
THE CrossFit JOURNAL

A Theoretical Template for CrossFit Endurance Programming

John McBrien offers basic programming for single-sport and multi-sport athletes who are looking to improve their endurance while training with CrossFit.

By John McBrien

September 2010



Courtesy of John McBrien

In February 2003, Coach Greg Glassman wrote an article titled *Theoretical Template for CrossFit's Programming*, which provided some of the rationale behind the workout of the day (WOD) and a foundation for understanding the specifics of CrossFit programming. Today, there has in many ways been an evolution in CrossFit programming due to the creation of programs such as the *CrossFit strength bias* and more sport-specific programs such as CrossFit Football and CrossFit Endurance.

1 of 6

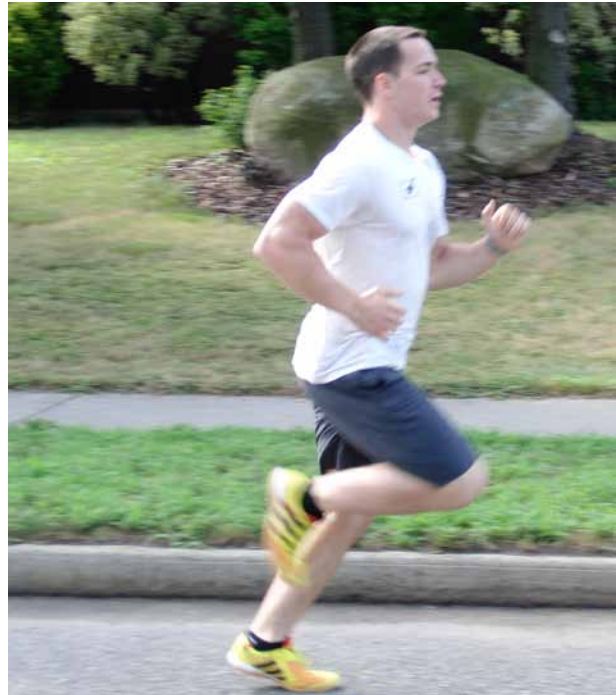
Using Coach Glassman's 2003 article as an example, our goal is to provide a theoretical template or model for CrossFit Endurance programming as a means for improving not only the sport-specific capacity of an endurance athlete, but also the broad work capacity of the CrossFit athlete.

Constant Variation

Before delving into the programming specifics of CrossFit Endurance, it is important to revisit one of the major principles of CrossFit: constant variance. In any thoughtful programming, variance should always be present through the utilization of different energy pathways, time domains, loads, rep schemes, exercises, couplets, triplets, etc. After all, a constantly varied program is fundamental to increasing work capacity across broad time and modal domains.

This principle of variance carries over into CrossFit Endurance programming as well and is just as important for the endurance athlete.

This principle of variance carries over into CrossFit Endurance programming as well and is just as important for the endurance athlete. However, the typical endurance athlete is not familiar with variance and spends the majority of time "going long" through training the oxidative pathway. At the same time, the typical CrossFit athlete, while likely more balanced, tends to favor shorter time domains and is predominately training the phosphagen and glycolytic pathways. For a real-world example, one need only casually observe the comments, and subsequent substitutions, on the CrossFit main site after a 5K or 10K is posted.



Courtesy of John McBrien

James Hobart showing off his Pose at the CrossFit Endurance Cert at CrossFit Milford.

CrossFit Endurance programming addresses the weaknesses of both groups. Our programming provides the endurance athlete with a progression of technique, intensity and *then* volume. It is our goal to reduce an endurance athlete's dependence on only oxidative training by increasing broad work capacity and enhancing all 10 general physical skills through constantly varied CrossFit programming. After a foundation of CrossFit has been established, we proceed to supplement the endurance athlete's CrossFit programming with sport-specific endurance workouts.

The same is true of the CrossFit athlete. An excellent example can be found in analyzing Rob Orlando's improvements in work capacity with specific regards to running. Utilizing CrossFit Endurance programming provided by CrossFit Endurance head coaches Jason Leydon and Brian MacKenzie, Orlando has seen his mile time drop from over 7:00 to 5:59 in his training leading up to the 2010 CrossFit Games. John Steger, a 2010 CrossFit Central East Regional competitor, has seen broad increases in his overall work capacity as well and utilized CrossFit and CrossFit Endurance to run the 2009 Marine Corps Marathon in 2 hours 59 minutes.

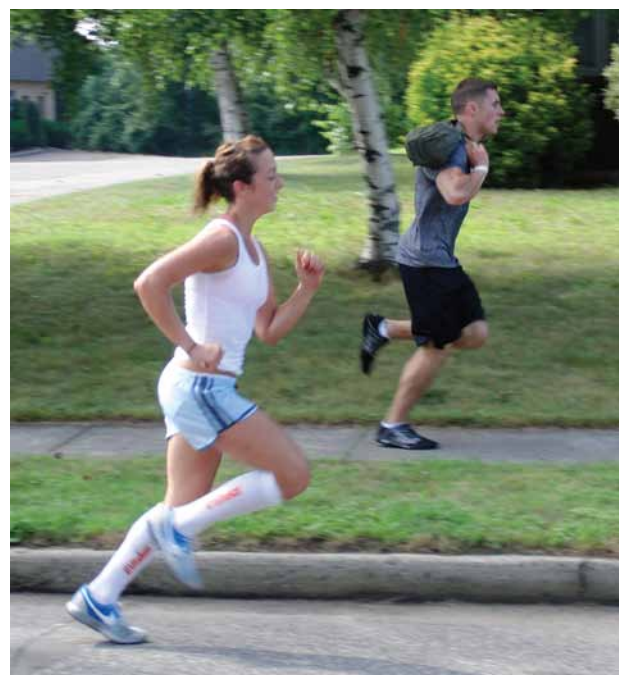
Programming for the Single-Sport Athlete

Now that we have established a basic foundation for training both the CrossFit athlete and endurance athlete, let us delve into the first template or model: programming for the single-sport athlete. When programming for a single-sport athlete, we are typically referring to someone looking to improve his or her running. For this particular template, we will utilize this general trend in the example outlined in Table 1.

The general prescription for the single-sport athlete with an emphasis on running is four to six CrossFit workouts per week, supplemented with two to three sport-specific endurance workouts per week.

The general prescription for the single-sport athlete with an emphasis on running is four to six CrossFit workouts per week, supplemented with two to three sport-specific endurance workouts per week. These endurance workouts are interval-based and stamina-based. In the example above, the athlete is supplementing five CrossFit workouts with two CrossFit Endurance workouts: one interval-based and one stamina-based. The interval-based workout may be something as simple as performing 8 reps of 200-meter sprints, holding each effort within 2-3 seconds and resting 2 minutes between efforts.

The stamina-based workout will be either a time trial or tempo workout and is performed on a CrossFit rest day. With a time trial, the goal is maximal effort for a given distance or time. For a tempo, the athlete is required to work anywhere from 85-95 percent of a best time or effort level for a given distance or time. In the template above, Week 1 may consist of a stamina workout in the form of a 5K time trial as a benchmark measurement. Week 2 may be a tempo at 95 percent of an athlete's best 1-mile pace. Knowledge and an understanding of the athlete's capacities, limitations and goals should drive the template's programming, not the other way around. Distances for the stamina-based workouts will range from 5K to 13.1 miles, depending on the athlete's goals.



Courtesy of John McBrien

Simple aerobic conditioning is being replaced by interval- and stamina-based workouts designed to increase work capacity.

Day	M	TU	WE	TH	FR	SA	SU
	CF	CF	CF	OFF	CF	CF	OFF
	INT			STA			
INT: Interval-based workout				STA: Stamina-based workout			

Notice plenty of flexibility is built into Table 1 to ensure the athlete is getting ample recovery. As a fundamental rule, always remember that recovery is why an athlete improves, not more training. With that said, room exists in the above template for the addition of a second interval-based endurance workout. This second interval workout may be performed, for example, on Saturday afternoon following a morning CrossFit workout. Again, as a general rule of thumb, attempt to ensure that CrossFit and CrossFit Endurance workouts are performed at least three hours apart to ensure proper recovery. For example, very few athletes will have the capacity to perform Fran with maximal effort followed immediately by intervals; progression is key.

As seen above, programming for the single-sport athlete is not unlike biasing CrossFit programming toward an athlete's weaknesses through supplemental work. As a result, programming for a single-sport athlete is relatively easy provided the principles of recovery and progression are respected. The template outlined in Table 1 is also not limited simply to an athlete focusing on running but can be utilized as a means for improving metabolic conditioning in general and for other single-sport athletes as well.

Programming for the Multi-Sport Athlete

In comparison to the template for a single-sport athlete, programming for the multi-sport athlete is far more complex and requires a greater understanding of an

The general prescription for the multi-sport athlete is to again perform four to six CrossFit workouts per week. In this case, however, supplementation will include two workouts per sport per week maximum.

athlete's ability to perform on a daily basis. Again, for the purposes of this article we will use a general trend for outlining our multi-sport template. In this case, the multi-sport athlete is a triathlete. It is important to note



Courtesy of John McBrien

With careful programming, single- and multi-sport athletes, as well as CrossFitters, can see impressive gains in endurance and stamina through relatively brief workouts.

that when programming for a triathlete, the athlete is essentially competing in four sports: CrossFit, running, biking and swimming.

The general prescription for the multi-sport athlete is to again perform four to six CrossFit workouts per week. In this case, however, supplementation will include two workouts per sport per week maximum. Furthermore, due to the number of sports that are being trained simultaneously, we prescribe performing no more than one to two stamina-based workouts per week—maximum—as well. Table 2 outlines the template for the multi-sport athlete.

Similar to the single-sport template, the multi-sport template places a week's stamina-based workout on a CrossFit rest day. This is useful not only as a means for ensuring adequate recovery, but also for mirroring an athlete's race schedule given that most races are usually held on Saturday or Sunday. It is unlikely an athlete will be capable of handling two stamina-based workouts per week, and certainly no more than one stamina-based workout for a particular sport, unless the number or total volume of CrossFit workouts is reduced. As a general guideline, distances for swimming- and biking-based stamina workouts will range from 500 meters to 1,500 meters and 10 miles to 30 miles, respectively. The athlete's goals and/or race distance(s) should drive the length of stamina-based programming.

We can readily see that programming for multi-sport athletes demands a greater understanding of an athlete's recovery abilities and, in addition, an athlete's strengths or weaknesses in particular sports. For example, an athlete with a strong background in swimming may not require two swimming workouts per week. This keen understanding of an athlete's abilities is required to ensure that the athlete can satisfactorily perform at the requisite intensity during both CrossFit workouts and sport-specific CrossFit Endurance workouts.



Courtesy of John McBrien

Hobart, center, is now a lifter and a runner.



Courtesy of John McBrien

A wide variety of CrossFitters are finding CrossFit Endurance workouts are a great supplement to their base CrossFit regimen.

Table 2: Multi-sport Athlete (Triathlete)							
Day	M	TU	WE	TH	FR	SA	SU
	CF	CF	CF	OFF	CF	OFF	OFF
	Swim	Bike	Run	Swim	Bike	Run	
	INT	INT	INT	INT	INT	STA	

INT: Interval-based workout STA: Stamina-based workout

Courtesy of John McBrien



The Forcai Endurance Team prepares to begin a 4x500 meter track workout.

Strong and Fast

This article is neither exhaustive nor entirely comprehensive in its scope but is instead designed to provide a theoretical foundation for how to program CrossFit Endurance for endurance athletes and CrossFit athletes alike. Some indicators for recognizing improvement include broad increases in work capacity for CrossFit benchmark workouts, faster interval splits and quicker recovery.

When individualized, a combination of CrossFit and CrossFit Endurance can be used to further maximize an athlete's performance potential. Rob Orlando is at an all-time low body weight yet has improved his running-specific capacity and cardiorespiratory endurance dramatically while still seeing progressive improvement in his strength. This is not an uncommon occurrence, and with attention to progression and recovery, all athletes can see the efficacy of the program in their own training.



About the Author:

A convert from traditional endurance training, John McBrien is a CrossFit Endurance head coach and utilizes CrossFit and CrossFit Endurance exclusively in his own training and the training of his athletes. He works with athletes of all ability levels and takes pride in helping the average Joe and Jane reach their performance potential in endurance events. He is also the head coach of the Capital CrossFit Elite Anaerobic Endurance Team out of [CrossFit Capital Jiu-Jitsu](#).



Courtesy of John McBrien