

the **CrossFit** JOURNAL ARTICLES

CrossFit Kids

Dryland Training for Young Swimmers

Kaitlin Lyons



Picture this: A coach yells “Three, two, one, GO!” and then kids are racing across the field, dropping to do 15 push-ups and 10 air squats, racing to the other side of the field for 20 streamline jumps (jumps up in the air with arms fully extended overhead) and 10 crunches, running again and cranking out 10 burpees, then making one last run across the field to complete 30 jump rope jumps. “DONE! What’s my time?” This is not your average dryland session—this is CrossFit for kids.

Why CrossFit?

I am a coach of young swimmers. Watching some kids attempting to swim butterfly, I noticed something that needed immediate attention. The swimmers cognitively knew and understood what was required to swim butterfly correctly, but they lacked the required strength, coordination, and flexibility needed to maintain correct technique over a distance. After some deliberation and thought, I found my answer: CrossFit Kids. The program is perfect for dryland training for them, and it can be

worked into water sets to build the athletes’ abilities and to keep things interesting and new.

CrossFit is based on three fitness standards: Standard 1 addresses ten recognized physical skills (see list below); Standard 2 addresses the fact that fitness is about performing well at any task under any conditions; and Standard 3 addresses training the three metabolic pathways that provide energy for all human action. Training in all three pathways is required for top performance. (See “[What Is Fitness?](#)”)



CrossFit founder Greg Glassman describes his program as one that “delivers a fitness that is by design broad, general, and inclusive.” Several physical skills that aid efficiency and ease in the water are focus points of Standard 1. These skills include cardiovascular/respiratory endurance, stamina, strength, flexibility, power, speed, coordination, accuracy, agility, and balance. Glassman continues, “You are as fit as you are competent in each

1 of 4



of these ten skills. A regimen develops fitness to the extent that it improves each of these ten skills.” [CrossFit Kids](#) workouts are randomized and use exercises such as box jumps, streamline jumps, squats, burpees, running, push-ups, dips, lunges, frog stands, jumping jacks, planks, pull-ups, handstand push-ups and many others, all done at high intensity. Like most CrossFit workouts, the kids’ workouts too are typically done for time or some sort of score, and keep athletes moving quickly from one exercise to the next with little rest time. This tends to elicit greater outputs from the athletes and motivates them to get the work done, and done correctly.

The universal scalability of CrossFit makes it the perfect application for any committed individual regardless of age or experience. For our young swimmers, we scale the load and intensity to kids of all ages and ability levels. Following the model of CrossFit Ramona and the CrossFit Kids program, we write each workout with variations for three different groups, with the difficulty progressively scaled down in each: the big dawgs, the pack, and the puppies. As kids get older or stronger or fitter, they can move up the scale.

CrossFit’s second standard of fitness addresses performing well under any and all conditions. Although most competitive swimming takes place in a relatively controlled environment, there are still a number of variables that are out of our control, such as facility conditions, pool temperature, environment, length of meet, and event order. (As I always tell my kids, the results will not say “10th place, Joey Smith, :29.5 but he was tired from his last race.”) Everyone must perform at their best regardless of the conditions, so you have to be ready for them. You don’t always know what meet day is going to be like, and things can always change during the competition. As Glassman explains, CrossFit helps prepare for that “by striving to keep the training stimulus broad and constantly varied” and by getting athletes accustomed to pushing their limits and dealing with the unknown or unexpected.

CrossFit’s third standard of fitness addresses the importance of training that utilizes all three metabolic engines or pathways. Training all three pathways has benefits for all events and all athletes. Swimmers tend to spend way too much time training in the oxidative pathway. Neglecting the other two pathways leads to decreases in muscle mass, strength, speed, and power. These are all important elements in swimming that

our athletes need to develop. We typically use some interval training to train anaerobic efforts and to develop carryover aerobic fitness using less volume. Ultimately, though, training all three pathways—with a particular emphasis on the anaerobic two—is critical for attaining peak fitness. Glassman explains, “Favoring one or two at the exclusion of the others and not recognizing the impact of excessive training in the oxidative pathway are arguably the two most common faults in fitness training.”

A new approach: Implementing a CrossFit swim conditioning program

CrossFit Newport Beach owner and multisport trainer Brian MacKenzie challenges his athletes to make a commitment to doing things right from the beginning. This includes having an open mind to a new type of training and trying new exercises. It may be scary, but the potential performance gains can be huge on race day. MacKenzie speaks to the importance and benefits of strength training as a regular and integrated—not separate—part of training: “Strength training actually speeds up recovery and lets [athletes] get back to training much sooner than they thought.” (“The New World Order for Endurance Training,” *CrossFit Journal* 63).

How we started: A plan for the 10-and-unders

My coaching team began slowly with our kids and gradually increased the repetitions and duration of the workouts. First, we assessed what the kids were able to do and established a baseline for comparison later on. The assessment included five push-ups, five streamline jumps, five crunches, five walking lunges, and five inverted hamstrings for balance on each leg.

It was quickly evident that the athletes did not have well-developed body connectedness and an understanding of how their bodies moved in space. These weaknesses were manifested in low hips and high shoulders or high butts on push-ups, very small (if any) vertical height on streamline jumps, landing flat-footed on streamline jumps, and wobbly midlines and loss of balance on lunges. If these abilities were missing on land, we could not expect the kids to have them in the water, where there is 900 times more resistance than in the air.

We started teaching them one skill or element per week. At first, the focus was on proper technique with the basics; then we added other elements. Second, we started

to combine skills with running. Sometimes we had two exercises and a run (200 meters), or a longer run (400 meters) and one exercise, or a mixture of the two styles. In the beginning, we waited for the entire group to finish one round before going to the next round, but we have since learned that we get better results overall with a more continuous workout. We tell the kids the whole workout in the beginning, so that the faster ones can get more rounds in or move faster, and everyone can work at their proficiency level. We post the number of rounds or the athletes' workout times on a dry erase board.

Many of our dryland workouts have a set time duration, in which athletes see how many rounds of the exercises they can complete. This keeps everyone together, allows them to work intensely at their own level, and makes it easier to manage a large group of kids. Some examples:

- “The All Around”: 10 squats, 10 push-ups, 10 sit-ups, 200-meter run
- “Game On”: 10 push-ups, 10 mountain climbers, 10 burpees, 200-meter run
- “Let’s Do It”: 400-meter run, 40 jump ropes, 20 streamline jumps, 10 walking lunges

We work additionally on balance and coordination when we work skills such as side bridge hip lifts, planks on the hands (i.e., the top position for the push-ups) or elbow stands, frog stands, and handstands.

We also add CrossFit skills to many of the games we play during dryland training sessions, including the following two:

- CrossFit Nation Ball (also known as dodge ball): When a player is hit by the ball (waist or lower is all we allow) or is otherwise “out,” you can set an exercise to be performed (10 squats or 15 jumping jacks) while the player waits for teammates to get him or her back into the game. The exercise can change, or you can designate one of the two balls as the squat ball and one as the push-up ball. The player performs the exercise assigned to the ball that hits them. If the ball is caught, the thrower is out and must do the exercises. If the ball is dropped, the fumbler is out and performs the exercises.

- Freeze Tag, CrossFit-style: To encourage more activity and to work on the ability to change gears and focus on a technique element, we play a version of tag that requires a tagged player to perform an exercise or set of exercises (5 push-ups, 10 sit-ups, 10 squats). This requires the athlete to be composed during activity and to quickly redirect their attention to a new task.

Water workout sets include:

- “CrossFitWednesday”: 5 air squats + 25 meters butterfly; 5 pushups + 25 meters backstroke, 5 pull outs + 25 meters breaststroke, 5 sit-ups + 25 meters freestyle. Start with one round and gradually increase the number of rounds performed. Record the times, of course, and track athletes' progress over time.
- “Killer Turns”: A second set can incorporate fast turn work. Mid-pool 25s focus on fast walls. (Have the kids begin in the middle of the pool and do 5 streamline jumps from the bottom of the pool, focusing on having good body alignment and a tight compact streamline. After rep 5, go right into a fast turn.)
- “Tabata Vertical Kicking”: Tabata exercises are performed as 8 repeats of 20 seconds of work and 10 seconds of rest. Younger athletes may start with only one set while older athletes may be able to work up to doing a round each of flutter kicking, dolphin kicking, and breaststroke kick for a total of 24 repeats.

Although these are examples of workouts that we use with a 10-and-under age group, the same examples are easily adjusted for senior level athletes. Both groups may have the same initial starting point, as many of these exercises will be new and different even for the older athletes. As when starting any new program, focus on technique and execution first before moving to more reps and intensity. As MacKenzie comments, CrossFit workouts “are about progression and increasing work capacity for the sport.”



Seeing results

We see marked performance gains from this type of program in consistent kicking ability, correct swimming posture, timing of strokes, starts and turns, underwater swims, stamina, ability to recruit the correct muscles to perform proper technique, and the ability to maintain technique over an increasing distance. We quickly began to see results in the pool as the performances during dryland training were improving. Arching backs in freestyle and backstroke are lessening as the push-up position improves. The kids are better able to self-correct some body position issues as they learn and are more aware of what correct body posture feels like and how to effect it. Improvements in streamline jumps and the vertical leap are evident in the underwaters and distance off the wall on turns. The swimmers have made huge leaps in learning how to coordinate muscle groups, and improvements in their positioning on the wall have been amazing. Streamline jumps are essentially push-offs, so the better they are and the higher they can get on land, the better and more distance they can get off the walls in the pool, and with less energy expenditure. Increased overall strength, coordination, balance, and flexibility are evident in the timing and coordination of strokes, most notably in breaststroke and fly. We have kids who could not do a legal breaststroke kick (due to lack of ankle flexibility) now seeing their times drop and actually enjoying working on the stroke.

What the kids have to say about CrossFit

Here are some of the kids' views on doing CrossFit sets as part of their practices:

- Hayden, age 8: "I like CrossFit for dryland because it is hard and I like to see how many people I can beat."
- Rhodri, age 10: "I like CrossFit because it makes me work hard, and I want to do good and to come in first for the workout. It helps me to push my limits to get better. I like the challenge and how things are always different."
- Iman, age 10: "The CrossFit sets we do have helped me to be a better kicker and have better turns to get my move-up times for the next group."
- Thomas, age 9: "I like when we do CrossFit because it helps to make me stronger and faster in the water. It is always different and challenging. It's not like anything I have done before and that makes it fun too."



Kaitlin Lyons is an age-group and masters coach for Novaquatics in Irvine, California. She is an ASCA (American Swim Coaches Association) Level-2 certified coach. She is a competitive triathlete who trains at [CrossFit Newport Beach](#) and with [Multisports Orange County](#).

