

## One Hundred Miles of Trials

How the author became the youngest finisher in a 100 mile race, and what Brian MacKenzie and Carl Borg of CrossFit Endurance think it means.

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Shane Skowron

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Courtesy of Shane Skowron

I was 20 years old on July 18, race day of the 2009 Vermont 100 Mile Endurance Run (VT 100). On July 19—28 hours and 26 minutes later—I was its youngest finisher.

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During my training in the months leading to the race, I used CrossFit Endurance methodology and I seldom ran more than five kilometers at a time. I averaged about 20 miles a week. Prior to the VT 100, my longest run was a single 50 mile race.

I've never been to a CrossFit cert. In fact, I have never been to a CrossFit gym. All my training was done in my backyard in North Brookfield, Massachusetts, or in New York City parks. Everything I knew about fitness training and ultrarunning came from Internet research. I read message boards, blogs, e-mails, articles and abstracts. My athletic background is not extensive. I was a member of my high-school cross-country, track and ice-hockey teams. But I was not a star in any of those sports. I began CrossFit in August 2007 at 18. Since that time I have completed two marathons, two 50 kilometer runs, a 50 mile run and a 100 mile run.

### The Precedent for This Type of Training

Many ultrarunners prepare for a 100 mile run by training approximately 60 to 100 miles per week, with half of those miles done in a two-day period. There is little precedent for low-mileage ultra-training.

Brian MacKenzie and Carl Borg, who developed CrossFit Endurance, have both completed 100 mile races using their own methodology and continue to train this way. CrossFit star Greg Amundson was able to complete 80 of a planned 100 miles in 24 hours. He had never run more than 10 kilometers in his life and had done no running to prepare for the event.

Ultrarunner Matt Mahoney does three runs per week for a weekly average of 20 miles. He's built an impressive ultrarunning resume that includes the daunting Hardrock 100. Other ultrarunners have completed 100-milers on weekly maintenance mileages of 30 to 40 miles, often supplemented by other modes of training.

To many ultrarunners, the idea of training 20 miles per week for a 100 mile ultra is absurd. Several people told me I was unlikely to finish.

### The Training Program

I chose to use a low-mileage program to complete the VT 100 because overall athleticism was as important to me as the ultra itself (I hope to become a Navy SEAL officer after graduation from college). It's extremely difficult to see gains in strength, power and speed while running high weekly mileage.

Five or six days per week I did a CrossFit WOD, including a few pure strength workouts. Three times a week, approximately five hours before the CrossFit WOD, I did a running workout inspired by CrossFit Endurance.

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***CrossFit heavyweight Greg Amundson (right) managed to complete 80 of a planned 100 miles relying only on CrossFit methods. Brian MacKenzie (left) of CrossFit Endurance helped with a few tips during the run.***

I ran more than five kilometers only 13 times in the seven months before the VT 100. Two of those occasions were 50 kilometer races in January and in April. One of them was a 10 mile run followed by 30 mile walk (the latter was due to a navigational error and was not supposed to be part of my programming). One run was 13.1 miles, and the rest were 10 miles or less. All other runs were short intervals and time trials.

This table shows my last six weeks of training before the VT 100. My training in the weeks prior was similar. The precise details of each workout are on my blog, beginning [here](#).

The table does not include warm-ups, stretching or skill work. I have not learned the Pose technique advocated by CrossFit Endurance, though I believe it would have benefited me in the VT 100.

### Selections for Programming

I did not follow the schedule of any single CrossFit site. I took most of my workouts from the [CrossFit](#), [CrossFit Football](#) and [CrossFit Endurance](#) sites.

I designed my training so my lower body was constantly bombarded with heavy stimuli but was barely able to recover. My reasoning? If my body could handle heavy back squats and sprints one day followed by Fran, a 10 kilometer run and a deadlift met-con in subsequent days, then my legs would be able to handle the stress of running for hours at a time. Having strong legs meant they would be less likely to break down. I wanted to combine that strength with running endurance training for the best results.

I was not afraid to use workouts lasting only a few minutes because they provide heavier stimuli. I did not consider non-running endurance workouts (such as doing hundreds of burpees, for example) to be as valuable. My research led me to the conclusion that endurance in one modal domain does not transfer completely to endurance in another.

I added a few workouts with calf raises to my training because my calves seemed to be the weak link in my lower extremities.

All my CrossFit training was done in Vibram Five Fingers, and my running was done in racing flats so my feet could be exposed to the same stimuli. With the running workouts, I trained on the largest hills I could find because the VT 100 has 14,000 feet of elevation gain.

### Shane Skowron's Training for the VT 100 (beginning June 1, 2009)

DAY	CROSSFIT ENDURANCE	CROSSFIT (STRENGTH & CONDITIONING)
1	None	Push jerks: 5-5-3-3-1-1-1-1
2	2 x 1200 m uphill, recover downhill, 1:00 rest	3 rounds of: 10 CTB pull-ups 10 front squats (166 lb.) 10 burpees
3	None	4 rounds of: Run 400 m 30 knees to elbows 15 deadlifts (245 lb.)
4	Hilly interval 30:20 x 8	Back squats: 5x3
5	None	Murph with 20 lb. vest (35:21) Run 1 mile 100 pull-ups 200 push-ups 300 squats Run 1 mile
6	None	None
7	13.1 miles	None
8	None	Power cleans: 8x1 (max 183 lb.)
9	3 x 500 m steep uphill, 5:00 recoveries	21-15-9 reps of: Snatches (95 lb.) C2B pull-ups
10	None	7 rounds of: 3 jerks (155 lb.) 6 pull-ups 9 push-ups
11	3 rounds of: Run 1:00/rest 1:00 Run 1:00/rest 0:45 Run 1:00/rest 0:30	Elizabeth (10:40) 21-15-9 reps of: Squat cleans (135 lb.) Ring dips  Tabata calf raises
12	None	Warm-up only
13	5.4 km race (21:30)	Hang power clean snatches: 7x3
14	None	Cindy (29 2/3) 20 minutes of: 5 pull-ups 10 push-ups 15 squats
15	None	100 body-weight back squats (147 lb.)
16	None	1.5 mile carry (75 lb. bag of plates) Calf raises, calf jumps

## Shane Skowron's Training for the VT 100 cont...

DAY	CROSSFIT ENDURANCE	CROSSFIT (STRENGTH & CONDITIONING)
17	Tabata 20:10 x 8	30 front squats (147 lb.) Run 400 m 75 burpees
18	None	Grace (4:29) 30 ground to overhead (135 lb.) Tabata calf raises
19	Run 6:00/recover 3:00 Run 4:00/recover 2:00 Run 1:00/recover 0:30 Run 0:30/recover 0:15 Run 0:15	Hang squat snatches: 8x1
20	4 x 5 km with 10:00 rests, carried hydration pack	None
21	None	None
22	4 x 5:00 on/3:00 off, wet trails	Squat cleans: 8x1 (max 201 lb.)
23	None	10 rounds of: 3 deadlifts (275 lb.) 6 ring dips 9 knees to elbows
24	6 x 200 m steep uphill with 3:00 rest	Back squats: 8x1 (max 282 lb.)
25	None	Power snatches: 100 lb. minute ladder
26	None	Fran (3:00) 21-15-9 reps of: Thrusters (95 lb.) Pull-ups
27	110 minutes on mountain trails	None
28	None	6 rounds of: 3 push jerks (166 lb.) 6 C2B pull-ups 9 clapping push-ups
29	Intervals 30:20 x 8	21-15-9 reps of: Deadlifts (235 lb.) Ring dips Knees to elbows
30	None	Front squats: 5x3
31	2 x 900 m uphill with 6:00 rest	12 minutes of: 5 ground to overhead (135 lb.) 5 C2B pull-ups Tabata calf raises
32	None	333 weighted step-ups (40 lb. to 19.5 in. bench)

DAY	CROSSFIT ENDURANCE	CROSSFIT (STRENGTH & CONDITIONING)
33	10 mile run 30 mile walk (lost my way)	None
34	None	None
35	None	Push jerks: 8x1 (max 210 lb.)
36	None	20 minutes of: 5 thrusters (95 lb.) 7 hang power cleans (95 lb.) 10 sumo deadlift high pulls (95 lb.)
37	6 x 1:30 on/1:30 off	21-18-15-12-9-6-3 reps of: Front squats (166 lb.) V-ups
38	None	GI Jane 100 burpee-pull-ups
39	6 x 200 m steep uphill with 5:00 rest	Power cleans: 5x3 (max 188 lb.)
40	Rest	Rest
41	8 km at 90%	Back squats: 5x5
42	None	Angie (13:59) 100 pull-ups 100 push-ups 100 sit-ups 100 squats
43	None	Grace (3:56) 30 ground to overhead (135 lb.)
44	Tabata 20:10 x 8 at 50%	None
45	None	None
46	None	None
47	None	None
48	Run 100 miles in VT 100	None
49	Run 100 miles in VT 100 (continued)	None

After the event... I had no soreness whatsoever in my quadriceps, hamstrings, glutes or upper body. I attribute this to training with heavy weights.



## Trials ... (continued)

The VT 100 is 70 percent gravel and 30 percent trail. I trained mostly on dirt and asphalt, and occasionally on trail.

I minimized recovery times by eating an appropriate post-workout meal, sleeping at least eight hours per night, and submerging my lower body in a tub of ice water for 25 minutes several times per week.

### Race nutrition

Stomach issues are one of the most common reasons runners cannot finish an ultramarathon. Yet I had no nutritional problems whatsoever during the event.

Before my longer runs, I experimented with eating strange foods and seeing how my stomach reacted. Several months ago I tried using Brian MacKenzie's technique of eating a double cheeseburger before a 10 mile run, and I had success. I experimented with other foods including coconut oil, whey protein, ground beef, grapes, almonds, raisins and gels.

I maintained a high-fat "primal" diet during training, in contrast to the high-carbohydrate diet of most ultra-runners. I was able to add a few pounds of muscle mass through caloric excess and maintained a low body-fat percentage.

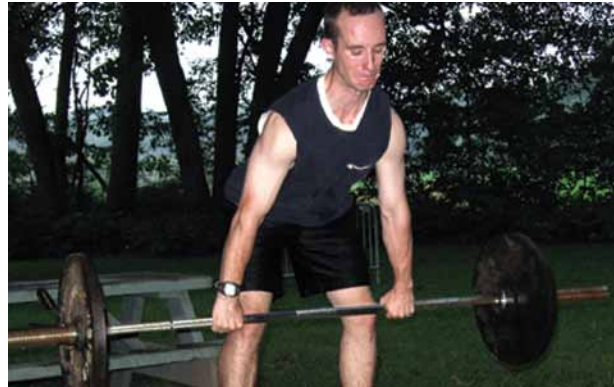
During the VT 100 itself, I did not follow the primal diet but rather ate the food provided at the aid stations. I supplemented during the race with coconut oil, SaltStick tablets, and L-glutamine tablets. The only downside of this sudden change in diet was an acne flare-up.

### The Running of the VT 100

I began the VT 100 at 4 a.m. on June 18 with the simple goal of finishing under 30 hours. I did not know how my body would react after 50 miles.

I ran a smart race, staying well fed and well hydrated and running at a pace to cover 100 miles. I passed all the mid-race medical checks and felt mentally acute and physically stable the entire way. I crossed Mile 50 in about 11 hours 30 minutes, a half hour under my goal time. I arrived at Mile 70 on pace to finish under the prestigious 24-hour mark. After Mile 77 I began to experience severe foot maceration (painful skin pruning), which made running painful. I learned foot pre-taping techniques, but I did not do them properly, and I did not have a crew to assist me.

Around Mile 80 sleepiness began to take a toll on my pace, though I resisted sleeping.



Courtesy of Shane Skowron

*By overloading his lower body with intense workouts in the months leading up to his race, Skowron believes he was able to effectively prepare for the physical strain of running 100 miles.*



*Shane Skowron used CrossFit WODs five or six days a week to prepare of his 100 mile race.*



*A detailed description of all of Skowron's workouts is available online [here](#).*

Starting from Mile 85 I began to get chafing in the crotch area, which got progressively worse as the miles added up. By Mile 90, the chafing made it overwhelmingly painful to run, and I had to resort to a fast penguin waddle. I finished the race this way, crossing the line at 8:26 a.m. the day after I had started.

### Recovery

Recovery was quick. I did not suffer any injuries before, during or after running 100 miles. After the event, I took two days completely off and enjoyed whatever foods I wanted. I experienced soreness in my calves, ankles, shins and feet for the two days after the race. I had no soreness whatsoever in my quadriceps, hamstrings, glutes or upper body. I attribute this to training with heavy weights.

By the third day, I returned to CrossFit training and met my PR levels on the weighted pull-up and also the following day on the squat clean. The soreness in the calf muscles lingered for a few days but was no more severe than soreness I've experienced as a result of certain CrossFit workouts.

### Conclusion

In retrospect, I believe I was prepared for the distance I attempted. My finish is proof, though I think I was capable of a sub-25-hour finish. Unfortunately, lack of experience and bad luck meant factors such as foot maceration, blisters and severe chafing added hours to my time. It was extremely frustrating to have to walk and waddle in the last 10 miles simply because my skin could not take it. I desperately wanted to run that section, and my legs were willing. At no point during the run did my muscles or joints fail me.

The only change I would have made in my training: adding a few sleep-deprivation workouts so I could have experienced physical exertion while sleepy.

I will continue to follow a similar plan for any future endurance events I attempt because I am pleased that CrossFit and CrossFit Endurance enabled me to meet my goal. I intend to learn the Pose method to improve my training. Because I now have more experience training for, tapering for and running ultramarathons, I expect to see significant improvements in the future.

### Brian MacKenzie of CrossFit Endurance

#### Comments:

First, congratulations to Shane on his enormous accomplishment. Carl Borg and I have been reading Shane's



blog and tracking his progress throughout his training. It's incredibly interesting to us that someone so young can actually put together a training program, more or less on his own, for a distance he has never experienced.

The goal of finishing in less than 30 hours shows tremendous humility and respect for the distance. It's something most people do not have. Shane's belief that he could have finished in 24 hours is not far from the truth, either. Many things can occur in these races. Nothing is guaranteed. Especially finishing.

Shane's concluding paragraphs show he understands what he needs to work on and is ready to make changes. I do have some nutrition advice: set up drop bags at specific aid stations. That way Shane can have foods he knows he wants to eat and won't have to rely on the aid-station medley.

On to shoes. I don't believe the Vibram Five Fingers are a viable shoe for the gym. A flat shoe with a little more construction (e.g. DC skateboarding shoes) would have been better. Shane might benefit from larger strength gains and more explosive movements without neglecting the stimulus of the foot.

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to achieve greater success  
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**— Brian MacKenzie**

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Looking ahead, developing strength and conditioning while increasing stamina outside the 10 K is imperative for success in future events. And it seems like Shane is already on the way. As a 20-year-old CrossFit Endurance athlete, Shane has tremendous ability to recover. He's already reaping the benefits of his youth and strength.

Not that it's needed, but Shane's accomplishment provides further validation of the CrossFit Endurance methodology. The same might be said of Greg Amundson's performance (in which I was able to personally take part).

I have long believed that the best use of CrossFit is to achieve greater success in your sport. That was the thought behind CrossFit Endurance and CrossFit Football. Others are now seeing the potential. The mixed martial arts world has embraced CrossFit and seen huge gains.

Mark my words: it is only a matter of time before athletes in many sports more fully embrace CrossFit. We already see athletes continuing to compete at the highest levels when they "should" be retired. Athletes everywhere are beginning to use less volume and a serious strength and conditioning program that includes Olympic lifts. In so doing, they are starting to achieve their full potential. A changing of the guard is underway, and if Shane continues, he will probably be part of it.

### **Carl Borg of CrossFit Endurance adds:**

One of the most potent lessons learned here is Shane's understanding of how much more is possible with proper technique. Shane completed the race on whatever his current run form allowed. Wanting to learn technique is something that usually comes with age and wisdom—and after a handful of injuries.

I do have one training suggestion. The Tabata calf raises, albeit creative, should have been swapped for more explosive Olympic lifts. The concentric contraction and the burn of the calf raises was the idea, but it's the eccentric loading of the calf during running that causes the soreness. Again, once Shane learns the proper technique this will not be an issue.

As the CrossFit/CrossFit Endurance style of training becomes rooted in the endurance community, we look forward to seeing athletes like Shane continue to emerge and achieve new heights of power, speed and stamina without logging huge mileage. It all boils down to one word: performance.

### **And the editor gets the last word:**

We are pleased to announce that Shane will be attending a CrossFit Endurance Certification as Brian and Carl's guest. We look forward to following Shane's progress.



### **About the Authors**

*Shane Skowron hopes to pursue a career in Naval Special Warfare. He is a senior at Fordham University in New York City, where he studies computer science.*

*Brian MacKenzie and Carl Borg are the founders of CrossFit Endurance.*



Courtesy of Shane Skowron

***Skowron hopes to use CrossFit and CrossFit Endurance to finish his next 100 mile race under the elite 24-hour mark.***