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How to Build a Better Neural Highway

Kids' brains learn quicker by using four techniques: Unique experiences, repetition, complexity, and grouping stimuli. And listen-up trainers: It works for adults, too.

Cyndi Rodi

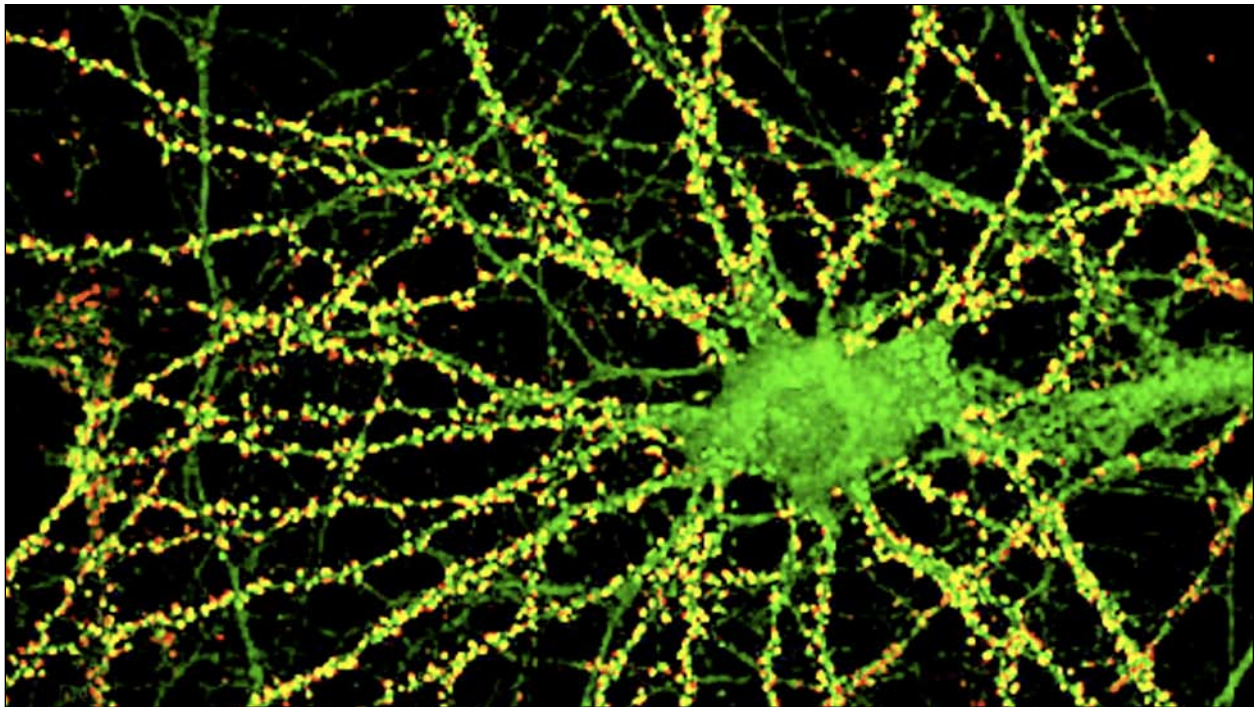


Photo courtesy of The Kennedy Lab at Cal Tech

The brain is somewhat like a powerful computer. It is programmed to record stimuli (the facts, conversations, experiences, behaviors, and feelings of your life), cross-reference that input to previously collected information, and respond according to a reasoned analysis of all available data. However, unlike computers, which require the manipulation of an owner's hand, the human brain and its cells (called neurons) are plastic. Neuroplasticity means the brain not only can sort and react to stimuli, but adapt and change. An advanced, permanent form of this adaptation is called learning.

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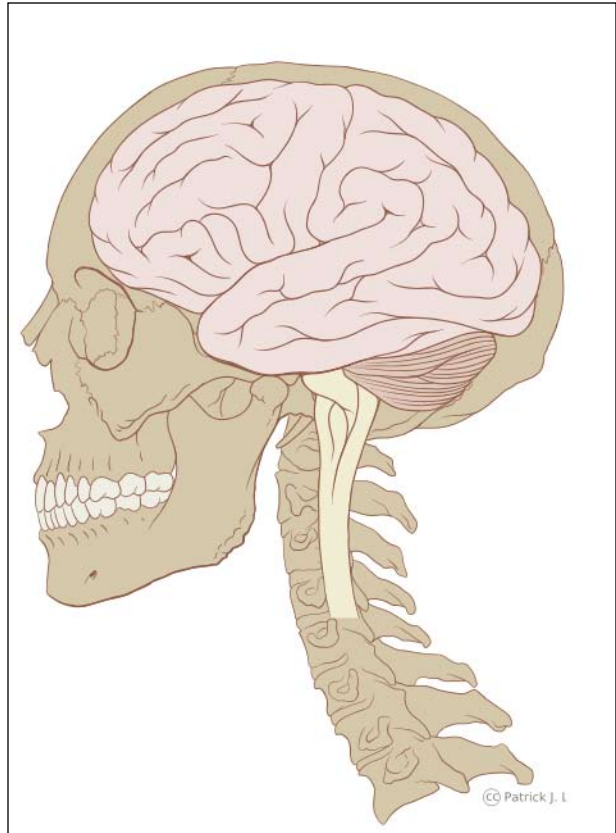
If you cut open a brain, you can literally “see” the learning. Permanent, learned information appears in the form of millions of tiny wire-like connections, known as synapses, that crisscross between neurons. A human brain includes 50 to 100 billion neurons, a number that can change over time based on how the brain is stimulated. Each neuron may use hundreds of synapses to communicate with its neighbors.

New synapses can be created and old synapses can deteriorate. Creation occurs when the body, sensing a stimulus, sends a message in the form of an electrical impulse, which then jumps the microscopic space from neuron to neuron, activating cells and leaving a connection in its wake. Over time, similar stimuli create highways of synaptic connections known as “neural pathways.” Their route and structure can be reinforced or changed by learning and experience.

Not all stimuli make a big impression; they generally have to be intense, clear, memorable, and relevant enough for the brain to deem them worthy enough to rate a connection.

Whether synapses wither like fading memories or live on as bustling neural pathways depends on the importance the brain attaches to the messages. People with active, receptive minds frequently bathed in interesting information and brimming with complex thoughts felt to be important, like Einstein, develop brains densely packed with these synaptic connections. Those with fewer and simpler thoughts who are exposed to limited modalities of stimulation have fewer visible connections.

Bottom line: The brain is choosy. It's not a tape recorder, accurately cataloging every single input thrown at it and turning it into a solid connection. Not all stimuli make a big impression; they generally have to be intense, clear, memorable, and relevant enough for the brain to deem them worthy enough to rate a connection.



What does all this mean for trainers and coaches? It's simple: Presentation is key.

Good information presented poorly may not warrant enough connections to create a strong neural pathway. Therefore, if you want to maximize your students' or clients' learning experiences—or your own—it would be quite useful to understand how the brain recalls information and responds best to stimuli.

At CrossFit Kids HQ, we have identified four types of experiences/input which appear to enable the brain to more effectively record and recall information, thereby maximizing learning. Armed with this knowledge, we carefully craft CrossFit Kids programming in order to create lasting learning experiences for children and teens.

Why should you, an adult CrossFitter, care about this? Well, because lots of you have kids. And because everything you're about to read, without any changes or accommodations, will work exactly the same way for you.

Four Tools That Make Learning Stick

Stimulus #1: Novel Experiences. **They prime the cell for new info.**

Neurons are wildly curious about stimuli to which they have not been previously exposed, so the brain takes note when we offer it something new. Novel experiences create changes within neurons that reconfigure the structure of the cell. It's like changing the combination of a lock. The new experience changes the "combination" of the cell and prepares it to make learning permanent when the same stimulus is repeated.

(Technically, the novel experiences cause a major excitatory neurotransmitter called glutamate to be delivered to the appropriate brain cells. This primes the receiving neurons for creating permanent synapses by causing changes to their receptors, which reconfigure the structure of the cells. This gets it ready to respond to subsequent stimulation of the same synapse(s). Hence, the combination-lock analogy.)

This couldn't be simpler to apply to our training. CrossFit ensures kids will be exposed to novel experiences by prescribing constantly varied movements. This gives a different spin to the term "teachable moments." Every time our children and teens participate in a WOD, their brains are being primed for learning through new visual, auditory, and tactile cues. As our kids work out, they are changing the "combinations" of their brain cells. These changes mean that permanent learning is just another experience away.

Stimulus # 2: Repetition. **It makes learning permanent.**

Repeated exposure to the same stimulus communicates its importance to the brain. It's like you're sending a signal that says, "Hey! I'm doing this over and over again so you'll remember it."

Having been primed at first exposure (novel experience), the brain is now ready to make the pathway permanent. The more times that specific neural pathway is stimulated, the stronger the attraction between its participating neurons becomes. As the stimulation of these synapses continues, the receiving cell's nucleus begins to contribute materials to the process that further strengthen the connections. In this way, learning is made permanent.



Every CrossFit Kids Affiliate has been through the CF Kids cert, where we teach them to structure their kids' classes to include a period of focus work. This is when we hammer home mechanics demanding perfection, or that kid's version of it, like no other time during the WOD. Focus work for a specific movement is repeated in each class for a set number of weeks. Then, in the interest of offering something new, we focus on a different aspect of CrossFit, though we never move completely away from any one movement. Each of these is cycled back through the focus work at a later date. The focus work ensures kids get the repetition they require to solidify the learning experience. Repetition allows learning to become permanent for our kids and adults alike.

There is an added benefit to repetition. An oversimplified explanation goes like this: When a new stimulus is presented to the brain, it is processed by the prefrontal cortex where it is recorded in working (short-term) memory, given emotional weight, and compared to and associated with past experiences. Over time and with repeated firing of a particular neural pathway, the learned information becomes second nature. When this occurs, it is delegated to the lower portions of the brain where things are "automatic." This frees up space in the thinking areas of the brain and facilitates more learning. For example, when you mastered bike riding (however many years ago), the brain delegated that activity to the motor areas of the brain, such as the cerebellum. When you get on a bike, these more primitive portions

of the brain remind both the motor (movement) and cognitive (thinking) areas of the brain what you should be doing. It also reports back to the vestibular system, which is responsible for balance and spatial orientation. This explains why you can get on a bike and be spinning around the block within minutes after not having ridden for many years.

Stimulus #3: Complexity. You learn better while moving.

Complexity causes the brain to become more active since more areas of the brain are stimulated. The brain functions as a whole unit, each part reliant on the proper functioning of the other. In learning a new skill or idea, the more areas of the brain you actively engage in any particular activity, the more likely the brain is to remember it. This is particularly potent when you simultaneously engage both the motor and cognitive areas of the brain.

Cognition and movement are inextricably connected. Our bodies were designed to move and think at the same time. Our early ancestors hunted and gathered, constantly moving as they were deciding what to do and where to go next. Multiple thought processes, carried out while in motion, were the key to their survival.

Through modern technology, we are able to solidly determine that the cognitive and motor areas of the brain fire together in response to most stimuli. Every



movement requires input from the cognitive brain to carry it out, and thought relies on input from the motor areas of the brain. For example, try to figure out a geometry problem without spatial awareness. Spatial awareness begins to develop in early childhood through vestibular development that dictates the way in which we move and navigate in a world of gravity. Without spatial references, geometry would be a difficult endeavor. Or try this: Imagine you are building a birdhouse that requires you to use a specific tool. Now, visualize yourself going to the garage to retrieve it. You could not bring this image of movement to mind without input from the motor areas of the brain.

Movement is pivotal to brain function and complexity maximizes these results. Just ask Phil Lawler and Paul Zientarski of Naperville, Illinois, a suburb of Chicago. I traveled to Naperville last fall to meet these forward-thinking gentlemen as a representative of CrossFit Kids.

Complexity in movement engages the cognitive and motor areas of the brain in tandem. This facilitates more efficient and effective brain function that provides for better information processing and recall.

While there, I witnessed a program they have implemented in Naperville Central High School and Madison Junior High School called Learning Readiness PE (LRPE). LRPE requires kids to participate in special PE courses in which they are asked to vigorously exercise immediately prior to those courses in which they are struggling. Those kids who participate in this program experience jumps in their academic performance well beyond those of the kids in normal PE classes.

To what kinds of activities are these kids exposed? Strenuous activities, aerobic and otherwise, that engage multiple areas of the brain, such as running stairs, swimming, lifting weights, large scale training apparatus that requires opposite arm and leg movements, etc. Complexity in movement engages the cognitive and motor areas of the brain in tandem. This facilitates more

efficient and effective brain function that provides for better information processing and recall.

To draw a non-athletic analogy, pretend you are a reporter attempting to gather information about an event that took place in a small Midwestern town. You may ask a local farmer what he witnessed in order to get important portions of the story. If you ask his neighbor, you will gather even more information, some of which will be similar to that of the first farmer and other parts which will be new aspects of the story. Suppose there was a tourist from a big city driving by when the event took place. Ask that person what he saw, and you will get a different version of the truth, one that is told from a different perspective than that of the small town farmers. Continue to search for other witnesses to the event and find that each of them tells a somewhat different version of the story, each colored by their own personal experiences and, sometimes, their agendas. The more witnesses you talk to, the richer the story will become, and the closer you will get to the actual truth of the event.

It is the same with the brain. Recruit more areas, and you will be more likely able to duplicate the "event." Learning occurs because the whole brain is working together to gather, record, and later retrieve the information.

CrossFit Kids has a ready-made arsenal of complexity. Olympic lifts and gymnastics movements tax the brain in a manner that engages multiple areas: motor, cognitive vestibular, etc. Let's face it; the squat is complex if you teach it properly. Like your news story, the varied input creates a richer and fuller account of the original picture, more easily reconstructed by the brain. The act of exercise itself improves brain function, and the complexity ensures learning will become permanent.

Stimulus #4: The Hebb Rule. **Associate learning with other positive stimuli.**

The Hebb Rule, formulated by neuropsychology pioneer Dr. Donald Hebb, states (among other things) that those stimuli which are continually paired or grouped together are more likely to become permanently recorded in the brain. Let's draw another analogy:

My mother loves the Christmas season. She decorates every room of the house and hosts numerous parties for family and friends. Every Christmas Eve morning during my youth, I woke to the sound of my mother clanging



around the kitchen as she baked pies. This was a significant event, since I grew up in a virtually sugarless home. Christmas carols would be loudly playing, threatening to raise the rafters of our home. Opening the door to my room, I was immediately surrounded by the warm, rich smell of cinnamon and apples. As I walked into the kitchen to greet my mother, she would rush across the room, wrap me in her arms and ask me how I slept. It was a pretty amazing way to start the day.

To this day, meaningful and lovely memories of Christmas Eve saturate my mind when I experience those sights, sounds, and scents, right down to the warmth of an oven in a well-used kitchen. In my brain, the smell of cinnamon, sound of Christmas carols, and the sight of Christmas decorations are forever paired with the positive feelings I associate with that time of year. Multiple areas of the brain (motor, cognitive, visual, auditory, olfactory, etc.) work together to stimulate my memories of those Christmas Eve experiences, filled with my mother's love and enthusiasm for the season. These are forever imprinted in my brain, as is the knowledge of how to make a pie (but not nearly as well as she could), through the multiple sensory inputs of those days.

The same is true for CrossFit Kids. Our kids come into a positive family environment. They are excited to see their friends. They have a great time as they go through their classes and receive positive reinforcement from their trainers. They gain a sense of accomplishment from taking on a difficult task and persevering. Their bodies respond favorably to the physical activity. For thirty minutes, the kids are laughing and enjoying themselves, even though they're working hard.

This grouping of stimuli is invaluable to learning. Multiple inputs create activity throughout many areas of the brain, which ensures that learning becomes permanent more quickly. Like my memories of Christmas Eve, our children and teens acutely recall their CrossFit Kids experiences. Technical aspects of movement become a permanent part of their cognitive and motor functioning. Engaging the cognitive and motor areas of the brain (among others) through vigorous, complex activities facilitates permanent learning and a readiness of recall like no other learning modality.

The Hebb Rule also highlights an important perk to CrossFit Kids training: Just like a song or a scent from my past conjures up strong memories and feelings for me, the fun and affirmation that define their CrossFit

Kids experiences mean that exercise will always bring to mind powerfully positive thoughts and feelings, even physiological reactions, for them. The thought and act of exercise will forever be something they view favorably and desire.

Conclusion

CrossFit Kids training takes advantage of the mind's power to record and recall information by catering to its inherent learning patterns. We are teaching our kids in a manner that maximizes their natural learning potential and creates lasting memories, principles which are applicable to all ages. Studying brain function allows us to offer our children and teens opportunities to learn in a positive and permanent manner. By offering novel experiences, creating repetition, incorporating complex movements and effectively grouping stimuli, we help our kids to learn better, remember more and experience permanence in skill development.

And, of course, it works for adults, too.



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Cyndi Rodi is a Level II certified CrossFit Trainer, CrossFit Kids Programmer and Trainer, a member of CrossFit Kids HQ, and part of the team that administers the CrossFit Kids Certification Seminars. She has a B.A. in psychology. Her background includes working with the UCLA-Camarillo Neuropsychiatric Institute Research Program and as a Behavioral Therapist, designing and implementing behavioral change programs for children with disabilities. She has spent recent years immersed in brain research with a particular emphasis on its correlation to physical movement and its applicability to CrossFit training and the specific developmental needs of children and teens. Cyndi has been previously published in the CrossFit Journal, has been a guest on CrossFit Radio, and is a contributing writer and editor for the CrossFit Kids Magazine.

CrossFitters, Be Nice

We're good but often arrogant, says one affiliate. His advice:
Cut the attitude and appreciate what you can learn from other athletes and workouts.

Michael Houghton



I just ran a half marathon. I did no special training for it, outside of the WOD. Going in, I had previously done the Endurance WOD for a month or so, but I have done no specific run training for several months going into this event. I figured, with my huge ego, that if I was in enough shape to crank out workouts as Rx'd, I'd finish this half marathon easily.

How wrong I was.

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The first half of the race, I felt really good. I had previously run the 15k that came up on the main page, and thought that if I could do 9 miles, I could certainly do 13.1.

Thinking back, it sort of reminds me of my attitude when I was looking at one of my first CrossFit workouts. It was Cindy. I thought, "hmmm, 5 pull ups, 10 pushups, 15 squats for 20 minutes? No problem!" After that workout, I realized that I should never underestimate a workout again. It literally whipped my ass. Since then, my favorite CrossFit sweatshirt was the one with the prescription on the back that says "Whoopass, Unlimited Refills." I distinctly remember Tony Budding wearing it at my Cert, in fact.

Anyway, at the half marathon I was in the front half of the pack for probably two-thirds of the race. As I hit mile 9, my body started screaming at me. It kept saying to stop. Just walk a little. My mind kept saying "Just keep running." My hips were in extreme pain, and my knees were crying for just a little rest. For quite some time, people were passing me. This did not bother me; I just kept my pace and tried to finish. Towards the 11- and 12-mile markers, I had old dudes with bad knees passing me, kids passing me, and old ladies passing me. There was not one kind of person who passed me that my mind didn't scream, "YOU SHOULD BE BEATING THEM!!!"

As I went on toward the finish, a lot of the people who were passing me would say, "come on, you're almost there!" It gave me hope that I could finish. As I went on towards the finish, my buddy yelled my name really loud, cheering me on. The whole crowd took his cue and yelled for me as well. Even the pacers on the bikes were cheering me on, riding alongside me until I finished.

As I crossed the finish line, my body gave out. I had run the entire race without walking once. I may have shuffled, I may have jogged extremely slowly. But I did not walk.

I got nothing but high fives and congratulations all around from everyone after the race. Then I got in my car, and broke down and cried.

Why? For one thing, my body was screaming in pain. I'm 6-foot-5 and 275 pounds. That's a lot of weight to carry that far. For another thing, I was emotionally spent.

For a time, while I was running the half-marathon, I was thinking of the various T-shirts I've seen worn by CrossFitters. "Your Workout is our Warm-Up." "I'm not a pussy anymore." "Your gym sucks." "I train harder than



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Coach Glassman stands for if
CrossFitters were to make fun of
and belittle anything we don't
understand.*

you." Countless other T-shirts that I have either heard of or been tempted to buy ran through my mind.

What was the common theme? We're better than you and we know it.

Granted, not all CrossFit T-shirts are arrogant and mean. But many are. As I kept running, I wondered why those shirts are out there. Certainly, many people just use them as a joke or as motivation, but for others they do reflect a real attitude. If you look at the message boards, you'll find that this attitude tends to permeate through them. Again, it's "we're better than you."

If a CrossFitter sees someone doing something questionable in a gym, he'll post it and mock it. One CrossFitter wrote about how amused he was by "a guy around 45 years old or so wearing the old fluffy head/wrist/ankle bands, protruding belly, 20-year-old-college t-shirt, and short shorts (you know the look)" setting up a squat rack with a bench under it and "then proceeds to do the top two inches of a bench press." Instead of laughing at him, why didn't he try to help him and explain the concept of full range of motion?

Sometimes, the critical CrossFitter won't understand what another exerciser is doing, but would rather make fun of it later in a post than bother to ask questions at the time. "Today I must have stepped in to some alternate reality, or the circus was playing in the gym and no one told me," wrote one guy. He went on to say he couldn't concentrate on his cleans because a gym-goer 10 feet away from him was doing "half-assed good mornings with a 6-pound medicine ball on top of his head" and another was "sitting at bench, bent forward slightly,

and was bobbing his head up and down while wearing a weird strap contraption that resembled some medieval torture device. Linked to that was a chain from which hung two 10-pound plates. You draw your own conclusions." Turns out, as another poster informed him, that this is a common old-school neck-strengthening device, and it's fairly effective.

My neighbor does Wii Fit. Is it right for me to trash on her? She will never be more fit than me. That's okay. She has lost around 30 pounds. She's doing something.

We CrossFitters take so much pride in being fit that sometimes we lose perspective and forget that there are people out there who are better than us at what they do. I'm not saying that Coach or many others feel this way. I'm just saying that the longer CrossFit is around, and the bigger it gets, the more elitist people's attitudes seem to get. I have often found myself saying things like, "Well, that's a waste of time" when I see people out running. Really, though, who am I to judge? At least they are out there doing something. As in-shape as I thought I was for the half-marathon, people absolutely smoked me in that race. They shouldn't have—according to my big ego.





I think that part of the problem here is that people who are relatively new to CrossFit go through what seems like an overzealous phase. I certainly went through it. I went to my strength coach in college and stated that I'd wished I had done this in the off-season. I thought that it alone would cause me to play better football. He quickly stated that I should learn about strength and conditioning from many angles, and not just one. In my head I disagreed with him. Why? Because I was convinced that my way was better.

Now, my strength coach has been doing his job for years. How could I assume that I knew better than him? I haven't done a bench press in many months. At that time, I could see no use for it in my CrossFit training program. It required more equipment than I needed or had. My coach said that football players need to push

weight around. Why? Not just to be strong. If they are out on the field, they need to know what it feels like to have something heavy acting on their bodies. Whether this is squats or bench press, they still need it. I know that squats are extremely important, but I had gone into the assumption that bench press was just not as necessary as I had always thought. If you look at the offensive lineman's position, though, bench press is close to the most useful exercise there is. Linemen make their money by pressing players away from them.

For some people, bicep curls are for making their biceps bigger. They don't care that they are not getting fitter, they just want bigger arms. Who are we to judge?

This is where most people get into trouble with CrossFit. They think that it is the end- all/be-all for strength and conditioning. Not all people think that, but a great many of the newer athletes to CrossFit become overzealous in this way. If we don't do it in CrossFit, it is useless and unimportant.

The thread "Seen at the Globo Yesterday" has a huge number of examples of people making fun of others doing things in the gym that they don't understand or see as useful. Many times, people are doing stupid things. Several times throughout the thread, however, someone chimes in and lets people know what they are doing and why it is useful. It would be against everything Coach Glassman stands for if we were to make fun of and belittle anything we don't understand. Coach has created CrossFit by having people do things that others don't understand. The Black Box approach works. People outside of the CrossFit community don't understand why we do some things we do. They might make fun of us, but we see it as a source of pride. Why should they feel stupid when they are doing something we don't understand?

What people fail to understand is that CrossFit is a conditioning program. If you want to be good at a sport, you have to practice that sport. If you want to be good at

running marathons, you have to practice running. That's why there is something like CrossFit Endurance.

As CrossFitters, we need to make sure that we don't make fun of something that we don't understand or don't see the usefulness of. What if people did that to us? Oh, wait, they do. We take pride in that, don't we? Why would we think that our way is the end-all/be-all? Maybe others think that their way is better. You know what? For some people, bicep curls are for making their biceps bigger. They don't care that they are not getting fitter, they just want bigger arms. Who are we to judge?

Instead of treating people like they're stupid, we should be saying, "Yeah! Good for you! Keep working hard, and if you need some other ideas, let me know."

My neighbor does Wii Fit. Like it or not, she does it. She could do CrossFit, but I don't think it's for her. Is it right for me to trash on her, and have the CrossFit community make fun of her because I don't do it? She has lost around 30 pounds. Yes, 90% of weight loss is diet. I know. But it still helps to be exercising. She will never be more fit than I am. That's okay. She's doing something. Who am I to make fun of her? She's working out and eating right. Isn't that the main idea here? Instead of treating people like they're stupid, we should be saying, "Yeah! Good for you! Keep working hard, and if you need some other ideas, let me know. If not, keep doing what you are doing! At least you are doing more than most of the people in this country."

I guess that what I figured out was that CrossFit is wonderful, but some people just have no interest in it at all. If they don't, who are we to judge them? Who am I to say that someone is wasting their time doing a bodybuilding routine? We should gently show them a different way of working out, and if they like it, great. If not, that's okay too. Help them where they need help. Small, kind suggestions go a long way towards helping someone understand fitness and CrossFit.

What I am trying to say is that as CrossFitters, we need

to really keep our sense of humility about us. We know we are extremely fit. We know that we can do more than a good percentage of the population, but we forget how much we got our asses handed to us in the beginning of our CrossFit careers. We know it is still going to whip our tails, but the difference is that we know it. There is no going into a workout with a sense that it will be easy. We are experienced enough to know that the simpler or easier it looks, the more devilish it is. Case in point: 400m Lunge Walk for Time. Just as we do not underestimate CrossFit workouts, we certainly shouldn't forget how humbled we were at the beginning, and how easily something like distance running can humble us again, no matter how in shape we are.

You know what else? As great as we all know the CrossFit community is, there are other communities out there just as kind and giving as ours. Those people did not have to wait around to cheer me to the finish, but they did. I even had a couple of runners bring me fruit and water when I could not even stand up. They didn't walk around saying that I should have "put in more miles." They just congratulated me, and asked me if I'm doing it again. You know what? That is awesome.



About the Author

Mike Houghton, 29, is a 4th grade teacher at Freedom Crest Elementary School in Menifee, CA, and a CrossFitter since 2007. He directs the school's Fire Breathing Falcons Fitness Club based on CrossFit principles and coaches varsity offensive line at Paloma Valley High School. Mike and fellow teacher Sean Murray run [CrossFit 951](#), which holds CrossFit classes in Mike's garage and bootcamp classes in the park in Menifee. He lives in town with wife Sara and kids Cody, 5, and Kylie, 3.



Squatting Outside the Box

Searching for common ground, powerlifting guru Dave Tate and this CrossFitter agree:
The explosive box squat works—if you can handle it.

Russell Berger



What do you get when you give a stubborn kid with no friends, plenty of bullies, and learning disabilities access to a small, private powerlifting gym? That depends. In Dave Tate's case, you get a 700-pound back squat before you've even graduated from high school. Decades later, Tate's experience as a professional athlete and coach have turned that stubborn, bullied kid into a powerful motivational speaker, successful author, and the founder of Elite Fitness Systems, a multi-million dollar equipment supplier to strength coaches and athletes.

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CrossFit San Diego recently hosted a seminar in which Tate, a world-class powerlifting competitor and trainer, shared his knowledge and experience with the CrossFit community. CrossFit continually produces trainers and athletes who are adept in everything, but masters of nothing. How CrossFit manages to pull this off is no surprise: we occasionally check in with the real masters and find out what we can learn from them. So what does the bald-headed Dave Tate, with an extremely specialized skill set, fondness for box squats, and an infamously terrible diet have to teach us? More than you might think.

I don't think any of us knew what to expect when he began speaking at our seminar, Tate included. Like others in his industry, Tate is known for complete, expletive-ridden honesty.

Tate, an Ohio-based father of two young sons and the author of the 2005 book *Under the Bar: Twelve Lessons of Life from the World of Powerlifting*, is impressive in more ways than one. His elite status in three separate weight classes of powerlifting obviously comes to mind. His best lifts, a 935 squat, 740 deadlift, and 610 bench press, put him at a monstrous total of 2,205. With a career that spans the roles of world-class athlete, coach, and businessman, Tate's life experiences make him an equally incredible source of knowledge. As a self-described "meat-head" and college drop-out, Tate returned to the University of Toledo and graduated with a degree in exercise science and nutrition, combining the wisdom of the gym rat with a detailed understanding of the human body and its mechanics. At 41, Tate's life-long resume has made him the stuff of legend to aspiring strength athletes all over the world.

Tate was already a relatively successful powerlifter when he was recruited by the now-legendary Westside Barbell Club of Grove City, Ohio in 1990. His success bred stubbornness, and he had developed a disdain for the unorthodox methods of Westside coach Louie

Simmons, a strength consultant with several NFL teams and the only man over age 50 to total 2100. Simmons is responsible for pioneering "Dynamic Training," a method that puts heavy reliance on generating power by using relatively light weights lifted at high velocity.

At first, Tate was extremely critical of Simmons and his unique training, refusing to even try such an unorthodox method. "Speed work seemed like bullshit," he explained, "I had been using western-style progressive overload, you know, sets of fives, threes, and singles, and went nowhere for a year." Finally, however, he succumbed to dynamic training, adopting an exercise known as the "box squat"—a squat in which the eccentric phase of the lift carries the lifter to a sturdy box placed just below parallel, allowing the movement to be partitioned and more focus to be given to the explosiveness out of the bottom (see sidebar). Tate used the box squat for the rest of his time at Westside, only attempting full squats during competition. This notion seems a little unbelievable at first, until he points out that he added 200 pounds to his squat in six months with this method.

Powerlifting vs. Strength-training vs. GPP

Impressive resume aside, Tate is a highly specialized athlete. What value he might be to us, even with his level of experience, was hard to estimate. I don't think any of us knew what to expect when he began speaking at our seminar, Tate included. Like others in his industry, Tate is known for complete, expletive-ridden honesty. Gathered before him was a small crowd of military personnel, CrossFit trainers, and HQ staff. All of us knew full well that we could end up having gained nothing from this interaction. After all, how did we know this guy was any different from others in his realm of the fitness industry? Would he spend his time labeling our methods as dangerous or ineffective, echoing the weak sentiments of CrossFit critics Poliquin, Boyle, and Cook?

From the start, however, Tate made it abundantly clear that he wasn't interested in CrossFit's calling card, GPP, or "general physical preparedness." He opened by acknowledging our differences, noting, "I can't train for general fitness. I respect the shit out of anybody that can, but I want to break records; that's just me."

This was an important piece of diplomacy from a guy who serves as an icon to many who trash CrossFit on a regular basis. Tate was offering us the value of his

TATE'S BOX SQUAT TECHNIQUE

The box squat is relatively simple. The athlete first chooses an object to serve as his or her box. This can be a sturdy plyometric box, a stack of bumper plates, or even a flat bench, but the object used must be able to accommodate the full weight of the lifter and the bar being squatted. The height of the box is largely determined by the individual squatter. One inch below parallel is preferred, a height that can be achieved with relative accuracy by stacking thinner bumper plates onto a 12-inch plyo box that has been turned at a 90-degree angle to the squatter.

Proper Body Position

Wide Stance: Take a much wider stance than a typical squat, with your toes facing nearly forward. Often, this will be just wide enough for you to get your hips below parallel, something that may be uncomfortable if your groin muscles aren't used to being stretched that far.

Knees Back: Do not let your knees move forward for the entire squat. This is challenging. Have someone watch you from the side and make sure it doesn't happen. Even slight movement forward is a sign that your quadriceps are being engaged to make up for a position in which your hamstrings are weak.

Proud Chest: Keep your torso as high as possible. This will require what may seem like an excessive lumbar extension, but does help to keep the bar moving on a straight path.

High Eyes: Look up and forward. This is primarily done to keep the chest high.

Execution

Step 1: Assuming a very wide stance, inhale and fill your abdomen fully with air. Begin pushing your butt and hips back like you are trying to sit on an object behind you. Continue to reach back, keeping the chest as high as possible and limiting forward motion of the knee as much as possible.

Step 2: Descend in the squat as you would without the box present. Squat style plays no role in the effectiveness of this exercise as long as you don't begin to blend styles together or lose proper form.

Step 3: Touch the box slowly, allowing your weight to settle on it with absolute control. At this point, every muscle in your body must be tight, and you must continue to hold your breath tightly in the abdomen.

Step 4: Wait one or two seconds. At the moment the crease of the hip passes below the top of the patella (knee), immediately squeeze (contract) the posterior muscles violently and violently snap up from the box/bottom of the squat.



Common Errors and Fixes

Out-of-control landing: The most common and potentially dangerous error in the box squat is bouncing off of or slamming onto the box. In order to prevent injury and perform the movement correctly, the athlete must be in absolute control of the squat all the way to the point where his or her weight settles gently onto the box. Not staying on the box long enough can also lead to attempts to bounce off. If you are falling onto your box, adjust the height of it until you are in control at the base. Then count two seconds in your head before exploding upwards again.

Moving the knee too far forward: Keep the knee positioned back, over the heel. If you are too quad-dominant to perform this type of squat to full depth, box squatting to the threshold of that depth can help. After enough practice, you should be able to lower the box and gradually improve your range of motion.

Not keeping the chest up: Dropping the chest during the squat is a common error. Lumbar flexibility is a must, and lowering your chest too far forces the barbell out of the straight-line path you are looking to achieve. If possible, having someone watch you and cue you to raise your chest when it drops will help. Looking up is generally effective at getting an athlete to raise his or her chest farther.

Assistance Exercises and Recovery Tips

If you have 300-pound hamstrings and 200-pound hip abductors, you will only squat 200 pounds. This is the simple way that Tate breaks down specific muscular weaknesses within your movement. Tate recommends analyzing the squat for apparent weak points, and using “assistance exercises” to build up that weak point. For example, falling onto your box because you can’t get below parallel using only your hamstrings implies that you are weak at that particular range of motion.

The GHD Raise: One of the most devastating assistance exercises Tate uses is the GHD raise. Start face down on a GHD bench, with knees just shy of the close edge of the pad and your body parallel to the ground. Without engaging your lower back, begin flexing your knee joint, curling your body to an upright position using nothing but hamstring strength. If this is relatively easy, prop the foot-end of the GHD bench onto a 12-inch box. If you can get more than three or four of these in a row you are doing well.

Less is more: If there isn’t a good reason to be doing an exercise in the gym, get rid of it. Training economy is key, and wasted energy both hurts recovery and limits time that could be spent on more effective training.

Doing more than four reps at 90% of your 1RM range during training, for example, won’t actually increase strength, but will seriously inhibit recovery speed.

Savor success: Always leave on a good lift if possible. Let’s pretend you just PR’ed on your deadlift by 30 pounds. You think you might have more in the tank, but don’t get greedy. In the grand scheme of your training, a PR is a huge accomplishment, and you’ve already asked enough of your body. You might be able to pull ten more pounds, but what if you fail? The psychological impact of leaving the gym on a missed lift is huge, and sets you up for failure in the future.



expertise, and it was up to us to do what we wanted with it. His no-bullshit approach to training made it clear that even though our goals and methods might be polar opposites, we were speaking the same language. As Tate began explaining his training philosophy, striking similarities between our methods arose. His three prerequisite considerations for training programs, for instance, “safety, efficiency, and effectiveness,” were a surprisingly familiar parallel of Greg Glassman’s hallmark measurement of “safety, efficacy, and efficiency.” He even touted the need for “quantifiable goals,” scribbling the classic black box theory on the board in his own words: “Progress = Correct training.”

Where the differences between Dave Tate and CrossFit became apparent were largely in the form of our goals. Because Tate’s training is designed around competitive performance, his objective is relatively simple: increase the load on the bar. How this happens isn’t really important to him; squat suits, drugs, knee wraps, and complex technical training are all fair game. The end result is a man who has made a career out of squeezing every possible ounce of usefulness out of an athlete’s available resources, applying a great deal of time and energy towards what we might consider tricks and gimmicks.

CrossFit’s own strength training, while making use of many of the same movements found in powerlifting meets, is designed to promote the adaptation of general strength. In theory, an athlete who is relatively capable in the squat will be generally stronger, and therefore more prepared to meet similar challenges in the real world. General strength, as we measure it with barbells and plates, shares in the desire to increase the load on the bar, but only in the context of increasing an athlete’s functional capacity.

These differences were highlighted for me at the Basic Barbell cert taught last December by Mark Rippetoe, CrossFit’s resident strength expert. During his cert, I made the mistake of confusing Rip for a powerlifting coach, something he really didn’t appreciate. Rip respects the athletes who compete in powerlifting, but dislikes the changes that have come about in the sport itself. Rip’s own powerlifting career ended in the late 1980s, and he criticizes the sport for the increased importance of equipment and the deterioration in qualifying deadlift weights—something Tate refutes. Some bench shirts and squat suits are so supportive that many lifters must train to fight against their own garments just to achieve full range of motion, but Tate holds that the technical skills required to effectively use



this equipment adds a tremendous skill component to the sport. As Tate explains, “One can’t just put on gear and get a 300-pound bench carryover. There is a very technical skill to this and a pretty large learning curve; you could say that these federations have added a higher skill aspect to the sport that was never there before. So now those who do not have the genetic advantage can beat those who do.” Regardless, Tate disagrees with judging an entire community based on only a percentage of its members. Raw divisions, for instance, which were recently allowed to compete at the national level by USA Powerlifting, are still recording squats well over 600 pounds using little more than lifting belts in competition.

Overall, Rip’s negative view of powerlifting seems to revolve around this same difference in goals. As a strength-training coach, Rip isn’t looking for every training trick and piece of equipment available to work a few extra pounds onto the bar. Rip’s goal is general strength, increased to further benefit a novice lifter’s work capacity inside and outside of the gym. While arguably less awe-inspiring than an 800-pound back squat, this is a goal far more valuable to us as CrossFitters. My mistake, confusing Rip’s strength-training with powerlifting, was a complete misunderstanding of Rip’s role as a coach. This is obviously something that happens frequently judging by his frustration, but I don’t blame him for his reaction. Being compared the likes of Simmons and Tate, who have produced a plethora of Elite level powerlifters, makes Rip’s resume look pretty unimpressive, but in the end the comparison is apples to oranges.

While Tate’s performance is undeniably impressive, it’s fairly clear how competitive powerlifting translates into GPP: poorly. Tate’s level of specialization is the antithesis of CrossFit. I’m not talking about trading a little work capacity for a successful powerlifting career; I’m talking about not even having the ability to function effectively in daily life. Tate himself admitted that he became concerned about a lifter’s need for “cardio” when he had trouble making it from the parking lot to the platform before a training session. When Tate retired, his own mobility was so bad that he couldn’t walk down stairs unless he moved down them one step at a time. This isn’t a far cry from the ultra-marathon runner that can’t jump onto a 12-inch box, and certainly constitutes a failure in our measurement of fitness. As CrossFitters, our interest in GPP forces us to balance strength training



*As a strength-training coach,
Rip isn’t looking for every training
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with all other aspects of fitness. Specific strength training efforts represent a small percentage of our overall training. Equally, these efforts also represent a small percentage of our capacity.

Or do they?

The question has been around as long as CrossFit itself: "Will an extra 100 pounds on my back squat increase my Fran time?" Some believe that increased maximal strength can increase GPP by increasing an athlete's ability to move lighter weights faster, since those lighter weights now represent a smaller percentage of his or her maximal effort. Others disagree entirely, citing examples of very strong people being beaten by much weaker people in efforts like "Grace." Here was a chance to ask Dave Tate, who has put an estimated 50,000 hours into training, coaching, and consulting on strength, one of the most fundamental and controversial questions in our community. His response, however, wasn't quite what I expected: "I don't know, and anyone who says they do is probably bullshitting you."

That was it. He didn't budge from this position. This "million dollar question," as Tate puts it, is the Holy Grail to strength and conditioning coaches everywhere. Does increased strength directly carry over to increased performance in any sport? Tate offered a number of counter examples to strength benefit in field sports, pointing out that there are always star players that don't have to work hard in the gym because they are so

naturally talented. But what does Tate think about more measurable events like CrossFit workouts? He couldn't say, and held that anyone who thinks they know all the answers is selling nothing more than "educated guesses."

The Instantaneous Explosion of Box Squats

Most of Tate's training involves improving a lifter's ability to get out of the bottom of the squat. The box squat, as Tate showed us, is a unique method for teaching the instantaneous generation of force or "explosiveness" required to reverse the direction of a massive weight. Practicing exploding out of the bottom of the squat wasn't new to me. Rip teaches this at his certification before even allowing anyone to touch a barbell. What was amazing then, was how profoundly inept I was at generating this force off of a box.

Tate began by teaching us his style of squat as we simultaneously learned the box-squat technique; coaching us down to, and up from, a box that was set just below parallel. Tate's squat form involves an extremely wide stance and a higher chest than Rip teaches. The most notable change, however, is that Tate does not allow the lifter's knees to move forward at all during the squat. Watching Tate demonstrate this type of squat is something to behold. As he descends, he forces his hips dramatically to the rear, and when he reaches the point just below parallel, his knee is actually at a point *behind* his heel. How is this even possible? For many of us it isn't.



One by one, Tate called us forward to attempt his style of squat. Just about everyone in this seminar was a veteran CrossFitter. Certainly a simple change of technique wouldn't come as much of a challengesurprise to athletes with our capabilities. As Tate describes it, even slight preference of the quadriceps near the bottom of the squat, which can be seen as the knee moving forward, isn't acceptable. One by one, everyone who attempted Tate's technique ran into serious difficulties. Allowing the knee to move forward of the heel, a normal occurrence in both Rip's techniques and the Olympic-style back squat, was incredibly difficult to resist, and restricting the knee's movement successfully often resulted in the lifter losing control at the bottom of the squat and falling onto the box. To deal with this, Tate began stacking thin bumper plates underneath lifters, attempting to reach this breaking point even if it meant the athlete was no longer squatting below parallel.

Always ready for a challenge, I was ready for the box squat, but since the squat technique I learned from Rippetoe had worked well for me, I wasn't particularly interested in learning something new if it meant I had to start from scratch. My "Texas-style squat," as Tate calls it, seemed to concern him, so he asked that I volunteer for the next practical exercise. I knew that I had Rip's teachings down pretty well, and after watching me squat the bar a few times, making sure I was moving it along a straight path, Tate gave his approval, even complimenting Rip on a job well done. If Tate believed that his squat style was superior to the "Texas-style" taught by Rip, he didn't show it. He took a measurement of the path of the bar during my squat, and began coaching me through his own squat style.

I stretched my stance out a couple of inches, pushed my chest up, and sat back to the point where I could feel my body hanging off of my groin muscles and hamstrings. This wasn't comfortable, but to the surprise of us both, I pulled it off. The width of Tate's stance requires the lifter to drive his or her knees outward with a great deal of force, pushing into the outer edge of the foot for support. This explains Tate's affinity for lifting in Chuck Taylor shoes, which allow for traction against the ground without putting the ankle in a compromising position, something that happens when balancing on the outer edge of a typical weightlifting shoe.

Under Tate's direction, at the base of the squat, I settled onto the stack of wood and bumper plates beneath me,

keeping every muscle in my body as tight as possible. I paused for a moment, and then squeezed everything I could, trying to "pop" out of the bottom. As hard as I concentrated, I still felt muted and slow. This was the kind of failure I felt the first time I saw someone doing double-unders with correct technique. When Tate demonstrated the box squat, it was like watching a cartoon character snap off of a hot frying pan. I simply couldn't re-create this display of power. His ability to instantaneously fire his muscles and generate speed was clearly something we lacked. Even the best of us looked sluggish in the bottom two inches of the squat, gradually picking up speed as we neared the top of the squat. There was obviously something to this technique, and we were all clearly incompetent at it.

"...Sure, if you're trying to bounce off the box or you're using more weight than you can handle, then there are definitely dangers to the spine."

Box Squats are Difficult and Risky. But Even Rip Admits They'll Build Strength and GPP

Tate's practical exercise was humbling. The explosiveness I thought I could generate at the base of the squat didn't seem to exist, at least not with any amount of weight on the bar. Was I completely missing a vital aspect of Tate's training, or was this just another gimmick reserved for competitive powerlifters?

Would doing box-squats have any carry-over into a CrossFit athlete's performance without the equipment, drugs, and diminished work capacity associated with it? In his response, Tate didn't skip a beat. "This style of squatting and dynamic effort training has nothing to do with equipment or drugs." He even offered to show me how to tweak the techniques and training he taught us to get the most out of a squat suit, but pointed out that I would never use anything like that.

Perhaps the most important endorsement of Tate's techniques comes from Rippetoe himself, who has written that, "The dynamic effort techniques are extremely



useful for anyone wanting to get stronger. CFT [CrossFit Total] benefits from their application immediately. They are an incredible tool, and in my opinion are the major contribution Louie [Simmons] has made to modern strength and conditioning."

Rip's book, "Starting Strength," however, provides a telling disclaimer on his concerns for the safety of the movement: "Box squats are an advanced exercise with a huge potential for injury if done by inexperienced or physically unprepared trainees." Rip's opinion is that these techniques, because of their danger, should be reserved for intermediate or advanced lifters, and novices will take the most benefit from the basic strength programming CrossFit currently prescribes.

On this point, Tate disagrees. He does admit that technical errors can lead to dangerous compression of the spine, but points out how easily these errors are avoided if technique is properly taught. The most common error, bouncing off the box at the bottom of the squat, has the potential to be very dangerous. (Add some momentum to that 400 pounds that you are trying

to squat by dropping straight to a box, and see how your spine feels when it "catches" that weight, trapped firmly between the box and the bar.) The fact that this is a very observable and easily corrected mistake, however, makes mitigation of this risk relatively easy. An excerpt from one of Tate's training articles says it all:

"...Sure, if you're trying to bounce off the box or you're using more weight than you can handle, then there are definitely dangers to the spine. When performed correctly, however, box squats are safe."

After teaching Tate's techniques to my own athletes, I've noticed that even the best of them frequently can't pull off the unique range of motion required to get below parallel without falling over. Learning Tate's squat technique takes time and energy, and frequently requires the lifter to practice at a height well above parallel, gradually reducing box height until his or her control and range of motion has improved. Whether or not learning Tate's squat style is worth this amount of effort is unclear. But Tate himself said that the "Texas-style" squat was perfectly effective and could be used in conjunction with his form of dynamic training.

Using Tate's squat style, my depth was exactly the same as with the Texas squat, but my starting position was a great deal lower—a result of both the extreme width of my stance and an increased back angle relative to the ground. After taking a measurement of my bar path during the second squat, we concluded that Tate's style of squat and coaching had dropped the barbell's total range of motion eight inches. In Tate's world, where efficiency is an absolute necessity if you want to win, eight inches is a mile. By shortening the path the barbell travels, even by a small amount, the athlete is technically doing less work. To Tate this means one very important thing: greater potential load on the bar. My ability to recreate this diminished bar path, however, is questionable.

Without the presence of a world-class coach, I can't effectively reduce my starting position to the proper depth achieved by Tate's improvements to my form in San Diego. At this point, any increased load I could have put on the bar to take advantage of those improvements is gone.

Thankfully, Tate did teach us that fully squatting a heavier load might not be the only way to make use of one. In fact, just getting that heavy load off of the rack

can have a big impact on your ability to squat at maximal efforts. The physical effect of skeletal loading, or simply un-racking a weight and standing under it, can be a big factor in training your physical and mental capacity. As Tate describes it, strengthening the core and getting accustomed to holding a heavy weight allows your bones and connective tissues to adapt to greater load. Equally important, simply holding up underneath a weight heavier than your desired 1RM can build mental confidence in your ability to control something lighter.

The “explosiveness” Tate demonstrated during the box squat, however, represents a challenge that must be overcome in any squat, regardless of style. After his seminar, I had 20 of my best CrossFitters attempt a “dynamic” squat workout that Tate had recommended we try: 20 sets of two box squats at 50-60% of the athlete’s current 1RM back squat. As familiar as this aspect of the squat was to us, the style of training we had been using didn’t seem to aid our ability to move explosively in the bottom two inches of the squat—the make-or-break point for a maximal effort. Even though the percentages used represented a relatively light weight, especially for sets of only two reps, none of our athletes had the same “pop” off the box that Tate displayed. To my surprise, however, each of them had improved dramatically by set 15, indicating that the light-weight, high-velocity lifting Tate recommends worked as a form of neuromuscular “practice.”

If Tate’s seminar could be summarized by a single quote, it would be this: “There are no bad exercises, only bad ways of doing them.” In other words, if your squat style is efficient and safe, keep doing it, and while you’re at it, use box squats to help you get better.

How much better will you get? I’m not entirely sure. It’s fairly safe to assume that at some point, regardless of how much dynamic training you do, you will need to become physically stronger to move greater weight. But watching a large group of CrossFitters perform so weakly at the box squat was humbling to witness. Rip’s strength training, designed for the novice lifter, bumped my back squat up a hundred pounds, but when Tate asked me to pop off of a box with less than half of that weight I was clearly incompetent.

My suggestion? Go out and try it yourself, even with just a box and a bar, see how “explosive” you are in those bottom two inches, the part of the squat that really matters. My guess is you will find the same thing

I did: a great tool for improving your performance. Use whatever style of squat you want with it, but do Dave Tate a favor and don’t wear your Chuck Taylors outside of the gym.



About the Author

Raised in Atlanta, Russell Berger spent four years in 1st Ranger Battalion and saw numerous combat deployments. After starting CrossFit in 2004, he left the military, moved to Alabama and opened Crossville Huntsville. Currently he splits his time between running his gym, writing for CrossFit, and spending time with his family.



A Platform for Great Coaching

Competition motivates any athlete to get stronger and faster. Learning how the best “Platform Coaches” help their weightlifters win on game day provides great lessons for trainers and competitors in any sport.

Bill Starr



An article about what’s involved in coaching athletes on the platform at weight-lifting contests—the job title is “Platform Coach”—might not seem relevant to many CrossFitters at first. But think about it: competition works. That’s why I think lifting contests are essential to any athlete who is serious about getting stronger. Once I teach aspiring Olympic lifters how to do full snatches and full cleans, plus jerks, I insist that they enter as many meets as possible—right away. The same goes for those who express an interest in powerlifting.

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Of course, they all balk at the idea, stating that they aren't ready for competition yet. While it's true that they aren't ready to win any trophies, they still need to get their feet wet by lifting on a platform in front of a crowd—or more likely, in front of a few family and friends. Competing is beneficial in many ways. It allows the rank beginners to observe the more experienced strength athletes, to see how they warm-up, prepare for their attempts on platform, and manage themselves while on stage. They can pick up points on training, nutrition, rest, and form, all of which can be used in their quest for greater strength.

On top of that, the energy and excitement generated at the competition is contagious. Weights that they struggled with in the gym suddenly feel much lighter. Seeing someone of the same size lift poundages that they haven't even dreamed about also is quite inspirational. I recall the feelings I had at my first meet: If that guy can do it, so can I. Contests force the athletes to focus more keenly. With only three attempts per lift, there isn't much margin for error, so they learn how critical total concentration is for success.

*As part of the learning process,
every lifter will make mistakes, but
this is how he begins to assemble a
formula that works for him.*

Prior to a contest, each lifter has to go through a strict routine so that he's completely ready when he starts his warm-ups. If he's had to make weight, he quickly finds out what he can and cannot eat or drink. He has to make decisions on how to train during the final weeks before a meet. As part of the learning process, every lifter will make mistakes, but this is how he begins to assemble a formula that works for him. He slowly puts together a workable schedule through trial and error.

Meets are gatherings where information about the sport is freely exchanged. You find out where others with the same interest train; how a certain athlete gets past sticking points; tips on dropping weight fast. Even when



a lifter comes away from a contest rather unhappy about his performance, he is still jacked up from the rush of adrenaline he got when he walked out on the platform for the first time and felt that surge of satisfaction when he did the lift successfully. There's no other feeling that can equal it, and he can't wait to get back to his gym the next week so he can train even harder. This is called being bitten by the lifting bug. I can vividly recall the moment it happened to me.

In 1958, encouraged by the Physical Director of the Wichita Falls, Texas YMCA, I entered my first Olympic weightlifting meet, the Southwestern YMCA Championships in Waco, Texas. I had just turned 20 years old. Like most other beginners, didn't think I was ready for competition, but I was curious to find out just what went on at a contest.

There were only six other lifters in attendance, but one of them was Sid Henry from Dallas, a highly-ranked heavy-weight. I strove to do my very best in front of him and succeeded nicely. I pressed 185, snatched 180, and clean and jerked 225 at a bodyweight of 181. All were personal records and I made all nine attempts.

I was elated when I accepted the small medal in the shape of Texas and realized that I felt differently than I did prior to the meet. It was as if I stepped through a portal and became a more confident, self-assured individual. I had set goals and, solely through my own efforts and determination, had achieved them on the lifting platform that

afternoon. I was filled with pride that I had joined the brotherhood of Olympic weightlifters and believed that the sport would play a major role in my life. It turned out that I was correct.

Now, at that time, there were very few platform coaches. The lifters coached themselves, often with the help of fellow competitors. The most confusing part of the contest for me was figuring out how to complete my warm-ups so that I was ready for my first attempts. What I did was mimic another lifter who was starting with the same weight as I was, or close to it. This didn't work out well, but it was the best I could come up with at the time.

Over the years, I continued to pick up more and more tips, partly from experience and also from talking with the other lifters before, during, and after the contests. Riding home from a contest with a group of lifters always turned into a seminar. Various lifters' styles were critiqued, some criticized, others praised. By the time we arrived home, we were all ready to get back in the gym and move some iron.

So those lifters, like myself, who competed in as many contests as they could, began to know more about preparing for meets and lifting on platform than most of the other athletes. That's when we started acting as platform coaches for teammates and fellow lifters.



Basic Principles of Good Platform Coaching

1. *All lifters aren't created equal:*

The first step, and the one most overlooked, is that you must deal with each lifter on an individual basis. No two lifters respond to a situation in the exact same way. The more you know about the athlete you're working with the better. How he deals with pressure. How he handles big jumps. How many keys can you give him? Only one or two or three? How he reacts after a missed attempt, and so on.

Understanding an athlete's psychological makeup and his demeanor and temperament at a competition is critical for the platform coach if he is going to help the lifter do his very best. But, many have argued, there isn't always time for all that. I just met some of the lifters for the first time yesterday. Then do a crash course. Within minutes, you should be able to tell if the athlete is confident or overly nervous. Plus a great deal more when you ask the right questions. Get him to just talk about himself, something everyone enjoys, and you'll soon pick up enough information to help you size him up quite well in relationship to what you can expect when encountering certain situations during the contest.

2. *Hang out together:*

To facilitate the above point, the coach should be in attendance while the lifter trains. That way he can learn a great deal about how the athlete paces himself, sets up for the heavy poundages, and his ability to concentrate on what he's about to do. In addition, the coach can find out what music he enjoys, what else he likes besides lifting; girlfriends, family, future plans, et cetera. In other words, work up a profile of the individual, put meat on his bones and you'll be a step ahead in knowing what to expect from him in the heat of battle and at the same time you'll greatly enhance his confidence in you. Which, for some, is as important as the advice itself.

3. *Remember that they are the stars, not you:*

Perhaps the greatest attribute a platform coach can have is absolute dedication to his athletes and

understanding that this isn't about him. It's all about the lifters. It's quite difficult for many who were very good lifters to set aside their egos and devote all their energy to helping their charges do their best.

This is why some top lifters are not good at coaching others. They're used to being in the spotlight and still want a healthy share of attention. They're easy to spot. They're unusually loud with their instructions and make sure that they're easily seen near the platform when their lifters are performing.

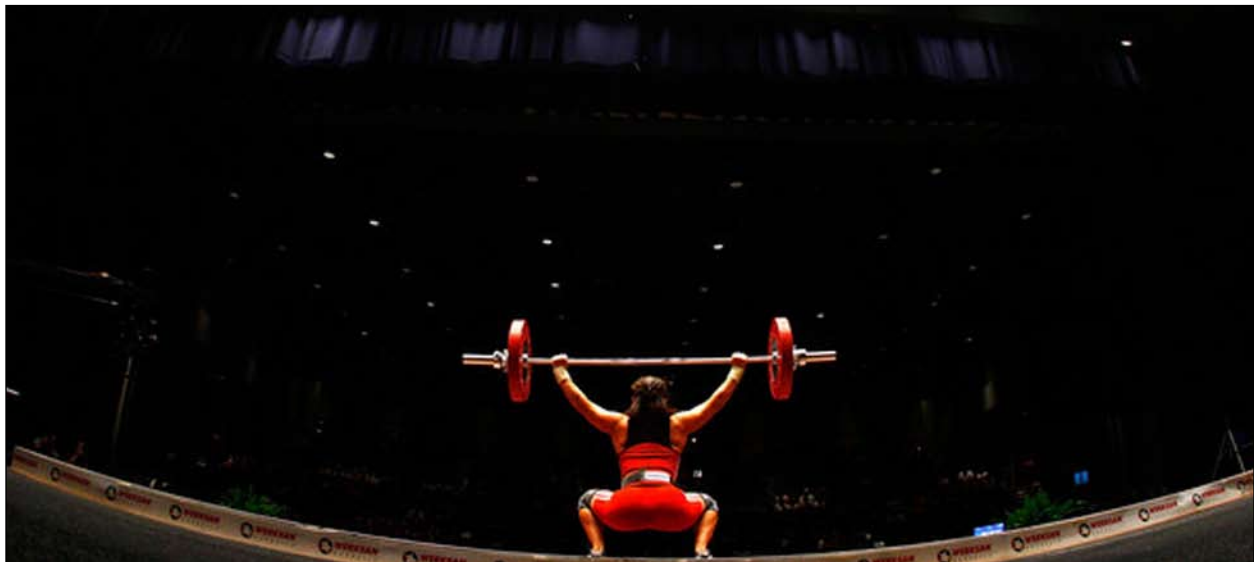
As I mentioned, some of the best platform coaches achieved little success in the sport when they lifted. Ironically, one of the best I was ever around had never competed at all: Dick Smith, the long-time trainer for the York Barbell Club. I once wrote that when "Smitty" worked with a lifter, he could count on an extra 20-to-30 pounds on his total. Smitty was always cognizant of the lifter's needs and willing and ready to do whatever it took to satisfy them. Need some muscle rub applied to your back? Smitty was there. Need a muscle cramp massaged? Smitty was your man. Smitty knew the lifters well, their strengths and weaknesses, and responded accordingly. He also knew their individual temperaments, which helped him deal with them when they were

under great pressure. Some he would coax softly, others he would push to get more out of them. He would offer technical advice and suggest how much weight to take next, yet he allowed the lifter to make the final decision. What made him such a great platform coach was he honestly cared about each lifter. He was 100% behind him and dearly wanted him to do his very best. That is a profile of what it takes to be an influential platform coach.

4. Require a warm-up and respect the lifter's preparatory rituals:

Maybe the most important function of any platform coach is to be sure his lifter is warmed up properly, so that when his name is called, he's totally prepared for his first attempt. I'll get to a system of warming up that I utilized when I competed and have taught to many lifters through the years that is quite simple but extremely effective, but this deals with variations on the number of warm-up attempts different lifters use.

Two of America's best, Mike Karchut and Phil Grippaldi, both liked to do a great many warm-ups, a dozen or more, often twice as many as their opponents. At the opposite end of the scale were Bob Bednarski and Bill March. They needed just a





Those lifters who began making noteworthy progress soon gravitated to a gym where there was a coach. This was a huge plus. The coach would help plan workouts, give form tips, offer encouragement, and serve as platform coach at contests. Some of these coaches also lifted in meets, but most had hung up their lifting belts. Yet they still had a love for the sport and were delighted to be able to share their knowledge and time in helping others.

However, merely having an affection for the sport and a background of competing over a long career does not necessarily make for a good platform coach. Just as there are exceptional and mediocre coaches in football, basketball, and other sports, so it is in weightlifting. Some of the best train lifters in a home gym and never receive much recognition, while some of the worst have a long list of credentials behind their names and have obtained positions as team or national-level coaches, yet they are actually poorly-equipped to coach lifters at major contests for the simple reason that there's a lot more to knowing how to prepare an athlete for his final training weeks, how to warm up properly, and perform up to the best of his ability than having won a national or international title. In truth, some of the very best platform coaches were unexceptional lifters.

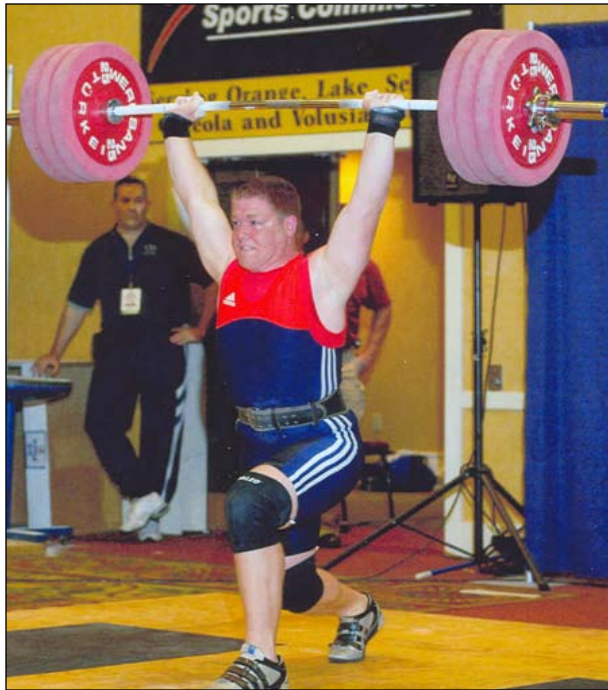
few warm-ups before going on the platform for their opening attempts. This was a direct result of all the demonstrations they held for Bob Hoffman at York, sometimes as many as three a week. The crowds at these exhibitions weren't interested in watching strongmen handle light weights. They wanted to see heavy iron moved, and that's what they got. Two warm-ups for the press and they could elevate 350. March was particularly adept at this. In fact, he was able to press 350 off the rack without any warm-up. I know this because I saw him do it many times and a lot of people in the York Gym lost money on his unique ability.

These, of course, are extreme examples. My point being that if a lifter is accustomed to warming up in a certain way, he should not be swayed to change his approach at a contest. When a coach tries to alter the number of attempts in the lifter's warm-up routine, he disrupts the normal mental pattern, which can have a negative effect on the athlete's performance. Even when the coach is convinced that the warm-up schedule is ridiculous, he still should not attempt to change it at a contest.

This is exactly what happened at the '70 Worlds in Columbus, Ohio—or, rather, would have happened had I not stepped in. John Terpak was the Head Coach and I was his assistant. Smitty, thankfully, was the team trainer and, in truth, it was he and I who did all the coaching. Terpak rarely showed his face at the training hall, which was fine with the lifters since they were well aware that he knew virtually nothing about coaching. The only coaching advice he ever imparted was "just pull the hell out of the bar." Not really all that bad, but there's a bit more to the job than that phrase. The primary reason why Terpak was such a crappy platform coach was because he didn't really care for lifters. Seems odd, right, yet it's the truth. Actually, he resented them for reasons I will not get into, but the lifters understood how he felt and avoided him as much as possible.

However, it wasn't possible to avoid Terpak backstage at the meet. While everyone knew his was no more than a political position to make

Being an effective platform coach is a complicated task and not everyone is suited for the job. Having said that, let me add that anyone who is interested in becoming a better platform coach can do just that. While I certainly don't know it all, I have picked up a wealth of information during the years I've been involved in both Olympic and powerlifting and later on as a collegiate strength coach. I'm going to share some ideas for those who enjoy being a platform coach and also for those who have gotten stuck handling a friend or fellow lifter.



The All-Important Warm-Up, Deconstructed

In regards to just-mentioned opening attempt, I need to reiterate the importance of the warm-up. As I mentioned, perhaps the key function of any platform coach is to make certain his lifter is warmed up properly, so that he is 100% ready when his name is called for his first attempt. I found this to be the most difficult part of competition when I began entering meets. It seemed every lifter had his own helter-skelter method of warming up.

The first thing a lifter or coach must do is note how many warm-ups he is planning to do. I find it helpful if these are written down, which allows the athlete to focus on the numbers as he proceeds upward. If there are any snafus, such as extra waiting due to unexpected misses

certain that a representative of the York Barbell Club was in charge, he had the authority to make changes. And this is what he wanted to do with Grippaldi's warm-up routine. Grippaldi was an intense individual who took all facets of training and competing very seriously. He was used to doing a dozen or more warm-ups, and here was Terpak trying to convince him to drop about half of them.

Although I thought Terpak had a valid point, this was not the time and place to make a change in Phil's routine. What had started out as a friendly discussion between them quickly escalated into a full-blown argument. Grippaldi was already strung tighter than a piano wire and Terpak was messing with his head moments before he had to go out on stage for his opening lift.

I pulled Terpak aside and suggested that he go out to the judges' table and check on how many more attempts there were before Phil was up. He complied mostly because Grippaldi was about to explode and no one in their right mind wanted to deal with Phil when he was angry. He was 198 pounds of muscle and energy. So Smitty and I did our best to calm Phil down, telling him to continue with his warm-ups and to forget about Terpak and start focusing on his initial lift on stage. It worked out okay, but could have been a disaster—not for Terpak, but Grippaldi.

5. Don't force significant form and routine changes on game day:

The day of the contest is not the time to try and change a lifter's technique. All that is going to do is confuse him. Instead of using his normal keys, he will suddenly have to insert some new ones, which just doesn't work under a pressure situation. However, a smart coach knows how to slip in some useful advice on improving a lifter's current form—such as telling him to pull a bit higher before he moves under a snatch or clean, or suggesting he think about jerking the bar a bit further backward on the jerks. These reinforce current techniques and don't alter them. But trying to make radical changes is a mistake. It's similar to switching from being right-

and extra attempts, the athlete's mental preparation will minimally be affected if the coach is on the ball. Merely have the athlete spend that extra time going over his keys and staying warm.

I've also had the opposite occur when I was coaching my brother Donald at a National Masters in powerlifting meet. We had the warm-up schedule down pat and everything worked perfectly for the squat and bench, but we hit a snag in the deadlift. With one warm-up to go before we opened, I went to the scoring table to make sure all was as it should be. It wasn't, big time. Four lifters who were scheduled to do their lifts in front of him had dropped out after their first attempts. That was eight attempts and Donald had one attempt on platform before he was due up. As I hurried back to the warm-up area, I saw him doing his last warm-up. He'd heard his name being announced. It worked out okay, but only because he knew how to adjust his mental state.

How to Handle the Waiting Game

Unexpected delays occur all the time in lifting meets, and you have to be ready for them. I find it most beneficial for lifters to get a feel of what it's like to have to wait for an extended period of time or get rushed. During the final two weeks of training, I have them go heavy and, at one session, make them wait for eight or ten minutes before doing an attempt. I also get them to do two or three heavy attempts with little rest in between. It's enough for them to realize that they can do well even when the situation isn't perfect.

There is also the matter of extended waits between attempts. If they're not too long, reinforce the keys to the lifter and provide him with some motivation. Again,



handed to left-handed with no prior notice and no time to practice.

The same idea holds true for weight selection on the platform. If the lifter has programmed certain numbers into his mental preparation, unless there's a significant reason for changing them, they should be left alone. Naturally, many circumstances that happen during the contest often force these pre-planned numbers to be altered, but to fiddle with them just to make the coach feel more secure is not a good idea. This is especially true when a coach wants the lifter to start with a much lower poundage than he previously figured on handling. One, this upsets his mental preparation. Secondly, it adversely affects his confidence. "If coach doesn't believe I can make that weight, maybe I'm not as ready as I thought."

Of course, there are times when the opening lifts should be lowered. However, this decision should be the lifter's and not the coach's. The coach should discuss why he thinks a lower starting weight is a smart idea and let the lifter determine if he agrees. A coach might say, "You don't have much snap in your pulls, so let's just get in that first attempt safely. If it goes well, we'll take a bigger jump on your second attempt." Or, "Either 303 or 308 will give you the silver, so take the lighter poundage and keep the odds in your favor. You'll have plenty left to go after the gold."

6. For the opener, have a flexible plan prepared in advance:

Ideally, lifter and coach will have discussed the starting poundages and considered alternatives prior to the meet. It's good to have set numbers, yet it's also smart to be flexible, especially with the opener. It needs to be understood that the initial attempt seldom decides the opener. It should be thought of as a set-up weight. I've known many lifters who were able to jump 40 pounds after their first attempt. The selected poundage needs to be heavy enough to make the lifter pay attention, but also not so heavy that he has to struggle. A proficient platform coach can alter his lifter's focus from one weight to another without any confusion.

this varies from individual to individual. Bednarski loved praise; when the crowd was behind him, he thrived. So when I worked with him, I assured him that every person in the audience wanted him to do well. Tommy Suggs was just the opposite. In order to get his juices flowing, I would tell him that the entire crowd was rooting against him and would be delighted if he failed.

In the event there is an extended delay, say 15 minutes or longer, take the lifter back to the warm-up area and have him do a single with a moderate poundage. For instance, if he was planning on doing 303, have him hit 220 to keep his form intact and his muscles warm. Should the impediment drag on, have him do another single. There's no risk of him running out of gas with these extra warm-ups. The workload for a contest is considerably lower than it is for a heavy training session and there's the added plus of the excitement of the meet. This waiting time can be used to remind the lifter of the key form points for the upcoming attempt.

Motivating with a Cool, Calm, Positive Spin

Many coaches are very confused about how to motivate their lifters. Slapping and screaming is ridiculous. Most of it is nothing more than attention-getting behavior on the part of the coach. It also uses up energy that should be reserved for the lifting. True motivation comes from within. The coach can help, but it has to be the lifter, in the final analysis, that believes he's capable of lifting a certain weight.

A coach's advice should deal with technique, not numbers. And at all times before and during the competition, remember Johnny Mercer's classic, "Accentuate the positive and eliminate the negative." This should be the credo of every platform coach. Unfortunately, the majority barks out comments in negative terms. Words like "wrong," "sloppy," "terrible," and "don't" elicit negative reactions and are what the lifter thinks about when he goes out for his next attempt. Rather than tell the lifter what he is doing wrong, tell him how to correct a form mistake in positive terms. An example: Instead of saying, "You're jerking the bar too far out front. Don't do that! Jerk it back!" say, "Drive the bar back more and it'll be in position to lock out better." It's just as easy to do with a bit of thought and will result in a favorable response.

The platform coach has to remain calm and collected in order to be helpful to the lifter. When he gets anxious,

upset, and displays his worry in his actions and voice, the lifter picks up on this right away and begins to have doubts about his ability to make his intended lifts. At a Senior Nationals, I watched a coach from the Olympic Training Center who was in charge of our very best prospect become so frantic that he was shaking. His emotional state rubbed off on his lifter and he ended up doing much less than expected. The coach was worried that if his lifter did not do well, it would reflect on him and perhaps put his well-paying job in jeopardy. If a coach's main concern is his own welfare, he shouldn't be anywhere near the platform. Make him an administrator where he can do less harm.

For a lifter to perform at his very best, he must have complete confidence in his platform coach. Any doubt will have a negative effect. Good coaches know what they're doing and this self-assurance is conveyed to the athlete, who can then use all his energy to focus on technique and not the other aspects of preparation.

Plan for every contingency you can imagine, have faith in your lifter, let him know that you support him 100% and all will go according to plan.

Of course, I realize that there is a great deal more to understand about the role of a platform coach, but these ideas will help you do a better job at every level of competition and also in training strength athletes.



About the Author

Bill Starr coached at the 1968 Olympics in Mexico City, the 1970 World 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](http://TheAasgaardCompanyBookstore.com).*

Pukie at the Pool

The famed Arden Hills Swim Team adds CrossFit and may be rewriting the rules of swim training

Roy M. Wallack and Brian Nabeta



Swim 100 yards freestyle, then do ten push ups. Swim 75 yards, then do ten squats. Swim 50 yards, then do ten burpees. Swim 25 yards, then do ten squat leaps. And that's just the beginning. Repeat the entire cycle with three other strokes: the backstroke, the butterfly, and the breast stroke.

"I've seen more kids puking in the gutter this year," says Brian Nabeta, coach of the Arden Hills Swim Club, "more kids running to the bathroom. More kids asking for rest between sets. They are so wasted—but so much happier."

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The Arden Hills Swim Club may conduct one of the strangest swimming workouts in the world, but the kids aren't complaining—especially after what happened to them at the Junior Nationals in Austin, Texas last December.

Seventeen year-old Katie Edwards dreamed of finishing in the top five. She did even better, winning the 100 and 200 breaststroke. Along the way, she obliterated her PRs. Her time in the 200 went from 2:19.30 to 2:11.22. And her time in the 100 went from 1:03.92 to 1:00.88.

"That took her from 'good' to someone who'd score a Top 8 in the NCAA," says coach Brian Nabeta. "And she wasn't the only one. We had kids ranked fifty-something who finished in the top sixteen. We had kids who had no chance at finals, yet got close. Out of 37 individual events, we had 33 lifetime bests.

"Other coaches were coming to me saying: 'Oh, my God, what are you doing?'"

The answer is a hybrid that no one's ever heard of before: CrossFit swimming.

A New Idea for a Storied Program

Arden Hills, located in Sacramento, occupies an exalted place in American swimming. Mark Spitz, until recently the greatest swimmer in history, trained there. So did Debbie Meyer, who won gold in the Olympic 200 and 400 freestyle relays in 1968, and Jeff Float, the 1984 gold medalist. But after that, Arden Hills dropped off the map.

Ten years ago, after assistant coaching at U.C. Berkeley, Nabeta arrived on the scene determined to return Arden Hills to its glory days. His first change was to reduce the volume mentality typical of most swimming programs. "You lose a lot of kids that way—and volume is boring," he said.

But his most effective change in the program occurred just last year, after one of his Masters swimmers persuaded him to try CrossFit.

"I became a believer in a month," says Nabeta.

"I thought I was in good shape—I swam, ran, and did weights. But in a few months of CrossFit, I went from 220 pounds to 190," he says. "I also found myself lifting more weight than I did as a Division I swimmer 20 years before. And at age 39, running far less than I did before, I set a PR in the mile run—a sub-5:30."



Last July, a week after the Olympic Trials, Nabeta went to a CrossFit Level 1 Cert. "On the drive home, my mind was on fire," he says. "I began jotting down ideas I could incorporate into our dry-land swim program for 14-to-17-year-olds."

Puking in the Gutters

The typical swim program consists of twice-a-day practices—one in the gym (dry-land) and one in the pool. Nabeta completely replaced his team's old 20-station dry-land circuit with CrossFit.

"There was no accountability in the circuit," he says. "They'd stop when the coaches get out of view. But CrossFit was exactly the opposite. I paired the kids up—and I'd never seen them push themselves like this."

"Now, I have kids who get pissed off when they lose to someone. One kid was so wound up that he tossed an F-bomb. I had never seen that kind of passion before in



The Method to the CrossFit Swim Madness

By Coach Brian Nabeta

The big question was this: How can I get my athletes to move themselves through the water at their existing body weight in the shortest period of time with speed and power? I came to the conclusion that you must learn this ability on land before you can take it to the water. And the best thing I've run across yet is CrossFit.

Last August, before the season began, I sat down with my national-caliber group of kids, discussed what I wanted them to do, and began explaining the technical aspects of the squat, dead lift, push press, and snatch. (All exercises were used with a PVC pipe or med ball.) Of course, the swimmers immediately asked me what any of this had to do with swimming.

I told them that the body in the water was like a ship and that the ship had to have certain specifications to move through the water without a lot of drag—as well as have a powerful motor to drive it. I explained to them I was going to make them faster, stronger, and fitter, and that each movement that they could master on land would apply to certain functions in the pool.

This is nothing new in itself. All swim coaches look at the power and quickness it takes for a swimmer to push off of the starting block, and try to figure out what we can do on land to improve it. Once I got familiar with CrossFit, I had many new exercises in my arsenal.

For example, the fundamentals of the squat can be seen when a swimmer turns on the wall, sets his or her body, and pushes off. The thruster reinforces the necessity of core body alignment for the maximum force required to maintain speed though the water. I actually have a high-school senior working on a project to find out how many pounds of pressure a swimmer pushes in the water when he pushes off of the wall. To mimic this, we train on land with dumbbell thrusters, pushing anywhere from 16 to 30 pounds. To mimic the streamline above their head, we probably raise the weights higher than most people do a barbell thruster.

When swimmers are fundamentally sound at these movements coaches then need to move to their swimmers out to the pool.



the gym. And the best part of it? We took that intensity out to the pool.”

Arden Hills kids cumulatively swim less now, breaking up their swimming with squats and pushups, but they swim much harder over longer distances.

“Not only did the in-the-water intensity pick up, but their thresholds are much further out,” says Nabeta. “CrossFit gives ‘em a comparison. So instead of dropping off at 50 yards, they max out at 75 or 80 yards. CrossFit taught them to push yourself beyond that uncomfortable grey line.”

Exactly how uncomfortable might that line be?

Page Sellers, 15, hasn’t puked yet, but loves CrossFit swimming nonetheless. “I really enjoy it—it really helps me,” she says. “It’s hard, but it works. It’s made me a lot stronger, so I get a lot more rhythm on my strokes. Without being well-rested, I cut three seconds off my 4IM (individual medley) time in the last meet—from 4:42 to 4:39.”

Nabeta thinks he’s on to something that could well revolutionize swim training. His program includes nine workouts per week, including five swims and four CrossFit days—three dry-land WODs on Monday, Wednesday, Friday and one in-water WOD.

CrossFit Trainers who are also swim coaches should use the CrossFit main website as well as the CrossFit kid’s site to scale workouts and get ideas to add in to their swim workouts.

CrossFit has changed the way I think as a swim coach regarding threshold. Knowing that a swim race averages two minutes plus (most events in the Beijing Olympics were under 2 minutes and 30 seconds—shorter than many CrossFitters do Fran), prompted me to push my swimmers on land and figure out how to transfer that effort to pushing beyond their thresholds in the pool.

How I Chose the Workouts

Our land workouts come 75% from the CrossFit Kids site, scaled from the Big Dawgs down to the Pack, and 25% from the main web site. The swimmers love the challenge. I have found that CrossFit levels the playing field when it comes down to the question of who is really fit. At first, I had to explain what I was looking for and had to be the example myself, as the kids were still searching for “intensity.” That day, as luck would have it, the WOD on the CrossFit web site was Fran—the perfect workout to show the swimmers what I meant.

After the workout, while I was on the floor for several minutes trying to recover, one of my female swimmers said that she could give that type of effort. I thought that moment was the beginning of a new chapter in training in swimming.

I have a national-caliber swimmer who really trains great in the pool, but has some trouble in meets competing with average swimmers. In the past three weeks, one of those average swimmers has improved in the pool, while the national swimmer has stepped it up on land and in the water. Both of these athletes have pushed each other to new heights in training intensity. The concept of “intensity” challenged both on land as well as now in the water at every practice. It took CrossFit workouts to engage these swimmers in a way that they could see transferring that same effort to a challenge set in the pool.

Convincing an athlete to push themselves beyond their threshold is a tough sell but CrossFit made it happen.

One of the coaches on my staff puts it in these terms to my group of national swimmers:

“Training takes place daily. We as coaches urge you, prod you, encourage you, and sometimes yell at you.

Given the importance of leg power in swimming, Nabeta's workouts include more leg exercises than standard CrossFit. A typical land workout might look like this: 20-lap run, 50 air squats, 16-lap run, 50 overhead squats, 12-lap run, 50 air squats, 8-lap run, 50 wall balls. In the water, his Arden Hills swimmers do versions of the swim/push-up, swim/squat, swim/burpee routine recounted at the beginning of this story.

Bottom line: Since implementing his CrossFit program at the end of August, the kids work out less on land and in the water. They used to swim 4- to 5000 yards a practice. That's down to 3,000 yards, with the extra time devoted to work on technique—yet they get better results.

"This is really two sports in one," says Nabeta. "I want to bring it to other coaches."

He may not have to—because other coaches around the country have noticed. Since Katie's success at Nationals, they are coming to him.

"Today, I got a call from a coach in Washington," he says. "I've been getting forwarded emails."

It's not too early to say that Arden Hills is back. Who knows? There might be another Mark Spitz doing squats on the pool deck right now.

About the Authors

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Brian Nabeta is the head coach and aquatics director of the Arden Hills Swim Team, coaching swimmers from ages 5 to 18. He has CrossFit Level 1 and CrossFit Kids certifications. Brian recently opened a CrossFit Affiliate, [Arden Hills Swimming CrossFit](#). Reach him at coachbkn@comcast.net.



Why? Because we want to see you get better—at more than just swimming."

Gaining the Ability and Desire to Cross the Line

The main WOD one Monday was typical: Sustained effort over a period of time that tests you physically, mentally and emotionally. You succeed at these when you learn how to do them...AND...when you recognize the time to cross "that threshold."

What is the threshold, exactly? It's the moment in time when you decide to either persist with all your might—or to give in, back off, and "settle." You "settle" when you take the easier path, one which delays discomfort and pushes passion to the rear. You think that you will cross the threshold NEXT time. More often than not, you won't. You will settle for the easier route, the one that doesn't hurt so much, but will also be the one that delays when you will reach your goals.

You see, that threshold represents a divide: On the other side of that divide is a chance at knowledge of what it takes to be great at anything. Your coaches test you everyday, to see if you are willing to take that chance to cross the threshold where consistent success lives.

Greatness, here, is a relative term. In terms of this group of swimmers in the Arden Hills National Group, greatness is determined not only by how fast you go, but the willingness to see how fast you can go and how much you will do to find out.

So, the question to ask yourself daily is, "Will I cross that threshold, and how often will I commit myself to doing so?"

In the past, Coach Chris, one of co-workers, has seen my swimmers just go through the motions on our dryland workouts. He recognized that swimmers in the past also just go through the motions on the aerobic training portion of our pool workouts. But in the past eight months, Chris told me that he's seen a transformation occur. Used together, CrossFit and swimming have created faster, stronger, and more powerful swimmers. The days of swimmers endlessly looking at a black line at the bottom of the pool hour after hour, year after year, as they swim at a moderate sustained aerobic effort are over. Intensity, in the gym and in the pool, rules. This is a whole new paradigm.

Sunshine and Sweat How My California Cert Can Help You Get Ready

A northerner's preparation tips and learning experiences at a southern CrossFit certification

Mike Warkentin



I should have got a goddamn tan.

That much was obvious from the burn on my pale Canadian face and arms after three hours of squats, presses, dead lifts, and cleans in the Southern California sunshine.

As burning flesh matched burning lungs halfway through Fran on Day 1 of the Level 1 Certification, it dawned on me that it might have been a good idea to have made a few more preparations before heading south. We train for the unknown and the unknowable, after all.

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The rest of my preparation for the cert at CrossFit San Diego was a bit more successful, and I'll share it here with the hope of helping you get the most out of your two days of full-on CrossFit immersion.



Prep 1: Study the Website and Read the Classics

I had quit my job as a radio copywriter in Winnipeg, Manitoba a few weeks before attending the seminar—just got up, deflated my silver Swiss ball, and walked out of the miserable office that was ruining my body and mind. It was the right time to do it; as a single 32-year-old without a clear idea of what I wanted to do with my life, I'd somehow found myself drifting around the slowly dying media industry, where spines lose their curves, shoulders droop and guts slowly creep their way over belts and toward keyboards. In January, when I realized I couldn't take any more layoffs, firings, or stupid car commercials featuring "craazy deals," I made a hard decision to walk away from a steady paycheck to pursue a career more in line with my two passions: fitness and writing.

To start, I picked up as much freelance writing work as possible and got a job at a local gym. I also decided to

learn more about CrossFit, which had been helping me blow off job stress for the previous eight months, so I booked a trip to the Level 1 cert in San Diego.

Besides catching some SoCal rays, I wanted to do everything I could to maximize my time in the company of the experts I'd read about, such as Greg Amundson, Josh Everett, Andy Stumph, Jolie Gentry, Pat Barber, Robb Wolf. The trip was to be a fitness vacation, but first and foremost I was going to San Diego to learn skills that could help me find a way to stay away from desks for the rest of my life.

Like every CrossFitter, I've had the experience of being laid out on the floor of a gym in a lake of sweat when a weekend warrior in Zubaz pants wanders up and asks, "Dude, what the hell was that?"

So, I figured it might be time to learn how to explain CrossFit to others—how do you explain the Filthy 50 to King Posedown?—and how to teach a growing number of curious friends how to do a kipping pull-up, muscle-up or snatch. Determined to learn the movements for myself and to be able to teach them to others, I was fairly motivated to make the most of it.

As with all things CrossFit, I started on the web, wading into the virtual community to find Eugene Allen's certification seminar notes in the Essential References section of the FAQ on CrossFit.com. That gave me a decent idea of what to expect, and the Certifications & Seminars section provided more details. I also reviewed just about every video in the Exercises and Demos section of crossfit.com a few times.

A great study guide arrived from Amazon.com in the form of *Starting Strength* by Mark Rippetoe and Lon Kilgore. It wasn't so much that *Starting Strength* is a barbell bible—which it is—but that the book showed exactly how a great coach should communicate his or her knowledge to a student.

Rippetoe's style is blunt, humorous and deadily accurate, and his cues are simple and direct. Similarly, his breakdown of the principle barbell movements is so clear, simple, and concise that even the hardest lift seems easy.

That said, I didn't find that Coach Rip's wisdom could help me avoid occasionally sending a pile of metal to the floor in a clatter that had the Spandex bunnies

scampering back to the Nautilus area of my gym. But sure enough, when I felt my shins hit the bar before a dead lift, the phrase “chest up, dumb-ass” echoed in my head with a Texan accent.

The Cert, Day 1: Speaking Clearly and Starting Over.

That’s really the key: clear communication. The most knowledgeable coach is useless without the tools to spread information, and I found that the cert instructors in San Diego shared Rippetoe’s ability to teach movements and correct errors in the clearest ways.

At the certification, I paid careful attention to the language the instructors used. How did they break down the movements? What cues elicited the best response from the athletes? How do you explain the snatch in 15 minutes? How did the instructors explain things that had me at a loss for words?

Armed with the fundamentals and a better understanding of key movements, I did one of the hardest things I’ve ever done in a weight room: I dropped the weight to nothing and started over again.

I figured if Mike Burgener can start all his athletes with a chunk of PVC pipe, who am I to try and learn the snatch with 135 pounds?

There isn’t much you can say to a steroid monkey who’s laughing in his Under Armour as you crank out slow sets of squats with a naked Olympic bar on your back, but I found focusing on the greater good seemed to get me through the heckling.

Old habits die hard, as they say, and despite the fact that I tried to hunt them down and kill them dead, many still lived on to make an appearance in San Diego, where they were immediately spotted by the instructors.

“Stop doing that!” Jolie Gentry barked at me as I made a mockery of the push press she had almost perfectly demonstrated inside. Winner of the 2007 CrossFit Games, 5th in ’08, and a Level 2 Instructor based out of CrossFit One World in California, she showed me what proper form is all about during a lunchtime instructors’ WOD featuring rowing and a clean and press.

Josh Everett, the ’08 Games runner-up, accomplished Olympic lifter, and U.C. Riverside strength and conditioning coach, spotted the same flaw in my push press during the Day 2 recap sessions in the parking lot.

Greg Glassman has said that the magic is in the movement, but my chiropractor has very clearly asserted that the misery is in the flawed movement.

During his presentation, he informed the group that hip extension is about going to the point of “deepest penetration.”

We all remembered that particular description, demonstrating the importance of cues, language, and communication. How do you teach someone a movement that’s going to challenge their muscles, their brain and their heart all at once? Greg Glassman has said that the magic is in the movement, but my chiropractor has very clearly asserted that the misery is in the flawed movement.

Prep 2: Tag-Team Teaching, Checking-Out the Girls, and Yoga

To my credit, I did a smart thing before I headed south: Without offering unsolicited teaching tips at the gym and risking a 10-pound plate finding its way inside my body, I asked a friend to come to the gym and alternate as student and teacher. I’d instruct him according to the CrossFit demos and the core barbell lifts, and then he’d critique my form.

Of all the things I did in preparation for the certification, getting in the gym and talking about the lifts was the most beneficial. Teaching someone else a movement is the equivalent of doing the overhead squat— it absolutely magnifies every deficiency in your own form. If you tell someone to get their ass below their knees in a squat, you can bet you’re going to pay attention when it’s time for you to squat.

Teaching also gets you out from under the barbell. As athletes, we have a tendency to get trapped in our own lifts, viewing the movement only from above or below a bunch of bumper plates, and god knows there’s not time for observation of others during Fight Gone Bad or Grace.

I found that watching, evaluating and correcting the movements of others ingrains the cues in your head and gives you a better understanding of the movement and its intricacies, which can translate into more success when you're on the clock.

On the physical side, I made sure to get acquainted with all the Girls before traveling to San Diego. I'd been out with most of them in the previous year, but I had yet to meet a few of the ladies. My afternoons with Isabel and Nancy went as badly as some of my real-life dates and revealed a few glaring deficiencies: core strength and shoulder flexibility.

If anything besides poor technique was limiting my success, it was a lack of core stability and an inability to rotate my shoulders to keep a bar exactly in the frontal plane of movement. The solution: more practice and yoga.

CrossFit and yoga may seem an odd pairing, but I found the centuries-old discipline to be a perfect complement to many of the core CrossFit movements. Take a closer

look at Chair Pose (Utkatasana) and you'll see all that's really missing is a barbell and some early Metallica pumping in the background.

Similarly, shoulder- and hip-opening poses released some of the muscle tension locked in by years of weight training, and soon I was noticing better hip drive and depth in my squats, great stability in overhead lifts, and increased range of motion about the shoulder joint—which transferred nicely to over-head squats, presses, snatches, and kipping pull-ups.

While hanging out at the bottom of a squat during the 'rest' phase of bottom-to-bottom Tabata squats at the certification, I felt exactly the same burn I had felt during a power yoga class, and the form checks during medicine ball cleans were a little easier thanks to yoga.

I also took a closer look at some of the featured videos online to get an idea of how the experts attack a WOD. Workouts such as Fran are all-out, balls-to-the-wall assaults from the word go, but others require some strategy and pacing, even if you're an all-star.



Greg Amundson explains the importance of posture

For example, watching the legendary Amundson crank out 100 pull-ups in 3:21 gave me some ideas about finding the right balance between reps and rest.

Those principles found their way into a box jump-kettlebell swing-run triplet on Day 2 of the cert.

The Cert, Day 2:

Getting Over Carbs and Making Peace with Fats

If I was lacking in one area in particular, it was in my understanding of the Zone diet. Before the seminar, I loosely followed the recommendation to keep the shopping cart on the outer periphery of the supermarket to avoid the preserved and processed carbs in the middle aisles, but I certainly didn't follow the Zone to a T. Nor did I understand the importance of fat as a fuel.

Things became clearer after a conversation with Barber (of CrossFit Santa Cruz) about the dramatic performance gains he experienced from a strict Zone diet (ironically while having a beer at the end of Day 1). The fourth-place finisher in the 2008 CrossFit Games explained that the Zone helped him set several PRs, which was all the endorsement I needed considering his amazing strength, which includes a 395-lb. deadlift, 180-lb. press and 315-lb. back squat.

After Wolf (of CrossFit Norcal) described the finer points of nutrition and meal planning, I decided that a complete re-evaluation of my diet was in order. Wolf is a Certified Strength and Conditioning Specialist and nutrition expert, and his website www.robwolf.com is full of useful information that helped me reconsider what I put in the shopping cart.

Just as I have to unlearn all the bad habits in my dead lift, I'm finding it a challenge to recondition my mind and body to get over carbs and make peace with fats. It might not be as hard as fixing the dead lift, but it's damn near.

Recent trips to the supermarket now include a few bags of nuts, some avocados, olives and other foods rich in dietary fat. Couple that with a reduction in high-glycemic carbs, and I should be well on my way to a few new PRs, I hope.

Certified:

Back Home with Form, Bumpers, and Videotape

With the certification now behind me and my sunburn fading to a mild tan, I've taken every opportunity to

instruct anyone who will listen to me. I've stolen a lot of cues from the instructors—I've certainly ripped off Everett's "deepest penetration" cue for my male athletes—and I've come up with a few of my own.

I've also taken a look at the movements taught at the seminar and thought about how they were broken down into manageable chunks for the athletes. If Amundson can get most of the group to knock out their first muscle-up in 15 minutes, surely I can teach the key points of the sumo dead lift high pull in an hour.

In the gym I've discovered that being ruthless with athletes about their form is absolutely necessary, even if it makes you feel like the drill sergeant from Full Metal Jacket. It only takes one or two disallowed reps in a crushing workout to get the required range of motion,



The author now practices what he preaches, and teaches what he learned

and in the end no one's happy with anything less than a RX'd WOD.

Working out with bumper plates is now also an absolute necessity. After pushing myself to the limits at the seminar it became apparent that I wasn't achieving the gains I wanted because I was afraid of missed lifts getting me evicted from my local gym. With bumpers you can challenge yourself to new levels of strength, and let's face it—if you don't miss the occasional lift you really aren't lifting heavy enough.

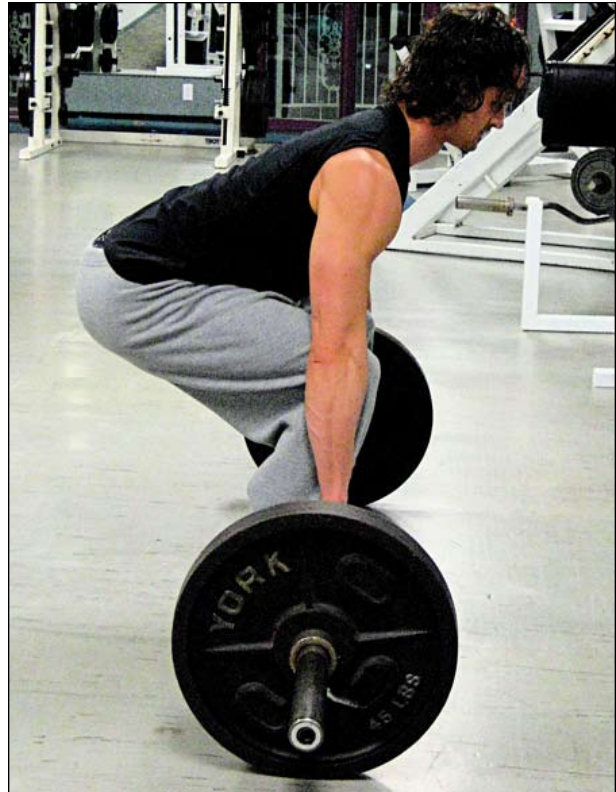
Finally, the video camera is now my best friend and worst enemy. I set it up as often as I can and lift, and then I review my technique. Poor hip extension, a brutal rack position, loss of lumbar curve, inefficient movement—they're all there on my Canon, and I'm working on them.

I'll keep working on them, and then I'll start working on my tan. By the time I'm ready for the Level 2 certification it'll be fall, and this time I won't be coming home from California with a sunburn.



About the Author

Mike Warkentin is a Level 1 Certified CrossFit Trainer and freelance writer. His ideal WOD would feature power cleans and muscle-ups, with a soundtrack provided by Slayer. He currently lives in Winnipeg, Canada and can look scary on the rings in his basement.



The author discovered deadlifts were his new best friends



Ship Shape

How CrossFit gave a carousing, cruise-ship golf pro the body he wanted
and fairway drives he never dreamed of

Roger King



I may not be the world's greatest golf pro. I may not even be the world's greatest golf pro who works on a cruise ship. But I am pretty sure that no one can touch me on this: I am most likely the world's only — and therefore greatest — golf pro who works on a cruise ship and is a CrossFitter who hits his drives a whopping ten percent further than he did a year before. If you think that's a long and winding mouthful, wait until you hear about my journey, a booze, broads and broken-hearts odyssey of golf and fatness and fitness that has taken me around

the world on various vessels with names such as *Carnival*, *Holland America*, *Celebrity*, *Princess* and *P&O* for about a decade now, with no end in sight.

Bear with me for a few minutes here. To understand someone, I think it's important to know where they've been. So, here's a brief history about yours truly.

I have been golfing since I was eight years old, but not seriously until I was 13. It was during this glorious

time in my life that the local country club in Nashville, Tennessee, became my parents' form of daycare. They would drop me off before they went to work in the morning and pick me up on the way home after work. I shot par for the first time at age 15.

I spent hour after daylight hour playing golf, and I didn't stop at night, hitting pitch shots at a tiny tree in the front yard. I spent tons of time reading every kind of golf magazine, watching miles of golf videos, listening to golf pros on TV, and seeking out local pros. Collecting all this information took many years. I really had no social life in high school, as I spent all my time on golf.

If you know golf, you'll know the feeling. The golf swing is so complex (easily as complex as Olympic lifting) that you have to try everything you hear. Get rid of the bullshit and keep what works, and that takes time. It's kind of like reading *Muscle and Fitness* magazine and realizing it doesn't work. (Oops. I'm getting ahead of myself).

By the time I was 19, I had a full ride to a junior college in Tennessee on a golf scholarship. I graduated 44th in my senior class in high school. No applause, please. There were only 44 in my class. I'm not proud of this. I am smart. I just decided to apply myself to something else.

Fast-forward a bit. I played golf for six months for the college, partied my ass off and decided college wasn't for me. I spent the next seven years working mini-tours off-and-on between sponsors and doing odd golf jobs. I had a horrible marriage during this time and went from a skinny-my-whole-life 185 pounds (I'm six-foot-three) to a svelte 255 pounds — in one year. That's pretty impressive. You have to eat a lot and not move very much.

After a two-year marriage and one-year separation before my soon-to-be-ex finally signed the papers, I came to a realization: wow, I am sooo fat and out of shape. It's time to go to a gym.

Now, believe it or not, I had never, ever worked out. Didn't know shit from shinola. The only thing I was told was, "If you lift weights, your golf game will suffer because you will become big and bulky."

So there I was, 26 years old and single and fat, and with no clue how to get fit.



In the Gym, Out to Sea.

I joined a globo gym and shyly went to the very back of a "body sculpting" class. Yes, we are talking the green and pink steppers and the light weights. I did this class three times a week.

You already know my history of obsessively studying everything ever said, filmed or written about golf, so what do you think I did next? Yep, I bought every kind of muscle and fitness magazine and nutrition book I could find, and I dug in.

I spent more than seven months doing all kinds of exercises every morning. Think yoga at 5:00 a.m., kickboxing at 6:00 a.m., sculpt at 7:00 a.m., treadmill and other machines at 8:00 a.m. and free weights at 9:00 a.m. By 11:00 a.m. I had started my workday as a club pro in Nashville, having left 3,500 calories in my wake.

I did this every morning. My diet consisted of protein, not many carbs, no sugar (the Antichrist) and lots of water. It was chicken, green beans and maybe some oats in morning. Strict? You bet. But I went from 255 pounds to 178 in seven months. Hey, I know what to do to get skinny. Object achieved!

After a while, I decided that I wanted to look like the big, buff dudes. Yeah, bring it on. I wanted to be super-fit and I wanted more muscle. But instead I spent the next few agonizing years working out and barely getting to 190.

Big? Nope. Not even close.

During this time of frustration, I met the most wonderful woman of my life. We dated for three months, never leaving each other's side. We were ham and eggs, peanut butter and jelly. Yep, we belonged... until she got colon cancer. Eight months later she was gone.

I sort of went numb for a year. I trained, but not as much. I ate a bit more. And boom, I weighed 195 pounds. It kinda stuck there.

It was during this time that my best friend Chip gave me a book called *Rich Dad, Poor Dad*. It's basically all about how to make money and how to save money, and about life. As I was studying this book, working at a golf course, and still feeling numb, I began looking for ways to make and save money. One day, I stumbled upon an ad for a cruise-ship golf pro.

I made a call to Carnival, and they contacted me regarding Elite Golf, an instructional program they run on their ships. With a recommendation from my great head pro, they offered me a job that day, a Tuesday. I joined the ship on Sunday. Talk about a fast change of life.



My first ship was the *Carnival Imagination* — a party ship. Enter my drinking, chasing-getting girls, partying phase.

I mean, jeez, I deserved it. I didn't do any of this growing up.

So, for the next five years (it took a while to get it out of my system), it was bar hopping and port hopping. One six-month contract after another full of drinking and eating. One day, tipping the scales at 205, it dawned on me that I'd better hit the gym. OK, cool. Soon, I'm back to 195, with a six-pack. The girls say, "Yummy." Good enough for me.

So, after about five years, I slow down. And instead of different girls each, um, night or two, I would pick one for the cruise. Progress, I know. Later on, I'd meet a crewmember and just date her until gangway do us part.

Yes, I was fun to be with but a jerk by many standards. Cruise-ship life is a different reality. It doesn't mix with the other world most people live in. And getting out? It's just like the famous line from *The Godfather, Part III*, "Just when I thought I was out, they pull me back in!"

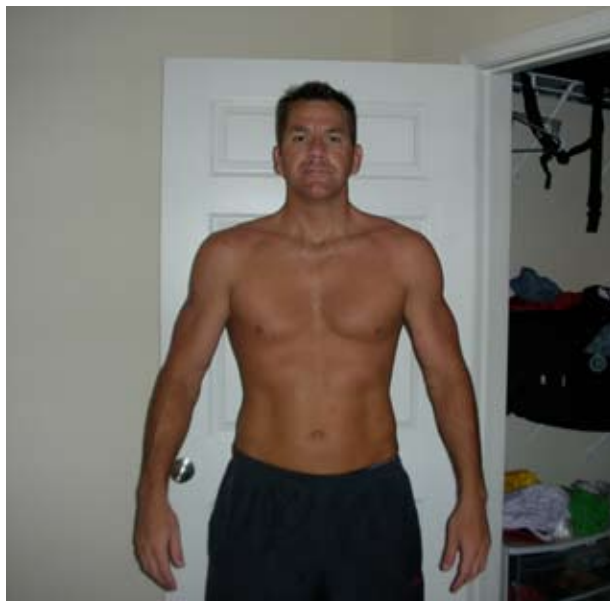
The ease of this life, for me and the entertainers, is hard to beat. We get room service — a cabin steward cleans your room for \$10 a week — and free food, free gym, cheap drinks (our own crew bar), free shows, warm weather and great ports. The things you miss are family and, at some point, a real relationship. It's hard to find ships that allow for anything long-term, anything normal. Eventually, it eats at you.

Back on Land: Discovering CrossFit

A couple of years ago, I left ships for what I thought was the last time. I decided it was time to grow up, spend more time with family, get one of my own — the 3.2 kids, the house, the two cars, the picket fence.

The last year before I left the ship, I was into fitness again, hard and heavy. I had found a pretty good book called, *The Men's Health Hard Body Plan*, which, among other things, said to eat more carbs. Quickly, I went up to a muscular 212 pounds, which was a big goal of mine.

Encouraged, I went home and decided to become a trainer — get a license, work at a gym, the whole nine yards.



I spent the next four months studying for International Fitness Professionals Association certification and took the test. I passed with an 82, got a job at a globo gym, and boom: suddenly I am a trainer.

“Congrats! You just won a job that has clients, and you start work at 5 a.m. and leave at 9 p.m. — if lucky.” That’s a far cry from five hours of golfing on ships. But I did it for two months. I taught bodybuilding lifts to a good client base. We did little to no machine work. I quickly realized that free weights and sprinting were better options.

After my first few paychecks, if you can call them that, I said, “Nope, I’m killing myself for no money. I can do this myself.” So I trained people out of my apartment.

I had time to study and search for new ways of training. My advertising was Craigslist. I found a pretty good system that got OK results: P90X. But after 60 days, it took me three hours of training to feel any kind of pump. I was lost, looking for new anything. Then I watched the movie *300*. Holy cow! Let me look like that!

The next week or so, I picked up my local fitness magazine and, lo and behold, in it I see the 300 workout and a reference to its creators, Mark Twight and the people at Gym Jones. So, I go to their site. It was intense, freaky stuff, and it was like Christmas. I dug in. 300 workout, here I come!

I didn’t make it through in 30 minutes. I hurt for four excruciating days afterwards. I hadn’t been sore from anything else I had done in so long. I was hooked.

I started searching Google, typing in “Gym Jones 300, a CrossFit-style workout.” Insert *Scooby Doo* noise here. When I saw the reference to CrossFit, I thought, “Oh my, look how deep the rabbit hole goes.”

Now get this: I was training four to 10 clients, max, out of my apartment — literally in a spare room. Then in February 2008, enter CrossFit workouts, and boom: 20 clients. What the heck? I kill them and they tell others. Another month later, it’s up to 30 clients.

Damn — I gotta move to a bigger box. I wasn’t even certified. But qualified? Hell, yes.

I read every CrossFit Journal article, watched every video and immersed myself in it all. My best friends were Coach, Mike Burgener, Nicole, Greg, Eva — you name them.

And I was busy. In between the clients and moving to a new box (an apartment with a two-car garage), I had been dating a girl I met at a globo gym when I first moved home. But nothing stood in the way of my thirst for knowledge. I read and studied everything about CrossFit as obsessively as I had studied my golf swing.

Then, I decided to re-enter my selfish-jerk phase — and head back to the water.

WODs in the Waves

I had a serious problem. I had to train so many clients that I ended up overtraining. I mean seriously messing myself up. From swings to deadlifts to muscle ups to handstand push-ups — I had to demonstrate for clients. I never could get any rest. Really, to slow down and get the family life I was so close to, all I had to do was get officially certified and get some investors on board for a bigger box. I’d have been the CrossFit facility in Nashville.

But reality struck. I started to have serious troubles with my girl (we were engaged by now), and it made me remember that I had been in an unhappy marriage before and was about to do it again. So I just split. Hopefully, she’ll thank me in the long run.

Remember that I said “selfish-jerk phase” a little earlier?

My job at Elite had always been there for me. They took me back, and here I am. It took me well over four months to get injury-free again. Now, I’m as healthy and CrossFit-fit as I’ve ever been.

Since being back on ships, I have trained and taught CrossFit. I brought some rings, an adjustable pull-up bar, a few bands, and a six-foot rope from www.againfaster.com. I train with a few crew members who show me they really care about fitness.

If you’re a CrossFitter and a cruiser, I recommend the *Carnival Sensation*, which has a running track and plyo boxes, pull-up bars, parallel bars and homemade weight hand-built by the chief engineer. The captain is Vittorio Marchi, and he is a great man. You can probably train with him.



I am currently the golf pro on the British flagship *P&O Ventura*, where I train a CrossFit class in the evening in the crew gym. It’s not the *Sensation*. All the ceilings are so low that I’ll punch a hole in the ceiling if I raise my arms with weights, which limits me to cleans, squat cleans, drop snatches, half swings and sumo deadlift high pulls. So, I had to train outside under a bulkhead to get anything done — not good news for the crew, because management wouldn’t let me keep my adjustable pull-up bar outside. Passengers might use it and hurt themselves, goes the reasoning. The repercussions were severe the one time I did leave it up. I was able to train with the bar and rings but had to put it down after each use.

Unfortunately, all my overhead stuff was put on hold when I recently got banned from outside training after the clean and jerk 1-1-1-1-1-1 WOD. I got up to 190 lbs and had to drop the weight. It shook the whole floor of the ship. All kinds of officers came running.

I am currently training with a bridge officer each morning from 5:15-6:30 a.m., before the passengers do their “walk a mile” at 7 a.m. Concept 2 Rowers are the only functional gear in our so-called state-of-the-art gym. The crew gym does have some Olympic bumpers with a lousy lightweight bar, but it’s enough for my intermediate CrossFit status — and enough to send my golf game to a whole new level.



Screamin' Clubheads and Super Drives

CrossFit can help anyone. Even golfers.

After doing CrossFit for a year, learning all the moves, doing the best I can in WODs and just getting generally, non-specifically more fit, it hit me like a ton of bricks one day: I have been golfing all over the Caribbean for over nine years and played these golf courses many, many times, but have never played like this before. On every course, I knew exactly where my ball would end up after my drives, but I suddenly started hitting the ball in places I have never been.

I had good club-head speed before. I was clocked at the Fujikura plant at 119 m.p.h. and carried an average distance of 292 yards. But after CrossFit, I started driving par fours anywhere from 320 to 340 yards. And it wasn't just the driver. All my irons were longer as well.

I had become way more efficient. I was clocked at 132 m.p.h. on max effort and averaged 127 m.p.h. Mind you, that's slow compared to long-drive champions but light years faster than the average pro's 112 m.p.h. and the amateur's 95 m.p.h.

I teach the golf swing on sea days and play golf with the guests from the ships in the ports. We use the V-1 video analysis software program, and this feedback, plus watching one of Coach Glassman's video lectures about better movements, has helped me figure out why I've gotten so much better.

The video showed me that my shoulders have gotten much wider and my swing has gotten a bit shorter. Coach's lecture put it all together for me: CrossFitting had made both my lower back and midline stability stronger, allowing my body to hold angles in the swing that it couldn't before.

I had been practicing clean and jerks. I worked my way up to Grace and completed it in just over 5:30. I was jazzed. I started at 65 pounds, went to 95, and worked my way up. I can finally do most WODs with the prescribed weight. I learned to recruit more muscle fibers from kettlebell experts Jeff Martone and Pavel Tsatsouline. I learned how to be tight. Doing swings, snatches, overhead squats, handstand push-ups, muscle-ups and everything in between made me more flexible and stronger.

All this affected the way I teach golf now, converting everything to a functional movement pattern. I don't know if anyone else teaches this way, but they should. My students sure seem happy. (For a free lesson on how I teach now, see the video links below.)

I'm pretty happy, too. Improving as a coach and as an athlete is a huge boost, no matter where and how you live. How long I can maintain this lifestyle, I don't know. But I do know that I love golf and I love CrossFit. And if I ever decide to return to terra firma for good, I know exactly what I want to be doing for a living.



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A Free Golf Lesson from the Cruisin' CrossFitter

Your body, with proper posture, is designed to move one way. Your wrist bones move optimally one way, your head moves one way, and your arms follow where the body goes.

The golf swing, you may be surprised to find, is a very functional movement. Like CrossFit, its movement is based on what the body is designed to do. And you can improve fast, whether you hit a little round ball or clean and jerk a heavy weight, as in the Tosh does Grace video. Tosh is great, but looking at the video you can see that he could have used his hips more, jumped more, and did it even faster, theoretically giving him more power, speed and intensity.

Golf's no different. You can't have high intensity without a certain amount of technique. Most people's technique is about 50 percent correct, so they can only apply so much force.

Example: If you deadlift a 45-pound bar and five-pound training plates, you can round your back and have the bar go out away from you, bend your arms a bit, stand up and not seriously mess yourself up. But if you try this with 135 to 200 pounds, you are seeing a chiropractor.

Same thing with golf. You can keep your left arm straight, your head still, and swing in a linear (correct) fashion, and you will be somewhat OK. But there won't be a snowball's chance in hell of you ever reaching 130 m.p.h. club-head speed. If you somehow did, you'd end up in the hospital.

The Lesson

OK, enough preliminaries. It's time for the fun stuff.

The hands cock up and down with a full range of motion. The angle is the same as they hang from the side and the speed at which you move the relaxed muscles and joints.

The arms hang from the side in an extended but not rigid position. You should have the same tension level as if they were hanging down from the sides of your body. They go where the body goes.

The head rotates with the spine, The eyes will track while the head moves with the spine.

The knees keep the same bend and flex throughout the swing. There are two ways you can mess this up:

- 1) The right leg straightens
- 2) The right hip gets higher than the left and the hip goes out.

The big picture: The golf swing is the body moving in a circle, with the hands controlling the club face and the swing arc. It's a single, circular line with no up and down in the swing. Check the video to see how it's done by the world's greatest CrossFitting cruise-ship golf pro.

Video Links

http://media.crossfit.com/cf-video/CrossFitJournal_RogerGolfSwingInstruct.mov

http://media.crossfit.com/cf-video/CrossFitJournal_RogerGolfSwingInstruct.wmv



Roger King has been a professional golfer since age 19 and has been teaching golf on cruise ships for the last nine years. He is an avid CrossFitter and will be going to a Level 1 Cert soon.