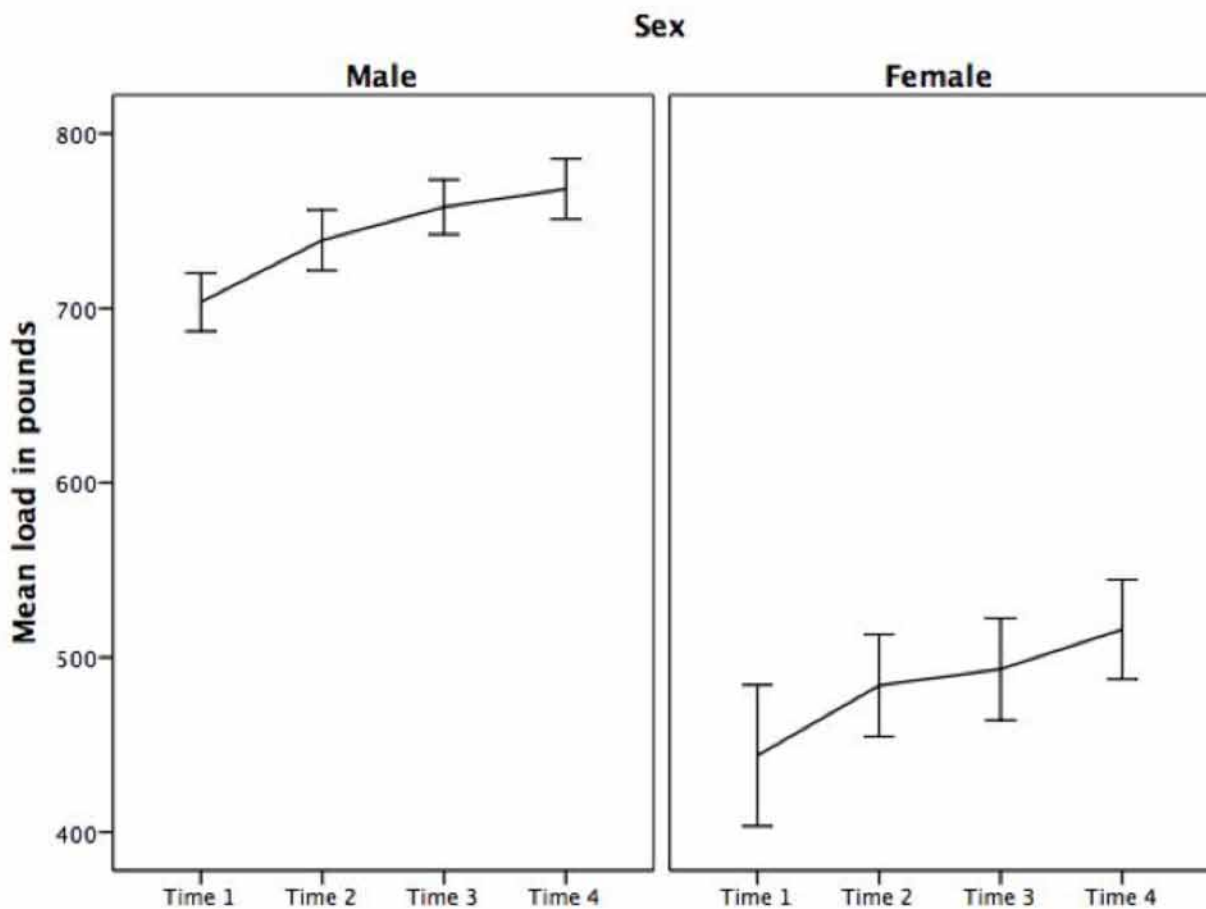


Figure 5: Mean (+/-S.E.M.) CrossFit Total loads of 80 athletes across four time points. Men posted significantly heavier loads than women, but both groups showed significant increases in loads over time.

Discussion

What do these data mean?

Well, if you've experienced a decrease in your Fran or Angie time, an increase in your number of rounds of Cindy, or an increase in your CrossFit Total load since starting CrossFit, these data will not be surprising.

But, if you reflect on the notion of evidence-based fitness, then these data are among the growing data-driven demonstrations of the effectiveness of the CrossFit training modality. That is, rather than use an $N = 1$ to $N = 5-10$ anecdotal sample size (yourself or a small sample of athletes at your box), here we've described the change in performance across time (that is, the change in work capacity across time in several benchmark WODs) in larger numbers of athletes.

These data are not without their problems. First, if you were to calculate the effect sizes for these findings, they are rather small, accounting for only 8-15 percent of the variance in WOD performance. That is, time, our experimental factor, accounts for only a small proportion of the variance in WOD performance. While these effects are small, they are also quite interesting: they suggest that time is simply one rather small factor that accounts for changes in performance. What accounts for the other X percent of variance probably includes factors such as pre-CrossFit fitness level, sex, age, nutrition and dedication to the WOD and main site. Also, neuroendocrinological changes such as upregulation of the hypothalamic-pituitary-adrenal (HPA) and hypothalamic-pituitary-gonadal (HPG) axes are likely to play an active and substantial role, although further investigation on this hypothesis is necessary and underway in our laboratory.

Additional limitations include the methods used in this investigation. In both experiments, we had no scientific control over these athletes. We were not able to track their nutrition, modify and correct their movement patterns, or observe the environment in which a WOD was executed (e.g., Globo Gym vs. box vs. garage). We also have to rely on the honesty of the athletes' reporting. It's possible that some athletes might have posted false times in an attempt to appear fitter (the self-serving attribution bias). Some of the individuals who posted might have been non-CrossFitters posting bogus times.

However, even in light of the multitude of methodological issues, the possibility for error around the means, and limitations, we still found a statistically significant change in performance over time.

Furthermore, in Experiment 2, it's very important to note that for every benchmark WOD we analyzed, the average time between WOD and age did not correlate with increases in performance. This finding alone is interesting in that it demonstrates that CrossFit works independent of age and regardless of practice of the specific WOD movements and combinations. Similarly, only one of the benchmark WODs (CrossFit Total) revealed a large sex difference, supporting the idea that CrossFit works independent of sex.

It's important to restate this finding: These data taken together strongly suggest that, with the exception of strength bias in our sample, CrossFit increases work capacity across broad time and modal domains independent of sex, age and frequency of exposure to the WOD.

As mentioned earlier, the effect sizes for these effects are small to modest. We feel strongly that more variance could be accounted for if nutritional data were available. Therefore, we'd like to collaborate with any affiliates running nutrition (Paleo or Zone) challenges to amass a much larger database that takes into account the effects of nutrition on performance. We've heard several anecdotes and seen some preliminary, small sample size ($n = 1-8$) data showing synergistic effects of nutrition and performance.

We are currently starting several controlled research studies related to these ideas at CrossFit Gwinnett. The aim is to take this preliminary data that is wrought with low scientific control and tease apart the effects that are driving increased performance in our athletes. We are inviting the CrossFit affiliate community to join us and facilitate a larger and more controlled data set. We are aware that many boxes, affiliates and trainers have run or are running nutrition challenges where athletes are enrolled in a nutritional program for four, six or eight weeks. We have also done one at CrossFit Gwinnet.

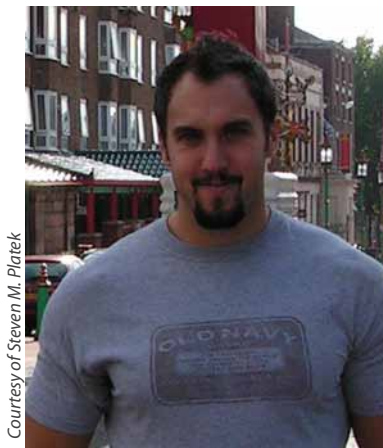
Prior to these challenges, athletes are usually run through a number of benchmark WODs, and morphological measurements (weight, waist, body-fat percentage, etc.) and photographs are taken. These same metrics are then

used at the completion of the challenge in order to track and demonstrate progress. If any affiliates have data such as those described above and would be willing to share the data with us, we will create an improved database for demonstration of the synergistic effects of nutrition and fitness in a greater number of athletes. Interested affiliates can e-mail data or contact Dr. Platek at steve@crossfit-gwinnett.com for more information.

Acknowledgements: Thanks to Bill Patton for generously providing an anonymized dataset from LogsitAll and for comments on an earlier version of this manuscript.



About the Authors



Courtesy of Steven M. Platek

Steven M. Platek (Ph.D. biological psychology, University at Albany—SUNY) is associate professor of psychology in the School of Liberal Arts at Georgia Gwinnett College, associate researcher at the MARIARC imaging center of the University of Liverpool, and collaborator at the Center for Advanced Brain

Imaging. Platek is director of the Evolutionary Cognitive Neuroscience Laboratory (ECNL), where he and his students have identified the unique neural substrates associated with self-referent phenotype matching (facial resemblance), self-face recognition, kin recognition, and attractiveness of female body morphology and male facial characteristics. He has published over 60 scholarly peer-reviewed articles, edited three academic volumes, is editor-in-chief of the journal *Frontiers in Evolutionary Neuroscience*, co-editor-in-chief and managing editor of the journal *Evolutionary Psychology*, associate editor of the journal *Personality and Individual Differences*, and consulting editor for the journal *Human Nature*. He also serves on the editorial boards of the *Journal of Social, Cultural and Evolutionary Psychology*; the *Open Ecology Journal*; *Scientific Research and Essays*; the *Open Neuroimaging Journal*; the *Open Evolution Journal*; and the *Journal of Scientific Psychology*. A new

focus for Platek and his team is to study the neurocognitive and psychological effects of various fitness-training regimens, particularly functional fitness vs. non-functional fitness movements and the benefits of ancestral living strategies. He is a Level 1 CrossFit trainer and director/owner of *CrossFit Gwinnett*. His wife, Austen, is also an avid CrossFitter, and the couple had their first child in the fall of 2010.



Courtesy of J. Ryan Porter

J. Ryan Porter is an undergraduate psychology student at Georgia Gwinnett College and a member of CrossFit Gwinnett. Ryan is Level 1 trainer and co-coaches at CrossFit Gwinnett.



Courtesy of Tia Y. Walters

Tia Y. Walters is an undergraduate psychology student at Georgia Gwinnett College and a member of CrossFit Gwinnett. Tia has presented scientific papers on the topic of waist-to-hip ratio and is currently researching female intrasexual competition as it relates to body morphology and strength. Tia is also a Level 1 trainer and a co-coach at CrossFit Gwinnett.

THE CrossFit JOURNAL KIDS

CrossFit Kids and Teamwork

Kevin Nichols talks about how CrossFit Kids encourages young athletes to come together as a team.

By Kevin Nichols CrossFit Works

March 2011



Staff / CrossFit Kids

Teamwork: the process of working collaboratively with a group of people in order to achieve a goal.

1 of 2



Staff/ CrossFit Kids

In team WODs, athletes learn the benefits of working together to solve problems and overcome obstacles.

The CrossFit Kids program provides endless possibilities to teach young athletes about teamwork and working together to meet a goal. It also gives young athletes the opportunity to learn trust, risk taking, communication, problem solving and leadership.

If you were to drop in on a CrossFit Kids class at CrossFit Works in Tucson, Ari., you would see teamwork in action during all parts of our class. During the focus segment, you would see young athletes watching each other to ensure the movements are done correctly. They keep each other accountable, not only for moving well but also for reps. We find that feedback from their peers rather than from an adult coach resonates much more with the kids.

During the WOD, you would see young athletes coaching each other, counting and cueing proper movements, congratulating each other for moving well, and going hard. We've had great success with athletes counting for each other, as we have seen that kids of all ages can struggle counting correctly for themselves during a workout.

Perhaps the best opportunity for young athletes to discover the power of teamwork is during the game. Young athletes want to win that game! They are driven by the desire to succeed. They are given a chance to lead and follow their peers, learning the kinds of communication skills, strategies and problem solving needed to achieve their goal of winning. Success helps kids develop the poise and confidence to tackle challenges inside and outside the gym. They have the opportunity to apply what worked in their game toward other areas that they wish to succeed in, be it academics, friendships or athletics.

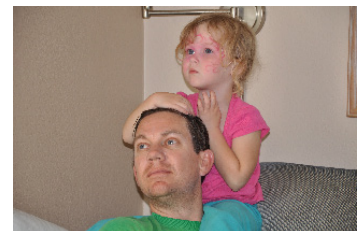
Defeat also presents just as many chances for learning and growth—if not more. Young athletes discover what didn't work while learning resiliency and graceful sportsmanship. Athletes in our program are given frequent opportunities to try a game again and work together to re-strategize as a team.

The best games to teach teamwork are those that require young athletes to work together to win. They fail together and they succeed together. Recently, we played a wonderful team-building game called [Cross the Swamp](#). Of course, we put a CrossFit spin on it. Check out the video on how to play Cross the Swamp and please contact kevin@crossfitworks.com if you would like more information on team-building games and resources.



About the Author:

Kevin Nichols is a certified strength and conditioning coach through the NSCA, holds certificates in CrossFit and CrossFit Kids, and is a Youth Fitness Specialist through the IYCA. Kevin is also a certified elementary-school teacher and is deeply committed to helping athletes of all ages enjoy the process of being active and reaching their goals. Kevin is married to his beautiful wife Anna McCallister-Nichols and has a three-and-a-half-year-old daughter, Jolene Rose Nichols. Jolene asks her daddy every day when she can start CrossFit Kids.



Courtesy of Kevin Nichols

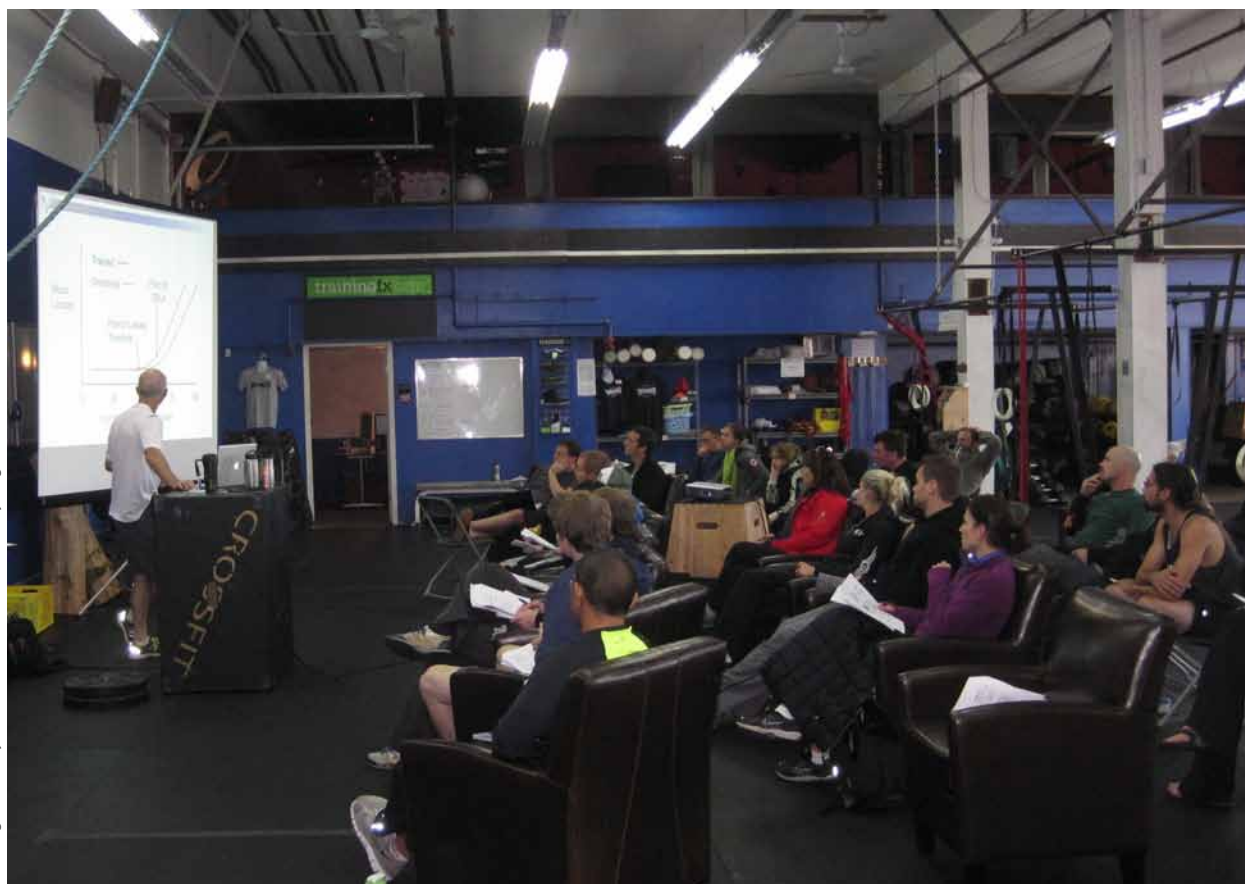
THE CrossFit JOURNAL

School of Fitness: Part 2

Emily Beers explains how CrossFit Vancouver is creating fitness professionals.

By **Emily Beers** CrossFit Vancouver

March 2011



All images courtesy of CrossFit Vancouver and Cindy Hughes

I was car shopping earlier this year and expected to be greeted by a car salesman.

"We don't call it 'car salesman' anymore," a woman said. "Judy Smith, vehicle consultant," she said as she shook my hand. I laughed to myself but quickly pulled back my smile when I realized she was serious.

Car salesmen have become "vehicle consultants." Sleep Country employees are "sleep experts." The woman working at Toys R Us is a "toyologist." Gone are the days when we had enough confidence to select an appropriate toy for our six-year-old nephew without the help of a toyologist. Now, experts are available for every menial task, and paint-matching consultants and shampoo technicians wander the streets flaunting their obscure expertise. After 20-plus years of washing my own hair, I would have assumed I could call myself a "shampoo technician."

Our apparent compulsion to use experts for all aspects of our lives also means a growing number of people are hiring personal trainers to look after their fitness needs. But, of course, not all strength coaches and personal trainers have equal expertise. Not even all CrossFit coaches have comparable levels of knowledge.

And because Canada has no true regulatory body in the fitness industry, the hypothetical 18-year-old Joe, the guy who lives down the street, can train 20 clients in his basement for \$75 an hour. He looks super fit and has bulging biceps and a puffed-up chest to prove it. He grunts when he lifts weights, and he follows a fitness program he calls "F the Legs, Let's Bench." We are all familiar with the prototypical Joe, and we know that his fitness knowledge is often quite minimal.

One of the major tenets of CrossFit is that the free market weeds out the incompetent. If we believe this, then we might not have anything to worry about. In the long run, the market will take care of the unqualified trainers. Our bench-pressing Joe might injure a client or two, and pretty soon he'll be out of business. Similarly, the good CrossFit affiliates survive, while the poor ones flounder.

But what if you're a CrossFit affiliate owner and you're growing rapidly? You're an incredibly proficient coach, your business model is sound and your ducks are in a row, but the other CrossFit coaches at your gym are inexperienced. They might be competent CrossFitters and good people, but they're not quite yet experts in their field.



After several moves, CrossFit Vancouver settled on an ideal 7,000-square-foot facility.



Craig Patterson (standing) talking to head and apprentice coaches at CrossFit Vancouver.

This is the situation Craig Patterson of CrossFit Vancouver found himself in a couple of years ago.

In his early CrossFit days, Patterson admits he hired and watched many inexperienced coaches train their clients incorrectly in his own gym. He watched coaches teach movements poorly. He watched coaches let their clients get away with poor technique. He watched coaches lose clients because they didn't develop proper relationships with them. Patterson felt responsible.

So Patterson turned his affiliate into a registered vocational school for fitness coaches. But the fact his affiliate is now a regulated school doesn't mean he rejects the free market. The two concepts are not mutually exclusive, he explains.

Patterson remains a whole-hearted believer in economic openness. He continues to believe Greg Glassman is a genius. He is still a strong advocate of the CrossFit Level 1 seminar, a pre-requisite to becoming an apprentice coach at his school. He doesn't want massive regulation in the fitness industry. He's not trying to create the fitness-trainer equivalent to sleep experts.

What he is trying to do is to create knowledgeable, technically sound and experienced coaches, coaches who can go out into the world and become entrepreneurs. What he is trying to do is professionalize the fitness industry. But don't confuse the term "professionalize" with words like "formal" and "pretentious."

The School of Fitness in Vancouver is anything but formal. One of its missions might be to create professional coaches, but what drives the place is an informal and somewhat uncharacteristic—some may even say slightly inappropriate—community all its own. Some say it doesn't even feel like a business lives there.

**What Craig Patterson is
trying to do is professionalize
the fitness industry.**

The Apprenticeship Diploma Program

Before you can become an apprentice coach at CrossFit Vancouver, you have to become a proficient CrossFitter. As a student of the sport, you complete 15 personal-training sessions, where you learn the movements of CrossFit and improve your fitness. Then you graduate to group classes. You must attend group classes for a minimum of six months before a head coach will take you on as an apprentice coach. You must also attend a CrossFit Level 1 seminar and pass its test.

(If you arrive at the school from out of town and you already have both your Level 1 designation and CrossFit experience, then instead of going through personal training and group classes, you can apply for the program much sooner. You'll be assessed by a head coach and must pass a test before you can become an apprentice.)

Once a coach agrees to take you on, you can begin your apprenticeship. You become a junior apprentice. This means shadowing your mentor coach with new students, as well as helping coach group classes. During this time, you'll also attend 10 in-house seminars.

The seminars include:

- Exercise science
- Business of CrossFit
- Nutrition
- Endurance/running
- Stretching/flexibility
- Olympic weightlifting Part 1: clean and jerk
- Olympic weightlifting Part 2: snatch
- Gymnastics
- Rowing
- Speed and agility

The next step is to become a senior apprentice, where you begin training your own clients. You lead both one-on-one personal-training sessions and group classes. You start by earning 20 percent of the revenue you generate. From there, you move up to 30, 40, 50 and eventually 60 percent. The more people you're able to bring in, the more referrals you're able to generate and the faster you'll move up the ladder in building your self-made business.



CrossFit Vancouver hosts a stretching/flexibility seminar by Giselle Nagy (center, in red).

Once your clients graduate from personal training to group classes, you will continue to make that percentage of their monthly fees. So the better you are at retaining and keeping your clients happy, the more money you'll collect each month.

**As Patterson explains,
the free market—and
ultimately the ability to sell
CrossFit—determines a
coach's monetary worth.**

As Patterson explains, the free market—and ultimately the ability to sell CrossFit—determines a coach's monetary worth. And the open market ensures there's no ceiling on financial success.

"The apprenticeship program is like a year-long job interview," said Patterson. "And ultimately the best way of evaluating a coach is what the free market thinks of the coach."

Corey Lapell is an apprentice coach at the school. Prior to joining CrossFit Vancouver, Lapell ran his own CrossFit affiliate, CrossFit Empower. He trained clients and had some success but soon realized there was much more to learn.

"There's a whole other level of integrity that senior coaches at our school bring to coaching. It's very uncompromising. I had no idea what I didn't know before working through an apprenticeship," admitted Lapell.

When he became an apprentice coach, Lapell did have to take a temporary pay cut. He started at the bottom, like everyone else. But he says it's been worth it.

"I was stuck at making 30 percent and 40 percent for a long time," said Lapell, who now earns 50 percent of the revenue he generates.

In 2010, Lapell brought in more than 60 people to the school. He currently has 40 active clients, either in personal training or who have graduated to group classes. His biggest month so far was in June 2010, when he took home \$9,000.



Corey Lapell, one of the trainers at CFV.

Under this system, Patterson says the school is creating self-employed, self-sufficient and technically sound CrossFit coaches.

The Intangibles: What You Won't Learn in Class

"Becoming a great coach is about more than just teaching the movements," said Patterson. "The Level 1 and Level 2 CrossFit (seminars) are great for teaching people the movements. But how business actually works on the ground level is much different than that," he continued.

As Patterson learned from Glassman, becoming a great coach isn't about learning how to coach a kipping pull-up. It's about understanding people, about figuring out where they need to grow, both physically and emotionally.

"Back in the day, I used to sit around on Glassman's couch until all hours of the night, and we would talk about the way life works, discussing issues and ideas. I learned more from Glassman those nights than I ever could at a Level 1 ...," said Patterson. "He's a genius."

But CrossFit has grown too big for Glassman to spend one-on-one time with everyone who wants to coach CrossFit. So what Patterson is trying to do at his school is to act as an apostle of sorts, relaying Glassman's knowledge to a new generation of eager coaches and aspiring business owners.

Patterson is not alone. Trevor Lindwall, Chris Saini, Charlie Palmer and Andrew Swartz are the other head coaches at the school. Each has a handful of apprentices he both coaches and mentors.

On top of learning how to physically and technically coach CrossFit, apprentice coaches learn about the business of CrossFit. They learn how to become entrepreneurs, they learn about themselves by attending personal-development courses, and they learn by debating social policies over a glass of wine on Friday nights. Through the ongoing trial and error of this community, they make mistakes together, they challenge each other, and they learn about the way people and life work—"just like the way I learned from Glassman in the old days," said Patterson.

30-year-old Bill McClain is an apprentice coach at the School of Fitness. A former Ph.D. math student from Missouri, McClain first came to Vancouver in 2009. "From Day 1, I asked Patty (Patterson) if I could do the apprentice program. He told me I'm going to have to wait a couple months and get fit first," remembered McClain.

A few months later, McClain brought it up again.

"I'm still interested in doing the program And finally, one day, we had the old sit-down. Patty brought in (other head coaches) Charlie (Palmer) and T-Bear (Lindwall) and Sheppy (Saini), and he asked them, 'What do you guys think? Should we let him in?'"

In July, 2010, McClain applied for and was granted an international student Visa from Immigration Canada and began the Apprentice Diploma Program at CrossFit Vancouver.

"I made Bill earn his stripes before I took him on," said Patterson. And because McClain had to earn his place, he is more appreciative today.

McClain agrees. "If he just tossed us in, we wouldn't respect it," he said.

What the Apprentice Program Is Really Like

I'm sitting in the school's lounge with Bill. I'm stressing about how I'm going to accurately describe in writing what being an apprentice coach at CrossFit Vancouver is really like.



Chris Saini (left) prepares to define the student-teacher relationship to apprentice Mike Dahlman.

"How am I going to explain this in my story? I mean, how honest can I be about the apprentice program?" I ask.

"Just tell it how it is," Bill insists.

"But can I really write about our apprentice nights out on the town? Those nights are a huge part of the program, but we don't even talk about CrossFit. Think about last Saturday night: we talked about cleaning up the Downtown Eastside, debated whether or not kids who have been abused can ever have healthy sex lives, and we razzed Reto about being a socialist," I begin.

I sigh, still somewhat stressed.

"I don't know if it will make sense if I write about how Patty sent me to talk to a rebirther to figure out why I had a meltdown at regionals last year. I can't write about how he gave me a raise for flexing my hamstring muscle for that girl he was into. And on the other side of things, I can't write about how Patty has made me cry on more occasions than any of my ex-boyfriends ever did. Our community is such a weird contradiction between love and uncompromising honesty," I continue.

"Why can't you write that?" he asks.

"I don't know. All I know is I've learned more here in the last year and a half than I did in seven years of university. As corny as it sounds, I can actually feel myself growing. And I don't just mean that I'm better at showing someone how to do a squat clean now. I mean that ... I don't really know how to explain it. I just see the world differently. But I can't write that."



Originally from Missouri, Bill McLain got a Visa to study at the School of Fitness.

Bill smiles.

"Why can't you write that?" he asks again.

"Because in journalism school, I learned that it's important to keep myself out of the story. You'll probably be more objective than I am. How would you explain what being an apprentice here is like, Bill?" I ask.

Bill looks at me for a moment and hesitates.

"Most of us are raised to be almost politically correct and professional, especially in a business setting, but we're definitely unlearning that here."

—Bill McLain

"You're right—this is going to be hard to articulate," he says.

"Something ... something so different is going on at CrossFit Vancouver ... We're learning to embrace people, but at the same time we're learning that you have to make them earn it. You work them really hard until they graduate to classes. It takes some people three or four months to be able to graduate from personal training to group classes, so when they get there they value it a lot more. They invest so much more of themselves," Bill says.

"That's true," I add. "And that's why the coaches are making us earn it too before they hand us the keys," I say.

"Exactly. It makes you realize how effective the approach is, so you start to understand how your brain works when you're pushed in this way, and you start to understand your clients better too," Bill says.

He continues: "There's a bit of a tough-love approach, a sort of honesty that we weren't necessarily comfortable with when we started the program ... Most of us are raised to be almost politically correct and professional, especially in a business setting, but we're definitely unlearning that here."



Chris Saini is a head coach and the general manager of CrossFit Vancouver.

I laugh. "No kidding. The other day, Patty walked up to me when I was training a new client. He says, 'Jesus Dave, we need to get you off the carbs, buddy. It will make your life better.' Then he reached over and pinched Dave's stomach and laughed. 'What did you eat for breakfast this morning, dude? Don't lie to me,' Patty insisted. Only Patty can get away with that. I thought I was going to lose this guy as a client, but after that comment, I had the best session I've had with him yet," I say.

"It's because Patty understands how people work," Bill says. "If you show people some love, they'll give you some trust, so you have more leeway to make mistakes Patty makes mistakes all the time, but even when he's just trying to be a horse's ass, even the times he pushes you until you're in tears, he is usually trying to teach you something," he adds.

"It's not even a conscious learning process a lot of the time. It's intuitive," Bill says. "And you end up learning more outside of the school than at the school because you watch the same things happen in different settings. We're learning how to sell, but you almost don't want to call it sales. It's not just about CrossFit. It's about understanding human interaction—you can abstract what you do at the school and apply that skill anywhere. Whether it's picking up a girl at the bar, creating a good energy at a party or telling a story, if you're keen on paying attention, then you'll see the same trends everywhere," he says.

"You articulate it much better than I do," I say.

"Really, I feel like I'm rambling," Bill says.

"Well, it is kind of hard to explain what it's like to be an apprentice here. I sure have never been part of something like this before," I say.

"Just be honest," he says.

The Executive Diploma Program

Like most aspects of CrossFit Vancouver, the executive business mentorship program was developed unintentionally, through trial and error. In 2007, as CrossFit Vancouver started to grow, other CrossFit affiliate owners began turning to Patterson for business advice. He found himself spending so many hours on the phone that Patterson started neglecting his own community. So he turned his mentorship time into an official program.

26-year-old Devin Glage, owner of Raw CrossFit in Penetanguishene, Ont., completed the business mentorship program before opening his affiliate in August 2009. Just a year and a half later, Glage has 121 members enrolled and has five coaches working for him. Not bad considering Penetanguishene has a population of only 6,300.

Glage says Patterson's business advice has been invaluable to his success.

"When I met Patty, he kind of threw his knuckles up in the air and put his arm around me. He has a bit of the big-brother thing going. I've been trying to do that with my clients. And I've been trying to teach my coaches this, too," said Glage.

"It's hard to teach people how to interact with people, but when you see it, you can learn it from them," he added. "Knowing what buttons to push with certain people, it's something that only comes with experience."

Since opening his affiliate, Glage has continued to turn to Patterson for advice. One way Patterson has helped Glage along the way is by getting him over the hurdles that most CrossFit affiliates seem to hit.

“If I could go back six or seven years and tell myself what I know now—about business, about CrossFit, about people—I could save myself countless headaches and stress.”

—Craig Patterson

“As a new business owner, you can’t predict what’s going to happen to your business. But all the milestones Patty predicted have come true, so he’s been really helpful to get me through them. I wouldn’t have had this much success this quickly without the business mentorship program,” Glage added.

Until now, Patterson has mentored most of his clients over the phone and via e-mail, but he says there’s much more he could do in person. So this spring, Patterson is broadening his mentorship program and hosting a three-day program at the school.

The seminar will cover the following:

- Professionalization of the fitness trainer
- CrossFit Vancouver’s business model
- The evolution of CrossFit affiliates
- Four common phases CrossFit affiliates go through
- Solutions to common mistakes CrossFit affiliates make
- Tools to maximize revenue



Emily Beers, an apprentice coach at the school, also authors the CrossFit Vancouver blog Bathroom Graffiti.

His goal is to help CrossFit affiliate owners and aspiring owners become successful faster.

"It's going to be three days where we look at wherever you are in your development as a CrossFit owner or aspiring owner, and we take you over the humps," Patterson said. "If I could go back six or seven years and tell myself what I know now—about business, about CrossFit, about people—I could save myself countless headaches and stress. Starting from the beginning, we made tons of mistakes, and it seems like everyone makes these same business mistakes," he added.



Head coach Andrew Swartz with student Lars Konge.

Patterson: The Mistakes Affiliates Make

I ask Patterson to explain a bit about the common mistakes affiliates make, as well as the hurdles they usually face in the first couple years. His face lights up, as though he couldn't wait to answer the question. He jumps right in:

The first place an affiliate gets stuck is when it opens and becomes a one-man show. One guy runs the place, and he's struggling to get clients. He always wants to start these big marketing campaigns, to slop himself up on a billboard.

The other mistake he makes is he lowers the price. He wants to lower the threshold, and then he attracts all the wrong people. He may even give away free months, which is the worst idea. Glassman always taught me that, "If you're not the most expensive guy in town, then you're doing yourself a disservice." You sell a better product if you're charging more money. If people pay for their first 10 sessions up front—when they hand you \$750 off the bat—you invest more in them, and they give more energy to you.

It wasn't until I learned this and started to standardize how a person's first day is administered that we started to make any money. A person's first day has to be done right. At this point in Vancouver, everyone who walks through the doors gets put through our patented first day. All our apprentice coaches are tested on putting a newbie through. If they do it right, it almost always results in a new client.

Business is simple. No matter how good your product is, what wins every time in business is the same. How many people can you get through the door? How long can you keep them? How much can you charge them?

Once affiliates get over the hump of finding clients, other challenges come up. He is usually still a one-man show, so now you have one guy working his ass off. He has lots of clients, but he works way too many hours. He usually has eight classes a day plus personal training, and sometimes there are only three people in each class.

He needs to find partners. The biggest mistake here is he starts splitting revenue instead of costs. Partnership agreements are tough to do. I know—I've had bad partnership agreements before. Resentment always grows. Ill will develops, and it's bad for the community. But the overriding lesson here is that you have to split costs, not revenue.

And once you have good partnership agreements, the business can start to take off. And in order to maintain it, you have to be able to develop your coaches from the ground up. This is where we are today in Vancouver with our in-house apprenticeship program.

The School's Longer-Term Plan

In 2010, the School of Fitness grossed CA\$700,000. Patterson explains that growth has been stunted because of the hoops they've had to jump through to become a registered school.

"We basically had to hide until we received the City of Vancouver's approval. We don't even have a sign on the door. We haven't even gone into the community yet. We've done zero advertising. We've operated in the shadows," Patterson said.

Finally, in 2011, the school will have a chance to flourish. Currently, Patterson is the sole owner of the School of Fitness, but within the next year his top coaches will be able to buy shares of the company.

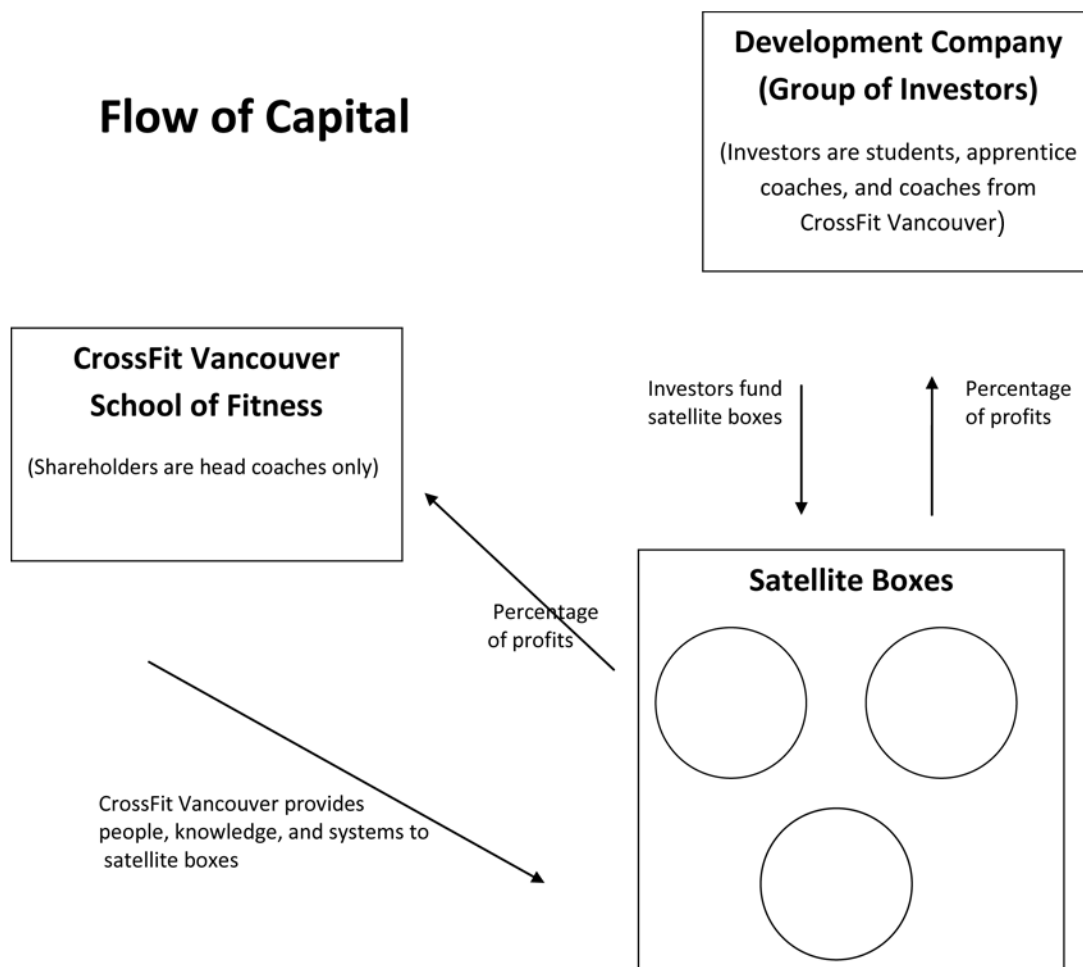
And once enough apprentice coaches graduate from the school, they will start a development company as a way to raise enough capital to open satellite boxes, sister schools. Students of CrossFit Vancouver, as well as apprentice coaches, will be able to invest in the development company.

"Once the development company raises enough capital," Patterson explains, "we'll take the best and the brightest coaches and put them in the new satellite boxes."

And once the satellite boxes are making money, capital will then flow back to both CrossFit Vancouver and to the shareholders of the development company.

"This way, everyone can be a business owner. It's sort of like a co-op," said Patterson.

(See graph for flow of capital.)



Patterson is still working out the details and the timelines, but the hope is that eventually anyone who has been CrossFitting at the school for at least a year will be able to buy a share of the development company.

"We're a couple years away from that at this point," he said.

For now, Patterson's focus is on ensuring his head coaches make a good living, and on bringing up his apprentice coaches.

"We'll get there eventually. This is only just the beginning," he said.



As an athlete and CrossFitter, Beers started out as a gymnast, competing to the national level. After growing too tall for gymnastics, she played NCAA Division 1 basketball for the University of Idaho, then returned home and played for the University of British Columbia. After three years of playing basketball, she started rowing, competing at the varsity level at the University of Western Ontario for two years. While trying to make the National Rowing Team in 2009, she discovered CrossFit and became utterly addicted. Soon, CrossFit was meant to be a way to cross-train for rowing but became her greatest passion. She moved back to Vancouver in September 2009 and found CrossFit Vancouver. In her first season competing in the sport, she won the B.C. Sectional competition in 2010. Regionals were less kind to her, but that's only made her more determined to get to the Games in 2011. On top of being an athlete at CrossFit Vancouver, she's also an apprentice coach and writer for the School of Fitness.

About the Author

Emily Beers finished a master's degree in journalism at the University of Western Ontario in the spring of 2009. Prior to that, she completed a bachelor's degree at the University of British Columbia, where she majored in political science and minored in history. In 2009, she won both the CBC Joan Mead journalism scholarship and the Global21 journalism writing contest. Last year, she worked as a sportswriter at the 2010 Vancouver Winter Olympic Games, where she covered figure skating and short-track speed skating. Currently, she hosts [Bathroom Graffiti](#), a not-always-PG publication of the CrossFit Vancouver School of Fitness. She also writes for Wolf Worster Associates and for Human Motion Inc., a Vancouver-based strength and conditioning and sports-science company.