

THE CrossFit JOURNAL

September 2014

TITLE	AUTHOR(S)
Playing With Intervals	Martin
Desert Ninjas	Cooper
Fitness Through Sports?	Cooper
Make Your Own Luck	Achauer
Virtuosity: A Call for Submissions	Warkentin
Injury and Opportunity	Starr
Attention to Retention	Beers
The Optimal Shoulder	Long, Casto
CrossFit Kids Classics: Rock-Paper-Scissors Tag	Patenaude

THE CrossFit JOURNAL

Playing With Intervals

Mikki Lee Martin explains how CrossFit Kids has made interval training both fun and effective for young athletes.

By Mikki Lee Martin

September 2014



All: Danell Marks

As a kid, I spent every afternoon playing with intervals—10 minutes of freeze tag, 10 minutes climbing a tree, five minutes of cartwheels—then maybe a game of kickball.

The activities, and the versions of activities I dabbled with, were endless and always fun. My fun.

The sad reality is this type of physical fun rarely exists anymore for today's generation of kids. Games and playtime have become more formal—often mechanical.

I believe the organic, varied play I grew up with is necessary to ensure our children are consistently exposed to the different stimuli necessary for fundamental motor-skill development. CrossFit Kids has been working on this for a decade, and in February 2014 we were invited to Google headquarters in Mountain View, California, to give a presentation on interval training and how it can be beneficial to kids.

The roundtable was organized by the Aspen Institute's Project Play and chaired by Tom Farrey, author of "Game On: The All-American Race to Make Champions of Our Children."

Interval training involves repeated short or long bouts of higher-intensity work paired with periods of rest or lower-intensity work (3,5). Traditional interval training usually involves cardiorespiratory-endurance activities—such as running, biking or rowing—and is characterized by a work-to-rest ratio and a time frame of at least 20 minutes.

The health benefits of interval training include increased blood flow, increased stroke volume, increased oxygen intake, and more efficient calorie and fat burning, and it can help reduce risk factors of metabolic syndrome (1,4,5,9,10,11,12).

For CrossFit athletes, the "black box" is an important training idea. We push the margins of our experience and options beyond what is considered traditional. We continue to pursue stimuli—or inputs—that produce positive adaptations. Black-box programming is not necessarily concerned with why the input produced the output, only that the output was positive.

Interval training has proven to be a pretty good black-box input, and CrossFit Kids uses traditional and nontraditional



While traditional interval training deals with work and rest, a work-to-play ratio can be successful with kids.

forms of it. We do not follow a work-to-rest ratio at all times. We sometimes use a work-to-play ratio. Play may be restful at times, and not restful at others, such as when we chase balloons. And we do not always assume 20 minutes is best in terms of time domain.

General physical preparedness has been shown to be the best basis for the long-term development of an athlete and a prophylactic to injury (2,7,8). Considering this, we incorporate standard strength exercises, such as deadlifts, squats and presses, as well as gymnastics exercises, into our interval training.

The Tabata protocol is a mainstay, but we program many other types of intervals, as well. For example, we can plug a highly varied combination of exercises into the following protocol, in which the acronym "AMRAP" means "as many reps as possible":

3-minute AMRAP, rest 1 minute, 2-minute AMRAP, rest 1 minute, 1-minute AMRAP

**The key with kids is not
just to find out what is
developmentally appropriate
and physically best for them
but also to provide a template
for a lifelong love of fitness**

The key with kids is not just to find out what is developmentally appropriate and physically best for them but also to provide a template for a lifelong love of fitness. To engage and retain 95 percent of kids, fitness has to appeal to them. For younger kids, this means it simply has to be fun.

With this in mind, we began using the work-to-play interval while incorporating nontraditional movements in what we call the “earn it” format: Kids perform work to earn a given type of play.

For example: 1 minute of sprinting, 1 minute of burpees and 1 minute of box jumps earn 1 minute on a pogo stick. Repeat 3 times, and 9 minutes of work are completed, as well as 3 minutes of what kids perceive as pure play.

Another example: 3 minutes of work and 3 minutes of play, where we ask our athletes to perform a 1-to-8-lb.

dumbbell clean-press-lunge-lunge complex for 3 minutes. Alternating with this, we give them a bin full of sand or a clay product to play with for 3 minutes. We repeat this 3 times, resulting in 9 minutes of work and 9 minutes of play.

Alternatively, you can also couple something monostructural with an unstructured play activity.

For example: 3 minutes of burpee box jump overs and 3 minutes of playing with water balloons.

The variations of exercises are endless, and this variety is appealing to children not only emotionally and psychologically but also because it fits with how they learn in novel, complex settings that include repetition in a positive environment.

This broad variety of movement, both in type and scope, also provides opportunity for those kids marginalized by



When children link play and exercise, they often create their own workouts at home as part of a lifelong love of fitness.

sport. We have learned over the years that many children in our program create their own workouts at home. In this sense, these kids are reproducing the kind of interval play I engaged in as a child.



References

1. Babraj JA, Vollaard NBJ, Keast C, Guppy FM, Cottrell G, and Timmons JA. Extremely short duration high intensity interval training substantially improves insulin action in young healthy males. *BMC Endocrine Disorders* 9(3): 2009. Available at <http://www.biomedcentral.com/content/pdf/1472-6823-9-3.pdf>. Accessed May 30, 2014.
2. Balyi I, Way R, and Higgs C. *Long-Term Athlete Development*. Champaign, Ill.: Human Kinetics, 2013.
3. Billat LV. Interval training for performance: A scientific and empirical practice. Special recommendations for middle- and long-distance running. Part I: Aerobic interval training. *Sports Medicine* 31(1): 13-31, 2001.
4. Gibala MJ, Little JP, MacDonald MJ, and Hawley JA. Physiological adaptations to low-volume, high-intensity interval training in health and disease. *Journal of Physiology* 590(5): 1077-1084, March 2012.
5. Gibala MJ and McGee SL. Metabolic adaptations to short-term high-intensity interval training: A little pain for a lot of gain? *Exercise and Sport Sciences Reviews* 36(2): 58-63, April 2008.
6. Laursen PB and Jenkins DG. The scientific basis for high-intensity interval training. *Sports Medicine* 32(1): 53-73, 2002.
7. Lloyd RS and Oliver JL. The youth physical development model: A new approach to long-term athletic development. *Strength and Conditioning Journal* 34(3): 61-72, June 2012.
8. Myer GD and Faigenbaum AD. Exercise is sports medicine in youth: Integrative neuromuscular training to optimize motor development and reduce risk of sports related injury. *Kronos* X(1): 39-48, 2011.
9. Tjønnå AE, Lee SJ, Rognmo Ø, Stølen TO, Bye A, Haram PM, Loennechen JP, Al-Shaer QY, Skogvoll E, Slørdahl SA, Kemi OJ, Najjar SM, and Wisløff U. Aerobic interval training versus continuous moderate exercise as a treatment for the metabolic syndrome: A pilot study. *Circulation*: 2008. Available at <http://circ.ahajournals.org/content/118/4/346.full.pdf+html>. Accessed May 30, 2014.
10. Vogiatzis I, Nanas S, Roussos C. Interval training as an alternative modality to continuous exercise in patients with COPD. *European Respiratory Journal* 20: 12-19, 2002.
11. Warburton DER, McKenzie DC, Haykowsky MJ, Taylor A, Shoemaker P, Ignaszewski AP, and Chan SY. Effectiveness of high-intensity interval training for rehabilitation of patients with coronary artery disease. *American Journal of Cardiology* 95: 1080-1084, 2005.
12. Wisløff U, Støylen A, Loennechen JP, Bruvold M, Rognmo Ø, Haram PM, Tjønnå AE, Helgerud J, Slørdahl SA, Lee SJ, Videm V, Bye A, Smith GL, Najjar SM, Ellingsen Ø, and Skjærpe T. Superior cardiovascular effect of aerobic interval training versus moderate continuous training in heart failure patients: A randomized study. *Circulation*: 2007. Available at <http://circ.ahajournals.org/content/115/24/3086.full.pdf+html>. Accessed May 30, 2014.

About the Author

Mikki Lee Martin is the co-founder of CrossFit Kids with Jeff Martin. They two own and operate *CrossFit Brand X*, the fifth CrossFit affiliate.

THE CrossFit JOURNAL

Desert Ninjas

"American Ninja Warrior" qualifiers meet in Sin City to try and conquer Mt. Midoriyama for the first time.

By Chris Cooper

September 2014



All photos: Chris Cooper/CrossFit Journal

Joe "The Weatherman" Moravsky in front of the warped wall.

It's hard to catch your breath in Las Vegas, Nevada.

In a city renowned for its sights—but not its views—the American Ninja Warrior Final transformed a dusty parking lot in the desert into a glowing extension of the famed Las Vegas Strip.

Scattered across two acres were four stages; three were at eye level, and the last, Mt. Midoriyama, loomed over everything else. Floodlights from helicopters illuminated the peak as a few dozen spectators were packed into small bleachers.

Dust clouds rolled through in great gusts, and spectators begged eye drops from strangers. The heat dehydrated, the floodlights blinded, the stress caused cramps. But ninja-wannabes were still eager for their single chance at Mt. Midoriyama.

"If this were easy, it wouldn't be fun," said returning competitor Jamie Rahn.

Over several months, contestants moved through the stages of qualification to arrive at Mt. Midoriyama in Las Vegas. In the six seasons "American Ninja Warrior" has aired in the U.S., no athlete has finished the entire obstacle course.

Season's Beatings

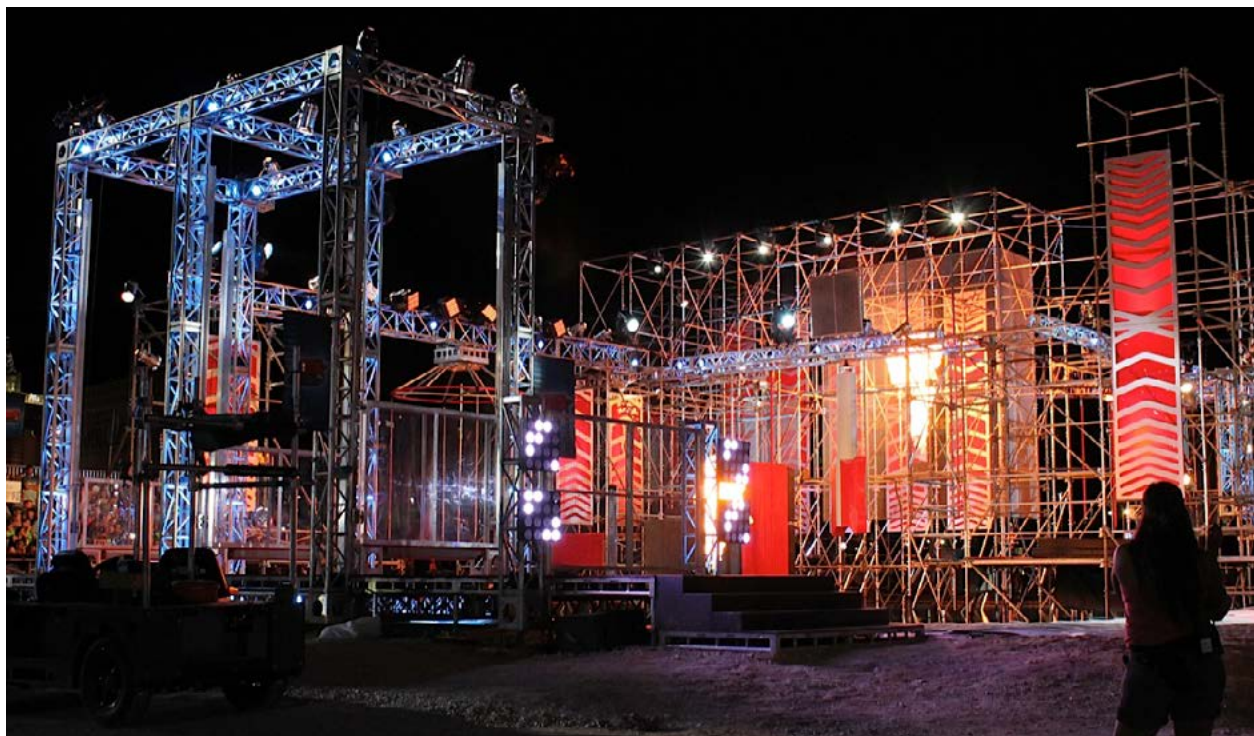
"American Ninja Warrior" is aired by NBC. Would-be contestants submitted their video applications in early spring; some were invited to a taping in one of five different locales. Some who weren't invited camped on the sidewalk for days in hopes of earning a walk-on spot. Most of those who started the qualifying course didn't make it through. This year, the roster of early exits included fan favorite Flip Rodriguez, whose baggy pants **dipped in the water** as he descended a cargo net. Brent Steffensen, who reached the

Vegas Final in two previous years, was also knocked out before reaching a regional qualifier.

Those who finished the qualifier course moved on to a regional event contested by more serious athletes. In this, the sixth season of "American Ninja Warrior," athletes who qualified for the regionals were mostly experienced gymnasts, parkour enthusiasts or "Ninja Warrior" specialists. The fastest to complete the regional course were invited to the Las Vegas final. In June 2014, 89 participants gathered in the desert.

Every obstacle in every stage is subject to change each year except Stage 4. Obstacles get tougher in each stage, but even the tilting table and curtain slider are mere foothills compared to Stage 4: a 78-foot rope climb with a 30-second time cap. The prize for completion is US\$500,000, but no American has even beaten Stage 3, though a handful of athletes reached that level last year. Joe Moravsky was one, and in 2014 "The Weatherman" changed his wedding date to be in Vegas for another attempt.

"My motivation is solely to beat the course," Moravsky said. "It's not, I just like doing it, so I'll keep doing it either way."



Shining in the desert like another casino, a host of obstacles stood between 89 contestants and \$500,000.



No American competitor has ever earned the right to attempt the 78-foot rope climb that is Stage 4's only test. Athletes who make it are given only 30 seconds for their ascent.

The trials are hard enough, and a made-for-television sport creates other challenges.

The Reality of Television

Most sporting events closely adhere to a schedule. Gameplay might be interrupted for the odd commercial break, but the nature of a live event determines the flow of the production. Not so with "American Ninja Warrior," whose participants were given a dusty tent in which to wait for hours before moving to a dustier spot offstage to wait again. Several times athletes jumped to the starting platform, greeted an applauding crowd and stood awkwardly for several minutes while cameramen fiddled with gear. Several commented, sotto voce, that they weren't nervous until they had to stand still for so long.

Eventually, after an unpredictable interval, a producer's assistant would emerge and begin a countdown with a changing cadence and without a visible clock. The loud beeps of the starting clock heard on television are dubbed in later. No contestant complained about the jagged pace of the starting order, but the effects of their fidgeting delays weren't lost on the crowd.

"That guy had to stand still for 15 minutes," one spectator said. "No wonder he went out on the second obstacle."

"Those guys must be so dry," said her husband. "We're all just eating dust out here, and they have nothing to drink while they wait."

Given a cap of 2:05 to complete Stage 1, most fell into the water waiting below before reaching the halfway point.

Between 10 p.m. and 3 a.m., ninjas rotated onto the starting block. Given a cap of 2:05 to complete Stage 1, most fell into the water waiting below before reaching the halfway point. Days of travel were washed away in less than a minute.

The first stage of the final featured familiar obstacles: the quintuple steps, swing circle, curtain slider, spider wall, half-pipe attack and warped wall. All were familiar to veterans, but several contestants still failed to clear the stage.

Rahn was one. Though the curtain slider posed no problem to "Captain NBC," Rahn was knocked out on the next obstacle, the spider wall: two vertical walls between which athletes wedge themselves, arms and legs outstretched, as they attempt to travel horizontally between the walls using friction. The athletes use a trampoline to launch themselves between the walls, adding more difficulty.

"The drop onto the little platform (on the curtain slider) was really freaking me out. I made it past but thought I wasted some time, so I didn't take a lot of time going into the trampoline before the spider. I flubbed the jump into the trampoline, had my chest down and tried to compensate with my feet up and just jammed in there and slipped out," he said.

Rahn failed on an obstacle he'd practiced many times before. This is common, according to Moravsky.

"Any potential slip-up of any sort can be potential failure, whether you're a veteran or rookie," he said. "You can't overlook any obstacle. I promise you, if you do, you are increasing your chances of falling by at least 50 percent."

Though 89 attempted Stage 1, only 19 cleared its obstacles. Attempts at the final three stages were planned for the second night of shooting. Moravsky, called The Weatherman because he's a meteorologist, was one of the few to qualify for Stage 2.

The First to Stage 4?

Stage 2 began with a Tarzan-like swing from rope to rope. Some ropes stretched, and some didn't. Next was a climb up a **salmon ladder**, including a transition across a gap to another climb. Then athletes dangled from suspended doors, shuffling their hands along the edges and jumping from one to the next. Several dropped when their forearms gave out, and those who continued faced a suspended rotating butterfly.

Athletes who were able to jump onto its wings and then to the safety of a high wall beyond were faced with four



Obstacles on "American Ninja Warrior" generally require impressive agility and gymnastics skills.

dangling chains suspended from a wheel. Ninjas had to run and jump, hit the chains high enough to make the wheel turn, and drop onto a platform. This test eliminated most of the best Ninjas, but Moravsky made it through to the three walls. He lifted each in turn and dove to hit the buzzer with under a second left.

"The first obstacle in Stage 2 was much more time-consuming, which made it more taxing on the upper body," Moravsky said. "That, coupled with the fact that Stage 2 is mostly upper body, made it much more difficult."

In Stage 3, Moravsky faced a familiar obstacle with a twist. Doorknobs were mounted to the side of a sheer wall, and he'd have to climb from one to the next while suspended 10 feet above water. He'd done it before, but this year the wall was slanted toward him rather than vertical, adding a new element to challenge his grip.

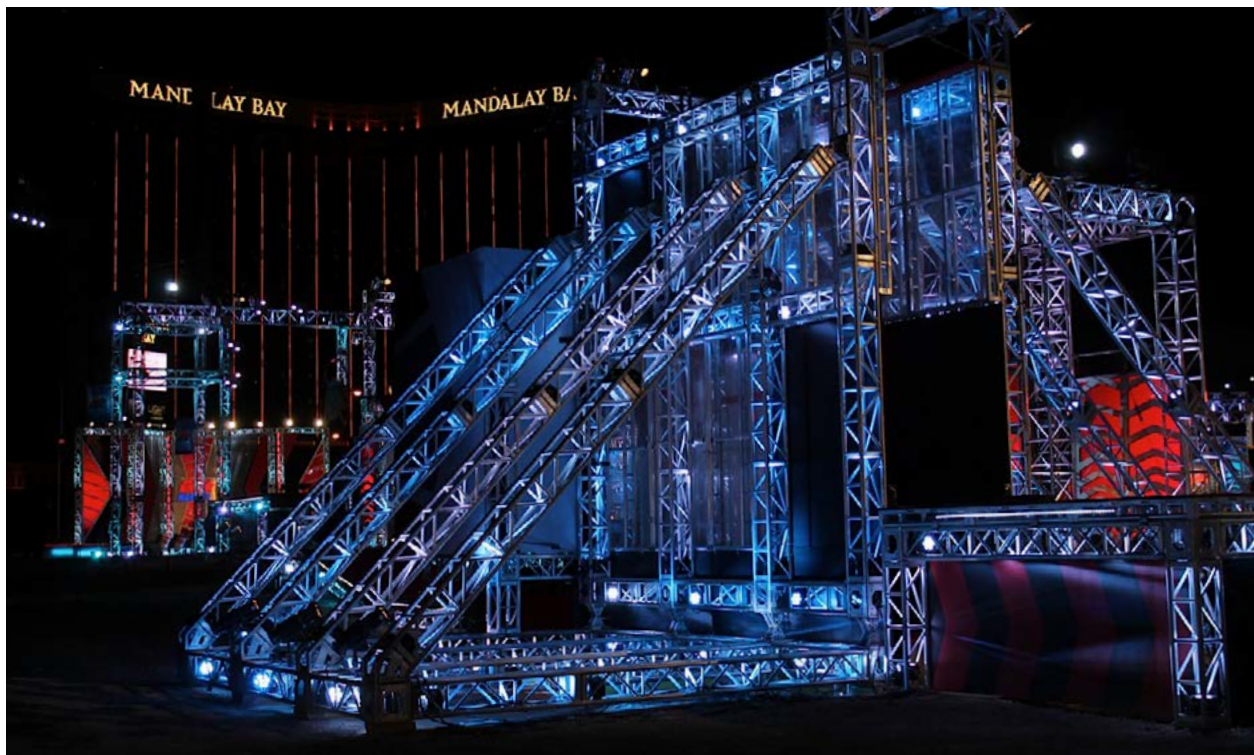
"Stage 3 was intense," he said. "The first obstacle was brand new, and only rock climbers are used to seeing the apparatus. The second obstacle—doorknobs—(was) difficult because of the incline, but overall not too bad."

Moravsky held on, suspending his 135-lb. frame by his fingertips. His forearms, already pumped from Stage 2 an hour before, were taxed but not beyond their limits.

He cleared the obstacle, shaking his hands like the rock climber he needed to be on the next obstacle.

The floating-boards obstacle—vertical two-by-sixes dangling from chains—required more skill than strength, and Moravsky had practiced heavily in the offseason. Likewise the cliffhanger, a series of ledges athletes have to navigate with their fingertips.

"If I hadn't trained it, it would have been very difficult," he said. "But I was prepared and demolished it. The next two



Sadly, the 2014 competitors didn't have any winnings to gamble away in Sin City. The \$500,00 prize is awarded only to the competitor who completes the entire course and achieves "total victory."

obstacles were tough. That jumping-propeller-blade thing to the upside-down rock wall—if I had the endurance, I would have beat it, but it looks like I need to condition even more than I thought.”

The propeller bars look like three ceiling fans with sticks instead of blades, and Moravsky was required to dangle from each while waiting for the next to turn his way. He cleared the obstacle, shaking his hands like the rock climber he needed to be on the next obstacle. The ascending climb looked like a rock wall that had fallen onto its face. Moravsky dangled high in the air from rock holds above his head before his finger strength failed and he plummeted into the water. The crowd, tired from a long night in the desert, let out a collective groan. The Weatherman was out without thunder.

No hopefuls qualified for Stage 4 in 2014.

The Quest Continues

The 78-foot rope sat untouched by competitors for yet another year, and no one won any money. Most went home only with sore forearms, wounded pride and a desire to compete again in 2015.

But what happens when Mt. Midoriyama is finally beaten?

“The main source of my motivation is to be the first. I think once that happens, you might see a decline of veterans coming back to the course. I don’t think money is the driving force; it’s to be the first. That’s what’s driving a lot of these people,” Moravsky said.

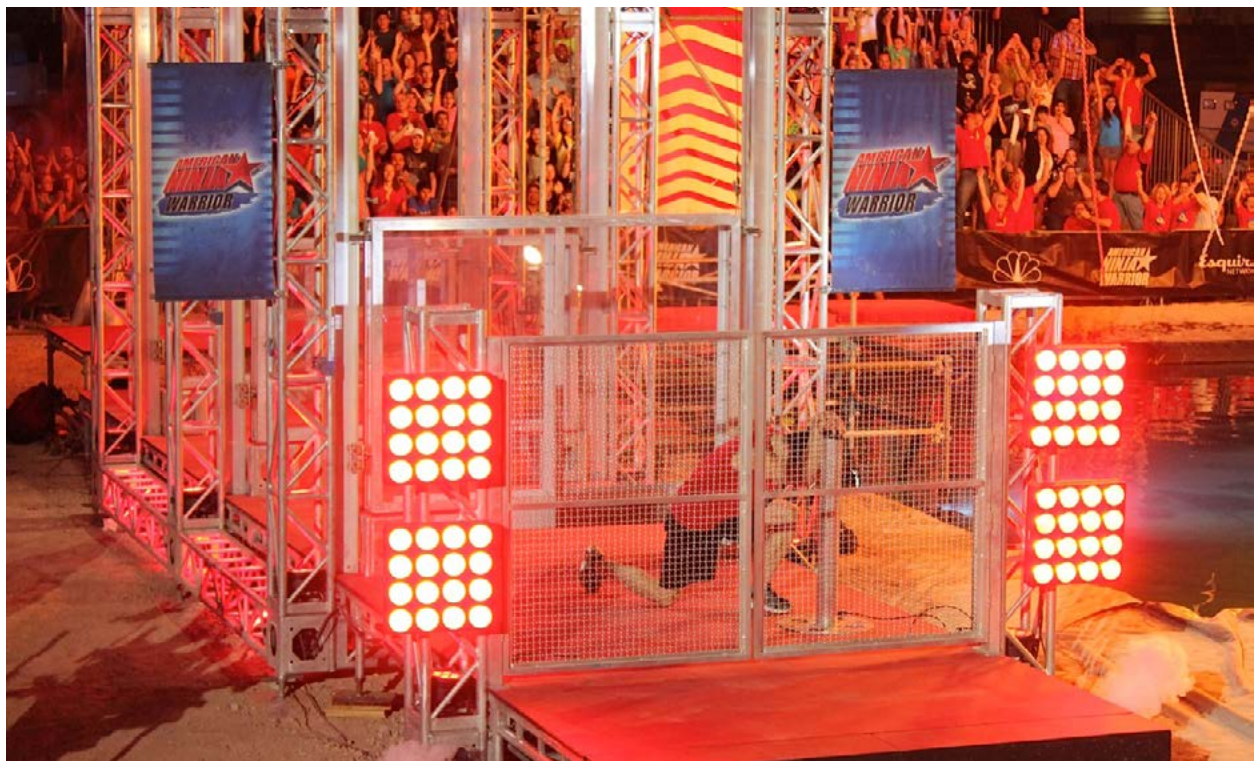
But in Japan, only three athletes have achieved “total victory” on the course in 30 seasons, with the last success coming in 2011. In 2014, two competitors made it to the rope climb, and neither could complete it.

In the United States, ninjas will stay driven for at least one more year—and perhaps many more.



About the Author

Chris Cooper is a CrossFit Journal contributor. He owns [CrossFit Catalyst](#) in Sault Ste. Marie, Ontario, Canada.



Moravsky completes Stage 2 with less than one second to spare.

THE CrossFit JOURNAL

Fitness Through Sports?

Parents who want their kids to be active sign them up for sports, but early specialization and pressure to perform often take young athletes out of the game for life.

By Chris Cooper

September 2014



Courtesy of Joseph Vigil

Are athletes made by playing or training?

At the 2014 NHL Scouting Combine, Sam Bennett couldn't do a pull-up. The 17-year-old faced criticism from various media outlets, but none were able to say why he should be able to do a pull-up. Without an objectively measurable scale of "fitness"—or even a definition—writers knew something was wrong with a potential No. 1 draft pick who couldn't do a single pull-up, but they couldn't say what, exactly.

1 of 5

"For every kid like this, there's a waiting line of kids who don't make it and still can't do a pull-up," said Jeff Martin, co-founder of CrossFit Kids. "If he dislocates his shoulders or gets injured, he'll have the money to get fixed. They won't."

Seventy percent of kids **drop out** of their primary sport before they're 13. Most of those say their sport should be more fun. Decades of research and practice paint a very clear picture: Early specialization in one sport is a bad idea.

So why are kids playing hockey in the summer instead of doing pull-ups?

The Next One, the Pull-Up and the Great One

No one would disagree with the idea that kids should play more. With adolescent obesity rates a constant topic in the media, it's conceivable the next generation's health crisis could cause a financial crisis. To help their kids get active, many parents turn to sport. Despite the cost, many parents hope a few hours of activity will encourage their kids to stay healthy. Some hope for leadership and teamwork opportunities for their kids; others are living their own athletic fantasies through their children. Whatever the reason, many kids now play "their" sport year round. As competition occurs

at a younger age, so do overuse injury and burnout, defeating the parents' original purpose.

Bennett's failed pull-up wasn't indicative of a failed athlete but rather a system built to produce a one-dimensional player. Bennett's comment to The Canadian Press—"But, I guess, ultimately games aren't won or lost if you can do a pull-up in the gym"—is both true and false. A pull-up isn't a sport-specific movement for hockey. On the other hand, a fitness program without equal parts pulling and pushing is imbalanced by definition.

"All of our ideas about sports are, 'Let's get them into the intensity part of the sport when they're 4 to 6 years old,'" Martin said. "We're doing it backward."

The Calgary Flames took Bennett fourth in the 2014 NHL Draft, and deservedly so. He's a good hockey player. But are sport-specific movements really best for developing long-term athleticism?

"For every (Bennett), there are thousands of kids who dedicate themselves to hockey who aren't physically literate," Martin continued. "When they can't play hockey, they have nothing."

Courtesy of Andréane Fraser



Courtesy of Andréane Fraser

In 1980, Wayne Gretzky—regarded by most as one of the best hockey players of all time and nicknamed “The Great One”—was offered a contract to play baseball for the Toronto Blue Jays. Though stories of young Gretzky’s passion for practice on the rink are ubiquitous, he played baseball and lacrosse all summer.

With artificial ice now widely available, many modern young hockey players attend hockey schools for weeks at a time in summer. Many attend dry-land training camps, where exercises selected to duplicate hockey movements are repeated. Instead of a broad-based approach in which every joint is exposed to equal movement in every plane, players sometimes create joint-dominance problems such as patellofemoral syndrome before they’re 13. This single-minded approach to sport as a child might create an imbalanced adult athlete.

“We’re starting to see these 25-year-old guys who played a sport in high school—they look OK but can’t squat without a chair,” Martin said. “They don’t have the kinesiologic awareness to do it. And they were *athletes*.”

Sport has a broad appeal to parents of young children: It’s fun—at least at first—and it’s undeniably better than sitting on a couch. But competition creates a funnel effect where the best keep playing only until they’re not good enough for the next level. When they’re “cut,” so is their pursuit of fitness.

The Long-Term Athletic Development Model

The [Canadian Sport for Life website](#) lists seven stages of Long-Term Athletic Development. These include five phases: Active Start, Learn to Train, Train to Train, Train to Compete and Train to Win. Although not every Canadian coach follows the plan, the model does encourage starting fitness with the end in mind.

Martin is aware of the LTAD model and said it’s a positive first step.

“At least (Canadians) have something,” he said. “We don’t.”

The LTAD model might not be perfect, said Martin, but at least it’s proactive. Many U.S. agencies are ineffective because they only give negative direction. Parents, bombarded with media messages of what not to do simply don’t know the downsides of competition at an early age. And coaches are judged only on their win-loss record, not their ability to deliver fun.

“There is no organization in the U.S. that looks at children and believes kids should move fast and with load before

they move well,” Martin said. “But that message doesn’t reach parents or coaches. So we just add more competition.”

He points to a [study](#) citing this statistic: Athletes who made it to the top tier of their sport, on average, chose to specialize in that sport two years *later* than those who didn’t quite make it. In other words, top athletes spent more time building a broad athletic base. This is counterintuitive to many parents, Martin said.

“You have a kid who is being trained in sport, and it ends up blunting their progress as an athlete,” he added.

“You look at the pyramid of genetic potential. What happens if you remove the nutrition part? The pyramid is much smaller. What happens if you remove general physical preparedness?” Martin asked.

“If you take those pieces out, the genetic potential of an athlete is muted,” he said.

A change in environment might help keep kids mentally fresh. In the 2008 study “Examining Adolescent Sport Dropout and Prolonged Engagement From a Developmental Perspective,” researchers discovered kids who quit swimming early had several things in common: early specialization, more dry-land training and less time off. Though their performance matched that of their peers, they no longer enjoyed participating. The majority listed “lack of interest” as their primary reason for quitting. They were bored.

Repetition, lack of time for outside interests and pressure to perform: It’s the perfect recipe for a disinterested kid. Success in competition means living with all three; success in fitness does not.

Starting From Play

The CrossFit Kids model of development begins with raising interest in movement. In other words, fun comes first.

“Take a preschool kid; they don’t understand mechanics yet,” Martin explained.

Their proprioceptive abilities haven’t been enhanced, and so CrossFit Kids focuses on vestibular exercise. Slowly, as the children become more aware of their physical positions in space, they move better.

“As they start to grow toward Kids class, they have mechanics, but they’re not consistent,” Martin continued. “This takes years. You don’t get mechanics and consistency (together) until you’re far into the Teen class.”

Courtesy of Andréane Fraser



Courtesy of Andréane Fraser



The CrossFit Level 1 Seminar reinforces the concept of mechanics, then consistency and then intensity. Martin said this process is the same in children, but the timeline is stretched out.

"We talk about adults understanding mechanics in two to three weeks and being consistent in three to four months," he said. "You can introduce intensity fairly quickly, like two to four weeks."

He continued: "You don't introduce kids to intensity until they're 10 or 11."

In other words, until they've been moving consistently for a long time.

The question not answered by the LTAD model: How do you engage a kid—and his parents—long enough to move him through the stages? The answer is twofold, and CrossFit coaches already know the first part: It has to be fun.

The second part is more complicated.

Goal-Directed Behavior

"I'll give you a dollar for every goal you score."

"If we win tonight, we're all going for pizza after the game."

This focus on outcome—points scored, games won—can be detrimental in the long term. Parents who push their kids to excel on the field usually want their kids to learn "what it takes to win." That's admirable but is probably having the opposite effect: A national [survey](#) of 5,275 high-school athletes revealed teens would rather play in a game for a losing team than sit on the bench for a winning team. According to [other studies](#) of youth athletes who quit before age 14, most listed "too much pressure to perform/win" as one of their main reasons for quitting.

"Most former athletes will tell you that what they miss most in retirement is competing in sports, not just the winning of games," wrote Chuck Wilson, one of the original hosts of ESPN Radio and founder of [EvenField.org](#).

Wilson said he believes the pep talk before the game should focus on values instead of tactics. Echoing Martin's views on consistency before intensity, Wilson advocates building athletes before building specialists.

"When kids are having fun, seeing themselves improve, and playing their sport with integrity, they are more likely to stay involved," he wrote on Evenfield.org's blog. "They play with effort, enthusiasm and confidence. This helps develop a desire to compete and excel."

And there's another critical time to emphasize play over victory: the car ride home. In "[The Real Reason Why Our Kids Quit Sport](#)," Australian news reporter Kathleen Noonan emphasized the "teaching moment" intrinsic in the journey home.

Quoting Peter Gahan, head of player and coach development at Australia Baseball, Noonan advised parents to say something like, "Geez, I love watching you play out there" instead of pointing out missed opportunities.

Beyond the Scoreboard

Eventually, every athlete will retire from his or her sport—usually before age 30. What happens next? Some, like professional-hockey-player-turned-gym-owner Scott Thornton, will broaden their fitness horizons.

Thornton, who was voted "Fittest Player in the NHL" several times during his 18-year career, regularly pursued triathlons and marathons during the offseason. He had an easy segue into CrossFit after he retired, but others don't have the same transition.

"I think playing multiple sports as a kid makes you a better athlete to begin with," said Thornton, who owns CrossFit Indestri in Ontario, Canada. "Nothing gets stale. In retirement, getting back to other sports that you love keeps you healthy and active."

While Bennett couldn't do a single pull-up as a 17-year-old hockey player, Brandon Wheat Kings center Jayce Hawryluk and Czech winger David Pastrnak each completed 12 to [set the best marks in the combine test](#). Time will tell who plays the best hockey and who continues to pursue fitness when their ice time is over. But parents of kids who aren't top draft picks—and even those who are—should consider building an athlete first, then possibly specializing later.

Narrowing the focus to competition for its own sake—creating "Little League parents" in the process—is antithetical to Martin and CrossFit Kids. While competition is part of the pursuit of fitness, it is not the ultimate end at a young age.

Pursue fitness, then sport, rather than fitness through sport.



About the Author

Chris Cooper is a CrossFit Journal contributor. He owns [CrossFit Catalyst](#) in Sault Ste. Marie, Ontario, Canada.

Courtesy of Andriane Fraser



If athletes are pigeonholed at a young age, what will that do to their athletic development?

Make Your Own Luck

By Hilary Achauer

Three cups of coffee, six hours of coaching, four hours on the computer and one life-changing encounter: a day in the life of affiliate owner Mark Lin.

Mark Lin was not happy to be in AutoZone.

“After the DMV and a country-music concert, AutoZone is my least-favorite place,” Lin said. He just wanted to get into the parts store, buy the battery for his mini motorcycle—which he uses to chase the members of his gym when he suspects they are sandbagging the 400-m run—and get out.

Lin’s days are long. The owner of CrossFit 858 in San Diego, California, Lin has been running his affiliate since 2011, and although he employs five other coaches, he’s in charge of the gym’s programming, accounting, marketing, social media, legal issues, vendor management and membership. He also coaches two or three classes and acts as assistant coach for a few more throughout the day.

On that day in May, a trip to AutoZone was one of the things on Lin’s massive to-do list. What Lin didn’t know was that the irritating errand would lead to a chance encounter with one of the AutoZone employees—and the interaction would change both lives.

A close look at a day in the life of an affiliate owner is a window into the appeal—and the challenge—of the job. Like most business owners, Lin works long hours and wears many hats.

Unlike many business owners, Lin is witness to life-changing moments, to people discovering a strength they never knew they had, to a community coming together in service.

For Lin, it all starts at 5 a.m.

// Not a Morning Person //

Lin doesn’t use an alarm clock to wake up. Instead, he uses two iPhones and an iPad, all set to different times.

“It’s a confusion tactic,” he said of the multiple alarms. “I have to shock and awe myself awake.”

After waking up, Lin puts on whatever clothes he can find and drinks two cups of coffee with almond milk. At the same time, he checks email, answering questions from members and handling any membership issues. Then he takes a tour of social media, going through his Facebook and Instagram feed to see if anyone has posted on the gym page, and he posts something of his own if he’s inspired.

Around 5:45, Lin leaves for the gym. If he’s running on schedule, he takes his truck.

“In the truck, the drive takes 15 to 17 minutes,” he said. “If I’m running late, I take my black Lexus IS from my old life (as a pharmaceutical sales rep), and I can make it in 10 minutes,” he said.

Before opening a gym, Lin spent 11 years in sales and marketing in the pharmaceutical, biotech and medical-device industry. It’s easy to see why he was good at sales. He’s outgoing, easy to talk to and always ready with an amusing analogy or anecdote. However, he’s not a glad-hander—even when Lin makes a joke, he’s speaks carefully, choosing his words deliberately.

Lin arrives at CrossFit 858 just in time to coach the 6-a.m. class, which he does three times a week.

“When I open the gym, I always think about something Greg Glassman said. I don’t remember the exact quote, but it was something like, ‘When you roll open the garage doors, remember you have the best fucking job in the world,’” Lin said.

Lin is not a morning person, and it’s a struggle for him to make those early classes. Lin could ask one of his five coaches teach the 6-a.m. slot every day, but he doesn’t.



Like many affiliate owners, Mark Lin divides his time between managing the business, coaching athletes and caring for his family.

“When I open the gym, I always think about something Greg Glassman said. . . . It was something like, ‘When you roll open the garage doors, remember you have the best fucking job in the world.’” —Mark Lin

“I realize sometimes people come in for different reasons, but one of the reasons could be the coach or the owner,” he said. “People have preferences on coaches. Some people like me, some people like other coaches. I try to be physically present if I’m not coaching.”

After he’s done teaching the 6-a.m. class, which Lin calls “the 6-a.m. cult,” he teaches the class at 7.

“I’m usually at the gym until about 8:30 a.m., doing admin stuff for those two classes, logging in sales, putting up an Instagram video or picture if (a member) hit a PR or I took a funny photo,” he said.

Then Lin locks up the gym and goes back home. He and his fiancée, Kelsey, have three dogs: two chihuahuas and a mutt. Lin walks the dogs and then makes his breakfast, usually two scrambled eggs, bacon, mushrooms and another cup of coffee.

If he has errands to do, Lin tries to fit those in after breakfast before heading back to the gym. It was in one of these small pockets of down time that Lin went to the AutoZone and met Gerardo “Jerry” Sandoval.

// A Chance Encounter //

For most of Sandoval’s life, his biggest health challenge was his weight. In 2011 he was 31 years old and weighed 400 lb. at 5 foot 9. He knew something had to change, so he went on a liquid diet, losing about 100 lb. in eight months.

Instead of feeling better, the weight loss made Sandoval feel worse. He was fatigued and weak, but the doctors couldn’t find anything wrong with him.

Everyone blamed his poor health on his weight. One day, Sandoval felt so bad he went to the hospital. A blood test revealed an astronomically high white-blood-cell count and a dangerously low count for red blood cells.

“How are you still standing?” a nurse asked Sandoval after she saw the results.

“I’m Mexican. That’s how we do it,” Sandoval remembers saying.

He immediately got a blood transfusion, but even after Sandoval stayed in the hospital for a month, the doctors couldn’t determine the cause of his sickness. Eventually, they sent him home and told him they’d call him when they had news. A week later, Sandoval got the call. He had Stage 4 lymphoma with 50-50 chances of living. Out went the diet plans. The new goal was survival.

Sandoval started his year-long chemotherapy treatment right away, during which time his doctors told him he shouldn’t lose weight.

“Ice cream helped a lot,” Sandoval said of the pain, fatigue and nausea of chemo. He gained back the weight he had lost, and then some.

Since 2011, Sandoval has had 10 rounds of radiation in addition to the chemotherapy. Once he finished treatment he weighed 412 lb., and his doctors told him it was time to lose the weight. In fact, they said he had to lose weight before continuing with his cancer treatment.

Sandoval said he wanted to try losing weight on his own, and the doctors gave him six months. Without support or a plan, nothing happened. It was time for the next step: gastric bypass surgery. The surgery was deemed medically necessary, so doctors put Sandoval on the fast track.

When Lin entered AutoZone, Sandoval was almost finished with the classes and counseling required before the surgery. It was time to schedule a date.

Sandoval works in the wholesale department of AutoZone and doesn’t usually enter the retail side. That day, he needed something from the store. Like Lin, Sandoval wanted to get in and out as quickly as possible.

“I didn’t want to deal with customers,” Sandoval said, “but then (Lin) walked in, all smiles. I asked him, ‘How can I help you?’”

As Sandoval rung up Lin’s purchase, the two started talking. Lin noticed the Livestrong tattoo on Sandoval’s forearm and asked what it meant.

Sandoval told Lin his story.

“He told me the doctor wanted him to lose weight before proceeding with more treatments,” Lin said. Sandoval told Lin he was about to have gastric bypass surgery.

Lin knew there was another way.

“I let Jerry know I owned a gym and did CrossFit. He had no idea what CrossFit was. I also told him about a member, Bernard Llave, who survived leukemia,” Lin said.

Lin gave Sandoval the name of an affiliate close to him and left the store. As Lin drove home, he kept thinking about Sandoval’s story. He thought about the cost of joining a CrossFit gym, how unlikely it was that Sandoval would actually show up and how dire his health was. Lin decided this wasn’t something he could pass along.

“I called Jerry back at the store and told him to disregard the referral. I told him that I would offer him a free membership to train at CrossFit 858, and that I opened the box to help people like him,” Lin said.

That night, Sandoval went home and Googled “CrossFit.” What he found on YouTube terrified him.

“There’s no way this fluffy human can do that,” Sandoval said.

“I told him that I would offer him a free membership to train at CrossFit 858, and that I opened the box to help people like him.” —Mark Lin

At Lin’s urging, Llave—the leukemia survivor who is a member at CrossFit 858—contacted Sandoval through Facebook. Then, about a week later, Sandoval met Llave at the Team in Training Inspiration Dinner before the Rock ‘n’ Roll Marathon in San Diego. Llave told Sandoval he should try CrossFit. Lin kept calling Sandoval, urging him to come.

Lin knew the CrossFit community would pull together and change Sandoval’s life.

“I’ve seen what it could do,” Lin said. “I know you can’t have enough help, and so I was persistent.”

Finally, Sandoval decided to trust the stranger who was offering him a free membership.

“If he’s reaching out, I thought I should try it,” Sandoval said. He showed up two weeks later.

The first day was the hardest. Sandoval said he almost turned around and went home when he arrived and saw people sweating, lifting barbells overhead and swinging on the pull-up bar. Then Lin saw Sandoval and called him over.



Through a chance encounter at AutoZone, Lin helped Jerry Sandoval get on the path to health.



After a reluctant start, Sandoval has become a fixture in the 6-p.m. class at CrossFit 858.

There was no going back.

“I think I did air squats the first day,” Sandoval said. “I couldn’t move for three days.”

But he kept coming. Partly because Lin was so persistent and partly because of the attitude of the other members.

“I didn’t feel judged by all these fit humans,” Sandoval said. “Everybody was really supportive without knowing me.”

// Beat the Owner //

On the days he doesn’t have errands or meetings, Lin tries to make it back to the gym for the 11-a.m. class for his own workout.

“I’m usually awake enough by then (to work out),” Lin said. He thinks it’s important to mix it up with the members at least once a day.

“When you are a coach or you own a place and you don’t work out with the people, you create a sense of elitism. And I am not an elite athlete,” Lin said with a smile.

Lin said he remembers reading about retired Gen. Tommy Franks of the U.S. Army, who would lead thousands of troops during the day and be the first one to get up and sing karaoke out of tune at night.

“You need to have that balance and sweat next to the people you’re leading,” Lin said. The only problem, he said, is that the members always trying to beat him.

“I’m like, c’mon! I’m almost 36!”

After he watches the noon class, Lin goes home again for lunch, which is usually ground turkey with peppers.

“I’ve been weighing my food. I count my macros. I’ll weigh it out, will know how many grams of protein, fat and carbs I’m eating,” he said.

Lin is done with lunch by about 2:30 p.m. He walks the dogs again and then spends more time on the computer handling administrative tasks, answering phone calls and returning email.

“I’m back to the gym by 3 p.m. if I’m doing a second workout,” he said. Lin doesn’t always do two workouts in a day—much of the time he’s a one-and-done kind of guy.

“I’ll usually coach from 4 to 6 p.m., and some days I’ll take the 6-p.m. class or stay and assist.”

Lately, Lin has been making sure he’s around for the 6-p.m. class. That’s when Sandoval shows up.

“With Jerry, I’ll try to be there to coach him, or I will adjust it so my workout will coincide with his,” Lin said.



Sandoval is down 20 lb. after a month of CrossFit. Next up: work on his diet.

After Sandoval came to CrossFit 858 that first time and Lin saw what his capabilities were, he sent an email to all the coaches, letting them know what movements Sandoval could do and giving them scaling ideas. The priority, as always, was safety. But Lin wanted Sandoval to participate as much as he could.

“Some of it was trial and error,” Lin said. “We found out with his body weight, jumping is not good for his joints, so instead of burpees we figured out high knees. Push-ups we modified to the wall.”

Lin also realized he needed to handle the warm-up differently for Sandoval.

“Normally we’d do a 400-m run and then something like 3 rounds of jumping jacks and this or that,” Lin said.

“Well, if we do that, he’s going to take the whole class. So what we’ll do, if he’s there, we send everyone out for a 400, and I’ll kind of point at him and he’ll know that means do a 200.”

Lin doesn’t want Sandoval to feel singled out in any way, so he’s had the coaches adjust the rest of the warm-up. Instead of doing 3 rounds of a warm-up, the coaches have the class do a set of movements for five minutes.

“(The other members) love him,” Lin said. “We’ve never flat-out said what his story was, in terms of ‘he’s got cancer,’ but we’ve hinted at it through social media,” he said. “I think any time we’ve put up pictures or videos of someone of his size trying, you automatically have that feeling: You want

“I think any time we’ve put up pictures or videos of someone of his size trying, you automatically have that feeling: You want to root this guy on.” —Mark Lin

to root this guy on, but when you find out his story, you want to root them on even more.”

After a month of doing CrossFit three times a week, Sandoval has lost about 20 lb. without addressing his diet. That’s next on Lin’s agenda. Meanwhile, the doctor keeps calling Sandoval about the gastric bypass surgery. Sandoval hasn’t returned his calls.

// Heading Home //

Finally, it’s 7 p.m. On a typical day, Lin spends about six hours coaching, assisting or observing classes and many more handling the administrative side of the business. He’s usually home by 7:30 p.m., hopefully in time to eat dinner with Kelsey.

“After dinner, I catch up with my fiancéé and watch TV.” His favorite shows are “The Walking Dead” and “Sons of Anarchy.”

“I try not to open up my computer,” Lin said. At Kelsey’s request he’s been working on not checking his email and phone at night.

Kelsey goes to bed at 9:30, and Lin tries to do the same, but often his mind is still spinning with things he needs to do.

“Usually what happens is I tuck her in and I get back on the computer, do more admin stuff.”

Lin shuts off his computer around 11 p.m. His day is done.

// Putting in the Work //

Lin said he feels lucky to live the life he does. The truth is luck had very little to do with Lin’s current situation.

When Lin decided he wanted to leave corporate life and open a gym, he didn’t immediately quit his job. First, he put in some time as a coach at nearby CrossFit Mission Gorge.

Then he started a free bootcamp class near his house on Tuesday, Friday and Sunday mornings at 6 a.m. After the class finished, Lin got in his car for a 32-mile commute to a job he hated.

Lin didn’t charge for his bootcamp but asked two things of the participants.

“All I wanted from anybody who attended was 100 percent effort so they could get results, and if they liked what they saw, keep coming. If they felt the need to give anything, I asked them to buy a kettlebell, buy a medicine ball, bring it to the class, and it became part of the class,” he said.

In that way, Lin started to gather equipment for his affiliate.

Lin’s first bootcamp had three people. Using Facebook and word of mouth, his biggest class attracted 45 people within four months.

“At that point, people were losing 20 or 30 lb. just from doing (the bootcamp).

They were my billboards, they were my advertising. I asked them to bring a friend or two each time, but I didn’t charge anyone.”

He opened CrossFit 858 in July 2011, and about 80 percent of his bootcamp participants became members. Lin was cash-flow positive within 10 days.

I met with Lin a few times for this story. After we spent over an hour in a coffee shop one morning, Lin sent me an email at night.

“One of the things I bitched about more than anything in my corporate career is the lack of respect of work/life balance. But as I sit here typing to you at 10:15 p.m., 13 hours after we met and seven hours away from my wake-up alarm, and with my (fiancée) asleep alone in bed, I realize the irony of the situation,” he wrote.

It wasn’t the long hours of the corporate world that bothered Lin; it was that he was spending all that time on something that meant nothing to him.

The days are long, but for Lin the hours add up to something. Instead of meeting someone like Sandoval and feeling helpless, Lin can reach out and offer him hope, community and a chance at better health.

“I feel the strength in my body,” Sandoval said after a month of doing CrossFit three times a week.

And more than that, he feels strength from those around him.

For Lin, it’s all in a day’s work. //

About the Author

Hilary Achauer is an award-winning freelance writer and editor specializing in health and wellness content. In addition to writing articles, online content, blogs and newsletters, Hilary contributes to the CrossFit Journal and the CrossFit Games site. An amateur-boxer-turned-CrossFit-athlete, Hilary lives in San Diego with her husband and two small children and trains at CrossFit Pacific Beach. To contact her, visit hilaryachauer.com



"The days are long, but for Lin the hours add up to something. Instead of meeting someone like Sandoval and feeling helpless, Lin can reach out and offer him hope, community and a chance at better health." —Hilary Achauer

THE

Virtuosity: A Call for Submissions

We want to know why you love your CrossFit coach, affiliate or garage gym.

By Mike Warkentin

September 2014



The desire to improve and seek perfection drives CrossFit.

Virtuosity is the soul of the program, and it's pursued every day by trainers and athletes who work together to create health and performance—true fitness.

The relationships between coaches and athletes and within communities are magical. That magic can be seen when a coach watches an athlete perform her first muscle-up, just as it can be seen when a gym member proudly wears

his affiliate's T-shirt or a garage athlete slaps sweaty hands with a buddy after Fran. It's the same magic that exists wherever members of a strong community support each other as they strive to become fitter.

In celebration of these relationships, we want to hear why you love your CrossFit coach, your affiliate or your garage crew. Tell us your story, and we'll select one per month for publication in the CrossFit Journal. In thanks, we'll pay the author US\$500 and send his or her affiliate or garage gym a \$500 gift card from Rogue Fitness.

We expect a large volume of submissions, so make yours stand out by pursuing virtuosity in writing and photography. When he wrote the first issues of the CrossFit Journal, CrossFit Founder and CEO Greg Glassman strained over every line, which is why his articles stand up 12 years later and define the methodology. That's the approach needed to get your words into the publication Glassman started in 2002, when he published "Foundations." Strive for excellence—which is a nice way of saying a great story can be ruined by a careless pen.

Please review the "range-of-motion standards" below, then send your submissions to virtuosity@crossfit.com. Due to the large volume of submissions, we cannot respond to each email or requests for feedback. Only authors selected for publication will be contacted.

To be considered for publication, authors must satisfy the following:

1. Articles must be original, unpublished works. Authors of selected submissions will be supplied with legal documents to be filled out prior to publication.
2. Articles must be submitted in Word documents attached to an email. Documents should not contain bolding, italics or other formatting. Please submit in Arial font.
3. Articles can be 500 words maximum.
4. Each article must be accompanied by at least one high-resolution photograph to illustrate the story. The photo can feature the coach, the affiliate, the community—anything that illustrates the article. Photo guidelines are as follows:
 - A. Photos must be original and owned by the person submitting. Photos taken by others may be submitted provided the owner has given permission.
 - B. Photos must be in focus, well lit and free of watermarks. Minimum file size is 1 MB. Please review your camera's settings to ensure you are shooting

high-resolution images. Cell-phone photos and thumbnails are not accepted.

C. Photos must be attached to the email as JPEG files. Do not embed files in Word documents. Photo file names should list both the name of the subject and the name of the photographer in this format: SubjectName-PhotographerName.jpg. Examples: JohnSmith-JaneDoe.jpg or CrossFitAnyTown-JimJohnson.jpg.

Virtuosity@crossfit.com is now open for submissions. Tell us why you train where you train, and do it uncommonly well.



About the Author

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

THE CrossFit JOURNAL

Injury and Opportunity

Smart athletes look at injuries as a chance to put in some extra work on the healthy parts of the body.

By Bill Starr

September 2014



Dave Re/CrossFit Journal

Anyone who trains seriously for any length of time is going to sustain an injury. This is simply a law of nature, and no one, as of yet, has found a way to avoid it.

Even those who do fitness routines and use light weight for higher reps still get dings somewhere along the way. Then there are those injuries that occur outside the weight room: hurting a shoulder when chopping down a tree that had fallen across a driveway, tweaking something while helping a friend move some extremely heavy furniture up three flights of twisting stairs, falling from a ladder while cleaning out the gutters. Injuries are a part of life.

1 of 7

Lao Tzu, author of "Tao Te Ching," summed the matter up rather profoundly. An older contemporary of Confucius, he wrote the following in the sixth century B.C.: "Accept misfortune as the human condition. Misfortune comes from having a body."

Eternal truth, and what really amazes me is that more people don't get hurt while lifting weights. They don't bother to warm up at all before doing their workouts, overtrain their upper bodies to the extreme, never bother stretching after a session, and do many exercises using very sloppy form. But sooner or later, this neglect of the more important aspects of strength training and bodybuilding catches up with them and they have to deal with an injury.

At the same time, I am well aware that even when an athlete does everything right in terms of preparation and using proper technique, he can still get injured. That's because there are so many variables to deal with when an athlete is striving to improve the top-end numbers on several exercises and also pushing the workload higher and higher. The major variables are rest, nutrition, biorhythms and, perhaps most important of all, mental stress.

The weather also takes its toll. Many athletes get injured when cold weather rolls in and they don't take the time

to thoroughly warm up before training. Extremely hot weather can take its toll, as well. If water-soluble vitamins and minerals, along with plenty of fluid, aren't provided, muscles and attachments can be dinged.

Then there are the old injuries to contend with. Any joint or area of the body that has been hurt previously is more prone to being hurt again later in life. That pulled hamstring you got while playing football in high school is more likely to be hurt again than the one that was not dinged. When I first started adding long runs to my fitness routine, I turned my left ankle at least once a month. It's still my weaker ankle, and if I overwork my ankles doing lunges or squats, that's the ankle that gives way first. Over the many years that I have been weight training, participating in a wide variety of sports, and been through minor and serious accidents of one kind or another, I have probably injured every body part in some manner, which means I have to pay attention and make sure I warm up properly before putting my body under stress, both in and out of the weight room.

Finally, some dings develop over a long period of time and can't be traced to any singular event. Rotator-cuff injuries are often like that, as are problems in the back and hips. These dings don't necessarily mean the athlete used faulty form on the exercises in his routine. It's simply a matter of accumulated workload over the years finally taking its toll. Constant heavy training is not conducive to long-term health. But many strength athletes cannot switch from lifting heavy to a more sensible regimen of higher reps and lower poundage. This is especially true for those who keep pounding away on their upper bodies. That's why the two most abused parts of the body are the elbows and shoulders.

If this sounds as if I'm a doomsayer, I'm not. I'm an advocate of training throughout a lifetime. I'm simply stating a hard and fast truism. Train diligently and you're going to get hurt. The key to being able to continue to train is the ability to deal with any injuries that occur along the way. And unless the injury is a serious one that requires the attention of a medical specialist, I believe the burden of healing that injury falls on the individual himself.

Working Around Injuries

Perhaps my view of managing injuries is a result of my history. I began lifting weights in the mid-'50s, when everyone who wanted to get stronger devised his own routine, and when he got hurt, he also figured out how to deal with the problem.



Dave Re/CrossFit Journal

Athletes can still train while injured, but they need to be smart.

Back then there were very few doctors who knew anything about rehabilitating injured athletes—even on the professional level. Mickey Mantle was a perfect example. Over and over he hurt his knees. The doctors would stabilize a knee, have him rest and give him pain pills, and after a period of time, they would send him back to the lineup. It's not that the owners or the team doctor didn't care, because they most certainly did. They simply did not know how to get those knees strong enough to withstand further stress. With proper treatment, such as that available today, Mantle might have played another 10 years, and it boggles the mind what he could have accomplished.

In the mid-'60s, when I moved to York and became a member of the York Barbell Club lifting team, I met perhaps the two most knowledgeable men in the entire country on the subject of rehabilitating injured athletes. Dr. Russell Wright was the team physician for all three major sports teams in Detroit, Michigan: the Red Wings, Tigers and Lions. Dr. John Ziegler of Olney, Maryland, was the person who formulated Dianabol, the first anabolic steroid that athletes used to enhance strength. He also invented the Isotron, a machine that could contract the

muscles of bedridden patients. Both physicians specialized in rehabilitation, and both did remarkable things.

When Bob Bednarski dislocated his elbow at the Pan-American Games in Winnipeg, Canada, in '67, he was immediately sent to Detroit to be treated by Wright. Ziegler was the team physician for the U.S. Olympic and World Championship team and treated the York lifters, as well, but at the time he was in disfavor with York owner Bob Hoffman. Bednarski was in good hands. Exactly 100 days after he had blown out his elbow, he set an American record in the clean and jerk with 450 lb. at the Kutzer's Invitation meet in New York.

It was from these two competent men that I developed my philosophy of treating injuries. Instead of backing off and allowing nature to heal the damaged area over an extended period of time, I use the methods Wright and Ziegler recommended: immediately do something to feed blood and nutrients to the injured body part.

The main thing I stress to all of my athletes when they get hurt is to keep training. As could be expected, this goes against the grain of most trainers and team physicians.



Mike Markentin/CrossFit Journal

In consultation with care providers, injured athletes can often find ways to modify movements so they're able to keep moving.

They avoid this proactive approach for good reason. Should an athlete further damage his injury by training, they could be held responsible.

The main thing I stress to all of my athletes when they get hurt is to keep training.

I'm not worried about this happening because I know it won't if the athlete does what I tell him. In addition, I always insist that the athlete has the final word in any form of rehabbing. He knows his body much better than anyone else. So while sports-medicine specialists list "rest" as a favorite word, "stay active" are my favorites.

Training while injured is beneficial in several ways. It gives the athlete the opportunity to focus on other body parts that are lagging behind. When an athlete exercises, even without resistance, he is flushing blood and healing nutrients throughout his body, and that includes the dinged area. Whenever an athlete stops training completely when he's hurt, he typically also stops paying attention to his diet and taking nutritional supplements. And because he isn't exercising as he did previously, he doesn't bother with getting any extra rest.

But if he continues to train, he also continues the disciplines that greatly aid the healing process. But perhaps the most important reason for an athlete to keep training when he's hurt is that it allows him to be in control of his destiny and not completely dependent on someone else to make him 100 percent again. I really believe this active-involvement approach creates a much more positive attitude on the part of the athlete, which in turn results in a faster recovery.

Shifting Your Focus

Whenever athletes were injured at the University of Hawaii and Johns Hopkins, they were treated by the team trainer or team physician. Then they came to me and asked my opinion. In every case they had been told to rest. No exercising at all. I suggested just the opposite, even for those who would need surgery. The more fit an individual is when he has to have a surgical procedure, the faster he will recover. And there are plenty of exercises anyone can do that don't involve the injured joint, muscle, tendon or ligament.

For example, I advise anyone who is about to have knee surgery, hip replacements or back surgery to work their upper bodies extra hard, especially with dips. By making the shoulders and arms stronger, the patient can deal with using a walker much better than those who do not have strong upper bodies. Even with a bad knee or hip, an athlete can still do dips, seated presses with dumbbells, inclines, curls, triceps movements, lateral and frontal raises, etc.

I instruct these athletes to come to me as soon as they have the surgery. And they do because I explain my reasons. I have had several athletes show up in the weight room on the same day they were released from the hospital after they had knee surgery. I had them do a short, light session for about 15 minutes. I had them perform a couple of sets of bench presses with dumbbells with their legs straight, then seated curls, frontal and lateral raises—short and sweet.

One of the rules I have is that when they're rehabbing any sort of injury, they cannot take any pain medication for four hours before coming to the weight room. This is most important. They must be able to tell if any movement



Dave Re/CrossFit Journal

An injury to the upper body should be viewed as a chance to put some extra work in downstairs.

is irritating the injured area. To override the pain is a big mistake that can set recovery back weeks or even months.

One of the rules I have is that when they're rehabbing any sort of injury, athletes cannot take any pain medication for four hours before coming to the weight room.

The main reason I want them to start training right away is it allows them to stay in the habit of training even if the training is rather easy. Once they get back in the pattern of working out, they're on their way to becoming fully healed—again, because they're controlling the process.

Perhaps the very best example of an athlete dedicating himself to train diligently while he was injured was Mike

House, an outstanding offensive lineman who maintained a 4.0 GPA over four years as a pre-med student at Johns Hopkins. He broke an ankle during a game on a Saturday. On Monday, he was in the weight room waiting for me when I arrived and asked me to give him a routine to follow while his ankle healed.

He was in a cast but wasn't the least bit despondent. On the contrary, he saw the task as a challenge. He had come ready to train and hadn't taken any pain pills since the night before. Squats and pulling exercises were out, but he could do a lot of movements for his upper body: flat and incline benches, seated dumbbell presses and dips. He was unable to do standing good mornings, but he could do them while seated. So I made that his primary exercise for his back. For his legs, he did leg extensions, leg curls and adductor work on machines without difficulty.

I told him his goal was to greatly improve his shoulder-girdle and lower-back strength during his rehab. He was willing and determined to do just that. Prior to the injury, he was handling 220 for 8 standing good mornings. Even



Dave Re/CrossFit Journal

When an injured athlete gets right back to some form of training, it helps sustain the momentum built up before the injury.

though the seated version is much easier, I still started him out conservatively with 185 x 5. Quickly, he figured out how to do them without putting any pressure on his injured ankle. He did the seated good mornings three times a week as the first exercise in his program. At each workout I bumped the numbers up just a bit. Baby steps. By the time he got his cast removed he was handling 280 x 10.

As a direct result of the increase in strength in his lumbar, he was squatting as much as he had before his ankle injury within three weeks of recovery. By the fourth week, his power clean also matched his previous best, and all the shoulder-girdle exercises had improved considerably.

Because he had worked hard while his ankle was in a cast, he had made himself stronger overall. Had he followed the regular course of rehabbing, done some physical therapy and rested, he would have lost a considerable amount of strength in that same period of time. He had, in fact, turned a lemon into lemonade. It's all about mindset and desire.



Mike Warkentin/CrossFit Journal

Safety and creativity are key when finding ways to train around injuries.

Smart Rehab

If any athlete is determined to get stronger, he will figure out how to train when he's injured. It will take some time and plenty of trial and error to learn which exercises can be done and which ones cannot, but it is extremely gratifying to know it lies in your power to heal yourself.

Of course, serious injuries have to be dealt with in a manner different than minor ones, although sprains, pulled muscles, tendonitis and sore joints can be as troublesome as broken bones or surgical procedures if they're not handled correctly. Often, most of these physical problems are handled by the athlete without consulting a doctor. In other words, you must learn how to treat yourself.

I have to believe every strength athlete knows the acronym RICE—rest, ice, compression and elevation—in relationship to treating an injury. The acronym helps to remember the four steps, but the order in which they are done is ice, elevation, compression and finally, rest.

The sooner you get ice on an injured area the better. Then elevate it if you can. This isn't always possible for some lower-back and hip injuries, but they can be compressed. Ace bandages work, although those wider, longer wraps that are used in powerlifting are best. It's important to know that you should only apply ice to an injured area for 20 minutes at a time. If ice is left on longer than this, it begins to act like heat, and you do not want this to happen. It will cause blood to rush to the hurt body part and results in more tissue being damaged. Ice as often as you can, but for no longer than 20 minutes at a time. Then rest the hurt area and try not to involve it in any strenuous movements.

**When you're rehabbing an injury,
it's critical you understand the
difference between a dull ache
and a sharp pain.**

For most minor dings, such as sprains, strains or pulled muscles, you can start exercising after a couple of days. In the meantime, figure out how to work the rest of your body. Movement facilitates healing. If the injury is in your upper body and prevents you from doing any upper-body exercises along with squats or pulls, just walk. That will

cause blood to circulate through your entire body and will bring healing nutrients to the damaged area. As a bonus, the walking will also produce endorphins, hormones that activate the body's opiate receptors, causing an analgesic effect. In other words, they relieve pain.

I'll use strained biceps for my example. Curls are out, but you might be able to do triceps pushdowns on a lat machine or straight-arm pullovers. And wrist curls and lateral and frontal raises, or maybe even seated presses with dumbbells. No two injuries are alike, so time must be spent trying out various movements. Use very light weight and run the reps up to flush more blood to the damaged area. Try to find movements that hit the muscles directly above and below the ding.

When you're rehabbing an injury, it's critical you understand the difference between a dull ache and a sharp pain. If it's a dull ache, keep going. If it's a sharp pain like a knife, stop. And if it persists for some time, go see a doctor.

If, on the third day after the injury, you find you can do a freehand curl without any pain, it's time to go to work—but first do some experimenting. Try a variety of curling motions to find the one that's the least bothersome to the injury—palms up, reverse curls, hammer curls. In this case, regular curls are best. Do 2 sets of 20 with no weight. No more than that regardless of how easy they are. You want to get feedback before moving forward. That will come later on at night or the next day. If those 2 sets were OK, do 3 sets the next day. You're going to be doing the rehabbing six days a week. Then do 3 sets twice a day, and finally, three times a day. Ice the area after each of these therapy sessions, and wrap it and elevate it.

After three or four days, or when the injury is feeling much better, begin to up the workload by using light dumbbells for the curls. Fives are enough. Stay with higher reps. They bring more healing nutrients to the injury than lower reps. When 3 sets with the 5-lb. dumbbell is easy, start using 7 or 10 lb. And so on and so forth until your biceps no longer bother you.

This is a critical stage in rehabbing. Because pain is absent, it's easy to assume the injury is back to 100 percent. But it may not be. Here's the rule I follow: Even after an injured area is back to full strength, you should act as if it's still hurt. That means spending time warming it up thoroughly and icing, compressing and elevating for another two or three weeks. This precaution will keep you from re-injuring the area, and as everyone knows all too well, when you re-injure a muscle, tendon, ligament or joint, the rehab process is two or three times longer than the first time around.

When you're rehabbing, you absolutely must pay close attention to your diet. Build your meals around protein and take extra supplements. And perhaps most important to the healing process, get lots and lots of rest—at least an hour more than usual every night. Rest is crucial because when you are doing an exercise to rebuild a body part, you must pay strict attention to every single rep. One sloppy rep can set you back weeks and even months. That extreme concentration makes the nervous system work much harder than usual, and it takes longer for the nervous system to recover.

Stay Strong

Injuries are simply just a part of the ongoing process of getting stronger. No strength athlete I know of has ever figured out a way to avoid them. You really have two choices: You can lay off all training and wait until nature and medication help you heal. In that case, you will get a great deal weaker, and it will take a very long time for you to regain your strength. Or you can keep training and use the opportunity to improve strength in a weaker area while you're rebuilding the injured body part.

The bottom line is you can be hurt and stay strong or you can be hurt and become weaker. In my book that's a no-brainer.

Disclaimer: Exercise good judgment and, where appropriate, consult a physician before working through injury. As with all physical activity, it is your responsibility to evaluate your own medical and physical condition, or that of your clients, and to independently determine whether to use or adapt any of the information discussed in this article. This article is not intended to diagnose any medical condition or replace a health-care professional's opinion concerning the scope or extent of an injury.



About the Author

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

THE CrossFit JOURNAL

Attention to Retention

Affiliate owners share their strategies for keeping members happy and coming back for more.

By Emily Beers

September 2014



Courtesy of Dale Ryan Thompson

In [The Five Love Languages](#), Gary Chapman suggests people express and experience love in different ways, meaning individuals give, receive and perceive love differently. And according to Chapman, one of the keys for a healthy relationship is for individuals to get to know how their partner experiences love.



Courtesy of Josh Newman

Fitness is always the focus, but many affiliate owners have found activities outside the gym help keep clients engaged and happy.

"People will quit a workout program, but they won't quit on a relationship"—that's something CrossFit Founder and CEO Greg Glassman has said, and it's clear that having strong relationships with clients is important, not just for their health but also for the health of a business.

Chapman's five languages are quality time, receiving gifts, acts of service, words of affirmation and physical touch, and it turns out CrossFit affiliate owners are instinctively—perhaps even subconsciously—speaking these languages to show their clients how much they care about them. The ultimate goal, of course, is to connect with clients to keep them healthy and happy and to retain their business for life.

Quality Time: More Than a Workout

Cindy Allinson, owner of CrossFit Crux in Stouffville, Ontario, never intended to open a gym or be a business owner of any kind. Five years ago, she was a humble mother who just wanted to make sure she stayed fit, and some of her friends were on the same page.

"We were a bunch of moms, and we would work out in the park together as a mom-and-tots group. We thought we should be getting exercise, so we went to the park and did CrossFit in the basketball courts," Allinson said.

Eventually this led Allinson to open CrossFit Crux with her husband, Sean Allinson, four years ago.

"For a long time, it was more a hobby than a business. But eventually you want to see what it can become," she said about how she started to take herself more seriously as a business owner.

Because she wanted her business to survive—and flourish—Allinson quickly learned the importance of client retention, especially in a relatively small city of 24,000.

"Stouffville isn't like a big city where people are always moving there," Allinson said. When new athletes do make it through the doors of CrossFit Crux, it's crucial to keep them there.

First and foremost, Allinson strives to develop genuine friendships with her clients and spend quality time with them. When you're spending time with your friends, it doesn't feel like work, Allinson explained. She believes that when you know what's going on in your clients' lives—when you know the names of spouses and children—client retention takes care of itself. This is relatively easy to do in a small town, in which everyone is connected to everyone else in one way or other.

Allinson reported that 85 percent of her members have been with her since CrossFit Crux's first few months four years ago.

As most coaches do, the Allinsons host community events, and they also invite their clients to their cottage to get to know each other outside the gym environment. Their efforts seem to be working.

"Eight of those 10 women are still with me," Allinson said of her original mom-and-tots group.

Allinson admits, though, it's getting tougher to keep on top of one-on-one friendships now that membership at CrossFit Crux has grown to greater than 120. So to build community this year, CrossFit Crux turned the 2014 Reebok CrossFit Games Open into a competition and social event. Each person from CrossFit Crux who signed up for the Open—85 out of 120 members—was put onto an in-house team.

"We tried to make the teams pretty even," said Allinson, who separated her athletes into four categories—competitive, Rx, scaled and brand new—before she made teams. Teams then came up with names, and each team was given a chance to host one of the five Open events.

"Each Friday night was a different theme. One team was called Victoria's Secret, and all the guys on that team wore (feather) boas," Allinson laughed. "It was the best event we've ever run. We had food and drinks and it really did bring a new energy to the gym. Everyone is already looking forward to it next year."



Cindy Allinson uses team workouts and theme workouts to add variety at CrossFit Crux.

She continued: "That kind of stuff has really helped retention. It gets people to rally behind it and talk about it on Facebook, too. Then others see it and go, 'Hey, I didn't know I could go to a gym where you work out and drink afterward.' I mean, not that (drinking after a workout) is what it's all about. But at the same time, it kind of is what it's all about."

What Allinson means is that one of her goals is to provide her clients with more than just a workout, and sometimes this means letting loose with a beer or two.

Allinson reported that 85 percent of her members have been with her since CrossFit Crux's first few months four years ago, and almost every person who has left has done so due to moving.

With success behind her, Allinson knows she can't become complacent and just assume her friends will keep coming and hitting workouts three days a week until they're 80 years old. Members of her original moms group are soon to be middle-aged women, and it's important to her to keep them motivated well into their 50s.

Fitness will look different for these mothers at 50 and 60 than it did at 40, so Allinson's plan is to keep her clients educated and up to date with what's going on in their bodies.

"Ten years down the road, most of my members will be in their 50s. So I need to spend time on educating them on safety and movements. We need to educate them that it's more than just a workout. It's a lifestyle, and it doesn't have to end when you're 50," she said.

Small Gifts, Big Rewards

Even if you're not the kind of person who needs to celebrate every single birthday or anniversary with an elaborate date and expensive gift, most people enjoy receiving a small gift from time to time, a token of appreciation that says, "Saw this, thought of you."

This is the idea behind Darren Ellis' postcard program.

Ellis is the owner of CrossFit New Zealand in Auckland. He's been around since 2008 and has learned that doing simple, thoughtful things for clients goes a long way in keeping them motivated and happy, as well as feeling loved and appreciated.

Happy clients will stick around and are also more likely to bring in a referral or two, explained Ellis. So when Ellis stumbled across a company in New Zealand that sends

out postcards through the country's postal service, he saw it as an opportunity to give a small gift to show his appreciation to his clients.

"You pick a template and insert an image, and you can write a personalized message," Ellis said. So whenever he takes a good photo of a client, he creates a personalized postcard, which is automatically snail-mailed to his client with a message.

"Hey, you've been smashing it in class. I'm really excited to see your progress," Ellis said of the kinds of things he writes to clients.

"I can do a whole bunch (of postcards) at once. Usually what happens is I'll be inspired by one really good photo we took of a client, and so I'll find a few more and send out a few at once," he said.

Postcards cost him NZD\$3 each, much cheaper than taking every single client he has out for breakfast or a drink to thank them for their ongoing business.



Courtesy of Lesa Komor

As a special gift to a client, Darren Ellis sent Lesa Komor a postcard with this image from the 2014 Open.

"It has proven to work well—receiving something unexpected. It's reinforcement that isn't expected," Ellis explained. "It can go a long way."

Lesa Komor received one of Ellis' postcards. He sent it to recognize her as "The Spirit of the Open." In the picture, Komor is standing near her bar getting ready to begin an Open event.

"I was so nervous about doing the Open," said Komor. She added that she never would have put herself out there without the support of her community.

Receiving the postcard brightened her day.

"I was totally surprised. I thought it was great to receive something through snail mail, as most people tend not to use that method if they don't have to," Komor said. "I was so stoked that someone recognized me in such a positive way, especially when I didn't think I did anything great."

Her postcard ended up proudly displayed on a shelf at home, where it still sits today. Komor explained that the simple postcard brightens her day but also inspires her to keep going.

"Not just with CrossFit, but with life in general," she said.

"It's easy to recognize all of the big names in CrossFit, or the names of those who are always on the leaderboard at your own box. Sometimes we forget about those who are giving it their all in the background," she said. The recognition showed her someone noticed she was working her butt off.

"People will go the extra mile or do what it takes to be in an environment where they feel appreciated and supported," she said.

Services With a Smile

In terms of the love languages, some people place high value on the services their partner provides for them. Whether it's cooking a warm dinner or fixing a computer, some show their appreciation through labors of love.

Affiliate owner Dale Ryan Thompson believes offering a broad array of services is also a good way to keep his clients happy.

Thompson is one of the owners of 12 Labours, a brand associated with three different affiliate locations: CrossFit Syndicate, CrossFit Annapolis and CrossFit BWI, all of which are in Maryland. Thompson's team—CrossFit Syndicate—placed ninth at the 2014 Reebok CrossFit Games.



Members at CrossFit Syndicate got to cheer their team to a ninth-place finish at the 2014 Reebok CrossFit Games.



Ronald Hartman

Dale Ryan Thompson (right) believes providing a broad range of services is critical to retaining members.

Thompson's main focus is on providing great service for his clients. Ten years ago, affiliate clientele was much different. Most people discovered CrossFit by accident and had no prior knowledge of functional fitness, so they were less critical of the service they received.

Today, though, most people who show up at a CrossFit box have some knowledge and experience with training functional movements at high intensity and thus have an expectation of receiving great coaching and helpful services. Thompson is aware of this, and providing a broad range of quality services is his No. 1 priority.

"Retention comes down to a value piece. You have to keep giving continuous value to your clients. We offer two different programming tracks (for different levels of athletes). We have a competitor's blog, Olympic-weightlifting classes, strength classes," he explained. On top of this, members of any of the affiliates can attend specialized classes at all three locations.

"Retention comes down to a value piece. You have to keep giving continuous value to your clients."

— Dale Ryan Thompson

"At our Olympic-lifting class today, we had five athletes from each gym, so we had people traveling to use the Olympic-lifting program from a different location that is 20 minutes away because we were offering something there that we don't offer at their home gym right now," he said.

"We want members to have a journey of fitness where there's no end point. If they want to branch out and do

more strength work for a while, they have options. A lot of times retention is lost because people want to try something different. So we try to give them options so they can continue on wherever they want to go," he added.

From endurance classes to a CrossFit competitors program, Thompson works to cater to as many varied interests as possible and ensure nobody gets bored.

"We want to provide people with things to make their lives easier so they can reach their goals," he said.

Facebook Affirmation

People give and receive love through words of affirmation, and Thompson uses Facebook to show a little bit of public love.

First and foremost, Facebook is used to disseminate important information to clients, explained Thompson, but it's also a good opportunity to celebrate your clients' victories via pictures and videos.

One of Thompson's coaches—Rebecca Koch, who competed on CrossFit Syndicate's team at the Affiliate Cup—is essentially the social-media director for his entire

affiliate. She's also in charge of planning social events throughout the year for all three affiliates, with the overall goal of adding value for their clients. Of course, Facebook, Twitter and Instagram help Koch get the word out to clients.

One of the keys to having a successful Facebook presence is to post often. Koch constantly updates the Facebook page, explaining that she cycles through different styles of posts ranging from marketing and sales-related subject matter to posts that are more member focused.

To put the spotlight on the athletes, Koch posts pictures and videos, often sent out through Instagram, to showcase things such as personal bests as well as "member spotlights."

"Spotlights are a more detailed look at an athlete who has done an exceptional job or has reached a milestone," Koch said. "Recently, the entire 12 Labours community rallied around our Games team and really wanted to hear about it. Features on those athletes have been the most popular."

To make for more efficient posting, Koch uses Eye-Fi, an SD card with wireless capabilities that allows users to automatically upload digital photos to both smartphones and tablets, as well to social media sites such as Facebook, YouTube and Instagram.

Koch's position is all about driving community and client retention.

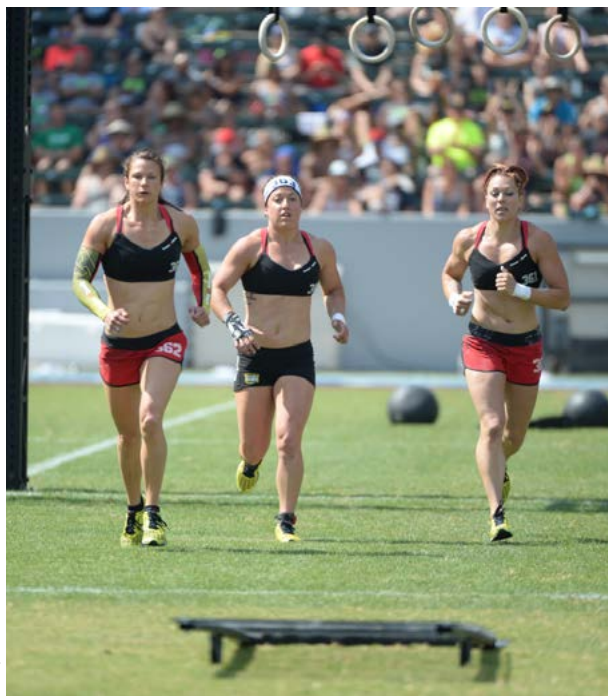
"It totally aids retention. The social aspect of CrossFit in and out of the box is extremely important to people," she said. "It's a low-cost way to create a large number of advocates for our brand and for our style of training and business."

The Physical Workouts

Some people value the physical side of a relationship as much as or even more than the mental and emotional side.

The same is true of clients. Some clients do not need gifts or social media to feel appreciated. Some people place higher value on the physical side of CrossFit: the workouts and their performance. Simply put, if they like the programming and they're improving, they'll stick around.

Josh Newman is owner of CrossFit NYC The Black Box in New York, New York, an affiliate that will celebrate its 10-year anniversary this summer. When The Black Box opened 10 years ago, it was the 15th affiliate in the world. Newman can still remember having just 20 members, and he needed 30 to cover the rent.



Ruby Wolff

Rebecca Koch (middle) uses social media to create community at her affiliate, while Christa Giordano (right) said exit interviews with departing members can help a gym improve its service.

Courtesy of Josh Newman



At CrossFit NYC The Black Box, staff deliver quality coaching and well-run classes to retain their 2,200 members.

"And I wasn't sure there would be 30 people in New York City who wanted to do this CrossFit thing," he said. Today, he has 2,200 members in a 40,000-square-foot facility.

In the early days, Glassman used to do a conference call each week with all the affiliate owners, Newman recalled.

"We would talk about things like where to buy bumper plates."

"The degree to which you're delivering a good CrossFit product—be it good coaching, well-run classes, a well-run facility—that keeps people in the gym."

—Josh Newman

And, of course, they talked about retention. Back then, the biggest retention tool was simply being a good coach who provided good performance results for your athletes. When it comes right down to it, that's still true 10 years later.

"The degree to which you're delivering a good CrossFit product—be it good coaching, well-run classes, a well-run facility—that keeps people in the gym. That, and the programming," said Newman, who believes these elements are the backbone of retention.

He elaborated: "It's a bit of a three-legged stool: results, community and fun. Those are the three things we're giving to people for their money, and we're balancing those three things."

To keep his clients happy, he places a high emphasis on programming.

Newman said the programming "can't be boring," which means constantly changing and reassessing the way he does things to keep up with the changing times.

"Each time we see growth slowing down, we sit down and talk about what we need to do, how we can take advantage of our size," he said.

Much of it has come down to giving the right workouts to the right people. Because he has 40,000 square feet of space and 24 full-time coaches, Newman can offer 400 classes each week. Often, seven different classes are going on at once.

"We have elements classes with beginner WODs for people with less than six months experience. We have experienced WODs. We have competition programming," he said.

Despite his success, Newman admits his instincts have sometimes been wrong and he has made some mistakes.

Prior to this year, he tried to get as many athletes as he could to simply participate in the CrossFit Games Open, thinking that if he made it too competitive, people would get scared and wouldn't sign up.

"We set out to create a friendly competition, trying to have the biggest Open team that we could. The goal was just to get people signed up, just to get their names on the roster. The important thing was participation," he said.

It worked out, but this year Newman went against his instincts and challenged his athletes to really step up and perform during the Open.

"We took the opposite approach. I didn't care if a smaller number of people signed up. We told people we only want them to sign up if they're going to take it seriously," he said. "And we got our members to really benchmark themselves to see where they're at."

With this new approach, 600 of his members committed and competed in the Open, put their fears aside and admitted they cared about their performance. And what he found was people really appreciated this.

"This approach got us 25 percent more people than just promoting participation," he said.

The point is that one of the major goals of CrossFit has always been increased work capacity—increased fitness. Performance gains will always keep people around, and Newman was reminded of that during the 2014 Open even if he'd already learned about it 10 years ago.



The Black Box offers up to seven different classes at the same time, giving members a host of options.

Courtesy of Josh Newman



If this athlete doesn't show up to the gym for a while, software can help coaches notice and reconnect with her.

The Software Language

Whether running a big or small gym, most affiliate owners agree that having a computerized client-management system helps them keep track of their clients.

From Zen Planner to Mindbody to Front Desk and a host of others, software helps staff manage the gym with features that track attendance and streamline communication with clients.

When Allinson first opened CrossFit Crux, she kept track of everything—attendance, retention, billing—manually.

"I used to know everyone in my gym, when they showed up, who their kids were, when they were on vacation. Up until 50 members, I could do it all manually. But now that the business has grown and the demographics are changing and I'm not as in touch with everyone, we use Zen Planner," Allinson said. She explained that Zen Planner helps her run reports to find out who hasn't been in the gym in two weeks.

For the most part, Allinson still has a good grasp of all her clients, but the bigger her gym grows, the more she'll rely on technology to help her.

And when you're the owner of a gym with 2,200 members, you definitely need an automated system to make your life easier. Like Allinson, Newman uses software to book, track and bill members, ultimately providing him with data to help make his affiliate better.

Newman explained: "If retention starts to fall, not only are we able track retention in general, but we can track it by cohort. If it's falling for everything then maybe the bathroom needs to be fixed."

He continued: "But if it's the new people who are leaving, then maybe we need to send them an email after 45 days of being a member ... to help them make an easier transition from elements or on-ramp into group classes. And if it's longer-standing members whose retention is falling, then maybe we need to add more competitions."

The purpose for tracking these numbers is simple: “We use the data from the software to figure out where the problem might be.”

While many gym owners employ similar software, only some have taken the time to learn how to use all the features that can help a gym retain members. By using these features, staff can quickly identify those who need motivation as well as those who might deserve a big thank you for long-term membership.

The Exit Interview

No matter how hard you try, how many systems you have in place, and how great a product you’re delivering, sometimes people leave.

Often the reason they initially give isn’t the actual reason. For instance, they might say they can’t afford it right now, but the truth is they’re going through a divorce or another personal crisis and they’re simply having a hard time coping with life. This is why many coaches believe it’s important to sit down and have an exit interview with each client.

Sometimes the honesty actually changes a client’s mind, and other times it allows the affiliate owner to amicably part with a client and perhaps gain valuable insight into how the facility could be improved.

Christa Giordano is one of Thompson’s coaches. She explained that they require everyone who wants to leave to have a face-to-face conversation and fill out an exit survey.

“The majority of our clients leave due to being in the military and moving,” she said. But obviously there have been times when members leave for other reasons.

“It’s extremely important to know why we lose clients in case it is a problem we can fix,” Giordano added.

Thompson agreed: “We take their feedback and we make it better,” he said.

What they’ve found is a face-to-face exit interview allows the client and trainer to part on good terms. Giordano explained that this has often resulted in their members returning at a later date simply because the door was left wide open.

While Allinson, Ellis, Thompson and Newman have found retention strategies that work for them, it’s important for affiliate owners to constantly remain wide open to new ideas.

Maybe it’s offering a broad array of services or maybe it’s a focus on high-performance programming that makes your clients happy. Or maybe small things such as gifts and Facebook affirmations will help keep clients around. Or maybe it’s a coach-development program and facility and equipment upgrades that speak to the clients at the box.

The point is each affiliate owner has the opportunity to experiment and to listen to his or her clients to determine exactly what will make them want to come back every day to see what’s on the whiteboard.



About the Author

Emily Beers is a CrossFit Journal contributor and a coach at CrossFit Vancouver. She finished 37th at the 2014 Reebok CrossFit Games.

THE CrossFit JOURNAL

The Optimal Shoulder

Strong shoulders are the key to performance overhead, and four simple movements can help you improve mobility and stability.

By Zachary Long and Brian Casto

September 2014



Dave Re/CrossFit Journal

A look back at the workouts from CrossFit.com for the 2013 year reveals that over 80 percent of them involved at least one exercise that had a transfer of force through the shoulder girdle. Therefore, proper function of the shoulder is critical for both optimal performance and injury prevention. An examination of the functional anatomy of the shoulder can provide insight as to what is required of the shoulder and how we can prepare it for athletic movement.

Functional Anatomy of the Shoulder Complex

The shoulder, or glenohumeral joint, is a ball-and-socket joint. The socket of the scapula is known as the glenoid. Unlike the hip socket, which is quite deep, the glenoid is relatively flat and not large. The shoulder joint is often compared to a golf ball on a tee to illustrate that the majority of the glenohumeral joint's stability does not come from bony approximation. Instead, four muscles collectively referred to as the rotator cuff provide dynamic stability to the glenohumeral joint.

The supraspinatus sits on the top of the shoulder joint, and it keeps the humerus pulled close to the glenoid, contributes to the external rotation of the joint and abducts the shoulder. The infraspinatus and teres minor make up the posterior rotator cuff and provide the majority of external-rotation torque to the shoulder. They also exert an inferior pull on the shoulder during elevation. This pull prevents the humeral head from sliding upward due to the pull from the deltoid muscles, which would result in impingement of the structures between the humeral head and acromion. The subscapularis originates on the front side of the scapula and both compresses and internally rotates the glenohumeral joint (8). The deltoids are superficial to the rotator-cuff muscles and work to flex, abduct, extend and rotate the shoulder.

Movement and stability of the scapula are equally important to shoulder function. Proper scapula movement is important for providing a stable base for the glenohumeral joint. When raising the arm overhead, shoulder elevation comes from both the humerus moving on the glenoid and the scapula rotating upward. The scapula should move approximately 1 degree for every 2 degrees of humeral movement. This upward rotation of the scapula comes from a balance of muscle activity between the upper trapezius, lower trapezius and serratus anterior muscles. Proper functioning of these muscles is important for lifts such as overhead presses. Other exercises, such as rowing, and proper posture rely on strength in the rhomboids and traps, which produce scapular retraction (8).

Another important role of the scapula is to transfer forces from the legs and trunk to the upper extremities. For example, studies on the tennis serve show that over 50 percent of the total kinetic energy and force is generated in the trunk and lower extremities. These forces are then transferred through the scapula to the arm (4). This is also seen in a variety of frequently used CrossFit

exercises—such as thrusters and jerks—in which the legs provide large amounts of force that is then transferred through the body to the shoulders and arms to complete the movement.

Another important role of the scapula is to transfer forces from the legs and trunk to the upper extremities.

Imbalances of the Shoulder Complex

Shoulder imbalances can decrease an athlete's performance and increase risk of injury. Imbalances can place unnecessary levels of stress on tissues; therefore, it is



Alicia Anthony/CrossFit Journal

In a push press, the scapulae transfer force generated by the lower body to the shoulders and arms.

vital that an athlete maintain a stable muscular base around the shoulder while also maintaining adequate mobility in order to decrease the risk of injury. The need to address both mobility and stability cannot be emphasized enough.

Mobility issues should be addressed before stability. But after gains in mobility, stability work should follow. If mobility is not improved, stability problems should be examined. Oftentimes, lack of mobility can actually be the result of a stability problem as the body decreases mobility in an attempt to create artificial stability (2). An easy example can be seen in a standing hamstring stretch. An athlete's mobility in this movement can often be improved by having him or her squeeze a ball between the knees. This squeeze increases core activity (stabilization) and often allows the person to reach farther.

In order to understand how to prevent or reverse muscle imbalances, we must first understand why they are so common among athletes and members of the general public. Functionally, muscles have been classified as "tonic" and "phasic." The tonic muscles are prone to tightness, and the

phasic are prone to weakness or inhibition (7). With a predisposition to weakness in our phasic muscles, it is of utmost importance to maintain proper strength in these muscles while maintaining proper length in the tonic muscles.

Table 1

Tonic Muscles	Phasic Muscles
Pectoralis major	Serratus anterior
Upper trapezius	Rhomboids
Levator scapulae	Lower trapezius
Scalenes	Deep neck flexors
Sternocleidomastoid	Upper-limb extensors
Upper-limb flexors	



A functional shoulder is characterized by both strength and mobility. Both must be maintained for optimal performance.

As previously discussed, proper scapula movement and stability during overhead activities occur as a result of the coordinated activity of the upper trapezius, lower trapezius and serratus anterior. Numerous studies have suggested altered scapular rotation and higher activity in the upper trapezius compared to the lower trapezius and serratus anterior are commonly seen in multiple shoulder pathologies (3,4,5). This imbalance falls in line with patterns of tonic vs. phasic muscles. Clinically, retraining muscle activity and proper scapular movement can be troublesome, and exercises that provide little opportunity for compensation are best suited to the task.

From a standpoint of pure sports performance, muscles cannot develop maximum levels of torque absent a stable base, leading to decreased strength. Calculations performed by Kibler found that as little as a 20 percent decrease in energy delivered by the hip and trunk results in a need for 80 percent more mass or 34 percent more rotational velocity in the shoulder joint to produce the same levels of force through the upper extremities. This huge increase in shoulder workload due to an unstable base will not only decrease the efficiency of the entire system during a movement such as a push press but will also likely overload the shoulders, potentially leading to overuse injuries (4).

One area of imbalance that is common in athletes is an overworked or fatigued rotator cuff. In a study performed by Chopp et al., it was found that continuous overhead work accelerates rotator-cuff fatigue. If the rotator cuff

is fatigued, the humeral head may migrate superiorly, narrowing the subacromial space, thus putting the athlete at greater risk for subacromial impingement (1). With continuous overhead motion, a strong rotator cuff is a key element in preventing injury or decreasing the likelihood of injury.

Strengthening the rotator cuff itself will help keep the humeral head properly positioned on the scapula during shoulder movements.

Increasing activation of the phasic muscles will create a more stable base for the entire shoulder complex. This will help decrease strain on the multitude of structures within the shoulder, such as the rotator cuff. Strengthening the rotator cuff itself will help keep the humeral head properly positioned on the scapula during shoulder movements.

Exercises for Improving Shoulder Balance

The following are exercises we believe to be excellent tools for both decreasing injury risk and addressing common imbalances in the shoulder complex that prevent maximum movement efficiency during high-intensity exercise.



On the left, the athlete has locked out the elbows with little protraction of the shoulders. On the right, she has been cued to “push the spine toward the ceiling,” resulting in shoulder protraction and greater activation of the serratus anterior and subscapularis.

Push-Ups

Fortunately for CrossFit athletes, one of the best exercises for strengthening the serratus anterior is commonly performed in CrossFit workouts. The push-up has been shown to significantly activate this muscle (9). Performance of a push-up with “a plus” will further activate both the serratus anterior and the subscapularis muscle. A normal push-up generally focuses on elbow lockout, and the plus portion can be added by protracting the shoulders—sliding the scapulae forward on the rib cage at the top of the rep (8). The push-up with a plus (or simply the plus portion of the movement) can be performed by itself as part of a pre-hab program, as performance of the entire push-up-with-a-plus movement during a workout would greatly reduce speed.

Bilateral External Rotations, aka Shoulder W's

One highly effective injury-prevention and rehab exercise is the bilateral external rotator, or shoulder W. This exercise is performed by holding a resistance band with the elbows against the sides, the forearms directed in front and the palms facing up. Once you are set up properly, externally rotate your shoulders by moving your hands apart while keeping the elbows near the body. This external rotation is coupled with scapular retraction by pulling the shoulder blades toward each other. The shoulder W is effective because it provides good activation of the lower trapezius with lower levels of upper-trap activation. A good ratio of lower-trap-to-upper-trap activation makes this movement a great choice for those who are upper-trap dominant, and it has the added benefit of strengthening

the posterior rotator cuff due to the external rotation of the shoulder (6). For the shoulder W, we recommend 20-30 reps performed as part of your warm-up.

Face Pull Y Press

The face pull Y press (FPYP) is great for injury prevention and performance as well. Begin with your arms straight in front of you while holding onto a resistance band (rings or a cable column work as well). Next, pull your arms back so your elbows are at shoulder height and your forearms remain parallel to the ground. Externally rotate your shoulders, positioning the forearms at vertical with your elbows remaining level with the shoulders. Push your arms up, creating a Y with the arms overhead before returning to the starting position. To perform the FPYP with rings, assume the same starting position as used with ring rows, but use a stance that places the torso in a more vertical position. Then perform the same shoulder movements described above.

The FPYP is effective because it works the external rotators of the shoulder while also stressing the phasic scapular muscles (see Table 1), such as the rhomboids, lower traps and serratus anterior. Both of these muscle groups are important for injury prevention because they help maintain proper scapula positioning while strengthening the rotator cuff. Most importantly, the top of the FPYP resembles the position seen in many of the overhead lifts performed in CrossFit. Strengthening the stabilizing muscles in this position will translate to better performance in press variations and exercises such as the snatch. Perform 2-3 sets of 10-plus repetitions with



The shoulder W combines external rotation with scapular retraction, activating the lower trapezius and strengthening the rotator cuff.

a steady tempo. For those really working on overhead stability, pause at the top of the Y for a moment before returning to the starting position.

Reach, Roll and Lift

This exercise is excellent because it challenges both mobility and stability in the overhead position with little chance of compensations from other muscles or joints. The reach, roll and lift will also facilitate activation of the lower traps and serratus muscles.

Begin in a quadruped position (on all fours) and rock back until your heels meet your butt. Make a fist with one hand and place your forehead on top of it. Put your opposite arm in front of you and reach forward as far as possible while relaxing the other side of the body. Reach forward,

roll your thumb up toward the ceiling, depress the shoulder blade by pulling it downward and lift the arm. Be sure to keep the elbow as straight as possible throughout the movement.

This exercise is deceptively difficult and can frequently expose limitations in mobility of the shoulder complex and weaknesses in the strongest athletes. Perform 2 sets of 10 reps, keeping the elbow as straight as possible and ensuring the shoulder blade is depressed prior to lifting. Most athletes are unable to maintain full elbow extension initially. Make progress in this exercise by increasing elbow extension and then increasing repetitions. An athlete with good mobility and stability of the shoulder complex can perform 20-plus perfect reps.



Dave Re/CrossFit Journal



Dave Re/CrossFit Journal



Dave Re/CrossFit Journal



Dave Re/CrossFit Journal

The face pull Y press works the external rotators and also targets phasic muscles such as the rhomboids and serratus anterior. Note how the final position resembles the overhead position seen in many lifts.

Dave Re/CrossFit Journal



Dave Re/CrossFit Journal



Dave Re/CrossFit Journal



Dave Re/CrossFit Journal



In the reach, roll and lift, movement should occur only at the shoulder joint. The set-up position is designed to eliminate compensatory movement patterns such as arching the back. Many athletes will find this exercise exceptionally difficult.

This exercise makes a great follow-up to mobility work as well. For example, take an athlete with slightly limited shoulder flexion who stretches and gains full motion. After gaining this motion, it is important to challenge the stability in the newly available range to help maintain these gains (2). While a shoulder press may be a good option for this purpose, it still provides multiple levels of potential compensatory patterns such as an excessively arched back. The reach, roll and lift may be a better follow-up for many as it provides less opportunity for compensation and is therefore better in helping maintain this improved motion.

Mobility and Stability

The shoulder is a complex anatomical structure, and proper mobility and stability must be in place for the joint

to perform most efficiently and without increased risk of injury. Rehab and pre-hab work is highly recommended for any athlete looking to improve or maintain shoulder health and function.



References

1. Chopp JN, O'Neill JM, Hurley K, and Dickerson CR. Superior humeral head migration occurs after a protocol designed to fatigue the rotator cuff: A radiographic analysis. *Journal of Shoulder and Elbow Surgery* 19: 1137-1144, 2010.

2. Cook G, Burton L, Kiesel K, Rose G, and Bryant MF. *Movement: Functional Movement Systems: Screening, Assessment and Corrective Strategies*. Santa Cruz, Calif.: On Target Publications, 2010. p. 408.
3. Cools AM, Witvrouw EE, Declercq GA, Danneels LA, and Cambier DC. Scapular muscle recruitment patterns: Trapezius muscle latency with and without impingement symptoms. *The American Journal of Sports Medicine* 31(4): 542-549, 2003.
4. Kibler WB. The role of the scapula in athletic shoulder function. *The American Journal of Sports Medicine* 26(2): 325-327, 1998.
5. Ludewig P and Reynold J. The association of scapular kinematics and glenohumeral joint pathologies. *Journal of Orthopedic and Sports Physical Therapy* 39(2): 2009.
6. McCabe R, Orishimo K, McHugh M, and Nicholas S. Surface electromyographic analysis of the lower trapezius muscle during exercises performed below ninety degrees of shoulder elevation in healthy subjects. *Journal of Sports Physical Therapy* 2(1): 34-43, 2007.
7. Page P and Frank C. The Janda approach to chronic musculoskeletal pain. Thera-Band Academy. 2002. Available at http://www.thera-bandacademy.com/elements/clients/docs/The-Janda-Approach-Musculoskeletal-Pain__011606_151616.pdf. Accessed Sept. 18, 2014.
8. Reinold M, Escamilla R, and Wilk K. Current concepts in the scientific and clinical rationale behind exercises for glenohumeral and scapulothoracic musculature. *Journal of Orthopaedic & Sports Physical Therapy* 39(2): 105-117, 2009.
9. Youdas JW, Budach BD, Ellerbusch JV, Stucky CM, Wait KR, and Hollman JH. Comparison of muscle-activation patterns during the conventional push-up and perfect-pushup exercises. *Journal of Strength and Conditioning Research* 24(12): 3352-3362, 2010.

About the Authors

Zach Long is a physical therapist and strength-and-conditioning coach in Waxhaw, North Carolina. He attended the University of North Carolina at Chapel Hill, where he majored in exercise and sport science, and East Carolina University, where he received his doctorate in physical therapy. Long's research related to physical therapy and athletic rehabilitation has been presented at multiple state and national

conferences. He currently runs ActivePTblog.com and works at The Physical Therapy Center in Waxhaw, North Carolina.

Brian Casto received his bachelor's degree in exercise science from Fairmont State University and then his doctorate in physical therapy from Wheeling Jesuit University. Casto played four years of college football, coached football at the high-school level and has taken USAW's National Weightlifting Coach course. He works at The Physical Therapy Center in Monroe, North Carolina.

CrossFit Kids Classics: Rock-Paper-Scissors Tag

Originally published in CrossFit Kids Magazine, Issue 61, Dec. 15, 2010.

By Alison Patenaude CrossFit Kids

September 2014



Staff / CrossFit Kids

Game Play

Remember that rock breaks scissors, scissors cut paper, and paper covers rock.

1. Each team huddles at its back line and chooses which hand sign to show—either paper, rock or scissors.
2. A few feet apart at the centerline, the two teams face each other.
3. The kids chant together, “Rock, paper, scissors, shoot!” On “shoot,” each player shows his or her team’s hand sign.
4. The players on the team that loses the shoot must turn and sprint past their end line without being tagged by members of the winning team.
5. Any player who gets tagged must join the other team.
6. If both teams throw the same hand sign, all must quickly sit down. The last player to hit the ground switches teams.
7. At the end of the game, the team with the most players on its side wins.

Set-Up

1. Mark off two back lines about 10 to 15 m apart and divide the playing area in half with a centerline.
2. Leave enough space behind the back lines so the sprinters can run through.
3. Divide the class into two teams.

Variations

Instead of sprinting, consider using bear crawls, broad jumps, single-leg hops, walks with an angry-gorilla back or skipping.

