

# the **CrossFit** JOURNAL ARTICLES

## Swimming, CrossFit Style

Tim Morrison

Amanda Beard, Jason Lezak, Aaron Peirsol, Lenny Krayzelburg. If you're remotely connected to the sport of swimming you recognize these as the names of Olympic champions. What you might not know is that in a swim training culture that usually has swimmers (who compete in events averaging two minutes) training like marathon runners, these athletes were trained in a manner that is pure CrossFit.

The mastermind behind the training center in Irvine, CA, where this training takes place is Dr. David Salo, who was named men's head coach at the World Championship meet in Montreal, Canada, that just concluded on July 31. For a guy who was almost blackballed from the community for espousing his radical training ideas twenty years ago, attaining this position today is quite a feat!

Back in those days, when Salo was a graduate student in exercise physiology at USC, his instincts as a swimmer and student told him that swimmers of all distances could swim faster on a fraction of the conventional training volume if the intensity was high enough. He scored a writing gig with *Swimming World* magazine and began presenting his theories and supporting evidence in its pages.

At a time when American swimming performance was falling severely behind that of countries that were training smarter, Salo, his ideas, and the magazine generated a strong backlash from the old coaching guard, who measured work in terms of total distance (rather than in terms of power, the primary requirement of swim events). "He's diluting the work ethic of the young," other coaches warned. The head of U.S. Swimming at the time was crusading for programs with more mileage

to get the nation's competitive swimmers back on track.

Needless to say, his column writing was short-lived. His only recourse was to walk the walk and produce performance. He took over the Irvine Novaquatics Club in the late 1980s and began training his swimmers at literally one quarter of conventional training volume (3500 total yards per workout) but with a variety of relentless high-intensity work in the pool and on the deck. Although the training volume was much lower than that of most other teams, athletes in his sessions typically produced four times the other swimmers' power output.

He began placing an increasing number of swimmers on Olympic teams, beginning with Amanda Beard in 1992, and his teams repeatedly won the U.S. Nationals. By 2005, there was no choice but to name him head coach of the world championships.

### Training

Salo's training revolves around a concept CrossFitters will recognize: work per unit of time. Power.

Load for swimmers is measured predominantly by speed. The faster the swim, the greater the resistance encountered and the forces exerted. Specifically, each athlete's projected race pace (PRP) is manipulated in a variety of ways to increase overload. Distances for sets rarely go over 150 meters and duration rarely exceeds twenty minutes. Sound familiar?

A wide variety of training modes and stimuli are used: multiple strokes for all swimmers regardless of specialization; upper- and lower-body overload; on-

1 of 4

## Swimming, CrossFit Style (continued...)

deck circuit work done in conjunction with swimming; a variety of resistance apparatus such fins, paddles, weight belts, stretch cords, pulling tubes, belts with chutes, and weighted diving bricks. All these provide the maximal overload and intensity possible in the water.

I know most CrossFitters are not training for competitive swim events and don't track goal times or paces, so what I'd like to do here is to present a few workouts in WOD fashion to give examples of high-intensity swim sessions that bring some CrossFit sensibilities to the swimming pool. Enjoy!

Perhaps a swim workout on your rest days?

### Assumptions

- You can swim! A passable technique of freestyle, breast stroke (or side stroke), backstroke, and perhaps butterfly provide variety of muscle use.
- You are in a 25-yard or 25-meter pool.
- You have a kickboard, fins, paddles, and buoy. A pulling belt with a chute and a weight belt are also great.

### The Workouts

These are benchmarks and form the core of each workout. You will warm up and do any other drills or training you like in addition to this. Unless otherwise specified, in the workouts described below, "pull" means using the arms only, with paddles on the hands and a buoy between the legs; "kick" means using the legs only, with the arms on a kickboard; and "swim" means using the full-body stroke. Calisthenics are done on the pool deck.

A suggested warm-up is three consecutively faster rounds of 150 meters swim, 100 meters kick, 100 meters pull.

## A - Exercise Swim Circuits

### A-1

For time:

- 50 squats + 500 meters kick
- 50 push-ups + 500 meters pull
- 25 burpees + 500 meters swim

### A-2

8 rounds for time:

- 15 squat jumps
- 25 meters swim underwater from dive
- 30-second vertical kick with hands out of water ("eggbeaters")
- 25 meters sprint kick

### A-3

8 rounds for time:

- 20 deep-end "muscle-ups" (start from full extension underwater with knees bent ninety degrees)
- 75 meters pull
- 50 bent-over stretch cord pulls (or 30 push-ups)
- 75 meters pull

### A-4

10 continuous rounds of:

- 1:00 vertical kick with weight held overhead (use fins if needed)
- 1:00 tread water with arms only, legs locked straight and still

### A-5

Partner Pulls: The first swimmer pulls the second swimmer, who kicks; 1-2 breaths max for each; switch positions every 25 meters: 24 x 25 meters; 10 seconds rest between rounds

## B - "Seals" Sets

These workouts present breath control challenges—a must for sprinters. Some require a 20-pound diving brick or equivalent.

### B-1

Record total time:

10 lengths swim

1 length underwater (use fins if needed)

9 lengths swim

1 length underwater

8 lengths swim

1 length underwater

7 lengths swim

1 length underwater

etc., down to 1 of each

### B-2

One minute rest between 50s:

12 x 50 meters swim (first 25 meters underwater; second 25 meters sprint)

Record average 50-meter time.

### B-3

8 rounds for time, with fins,

100 meters kick

25 meters swim, no breath

100 meters pull

25 meters swim, no breath

### B-4

Requires a 20-pound brick and 10-foot deep pool

8 rounds, one minute rest between rounds:

50 meters swim with head up

Surface dive and pick up brick

50 meters sidestroke, carry brick on your side

Record average time per round.

### B-5

Brick dive challenge:

How many times in 15 minutes can you surface dive and bring up a 20-pound brick? Only treading water is allowed between dives.

## C - Freestyle Swim Sets

### C-1

10 x 100 meters speed-play with 30 seconds rest between 100s; hold initial 25-meter speed throughout:

1. Sprint the first 25 meters

2. Sprint the second 25 meters

3. Sprint the third 25 meters

4. Sprint the fourth 25 meters

5. Sprint the first and third 25 meters

6. Sprint the second and fourth 25 meters

7. Sprint the first and second 25 meters

8. Sprint the second and third 25 meters

9. Sprint the third and fourth 25 meters

10. Sprint 100 meters

### C-2

Continuous. Decreasing numbers are moderate swim; 50s are timed sprints. Keep 50-meter times as close as possible to the first one.

400-50-350-50-300-50-250-50-200-50-150-50-100-50-50-50

### C-3

One minute rest between 100s:

10 x 100 meters swim

Record average 100-meter time.

### C-4

Swim the first set of 50s at 90% effort; try to hold that pace throughout the series:

5 x 50 meters, with 10 seconds rest between sets

4 x 100 meters, with 20 seconds rest between sets

3 x 150 meters, with 30 seconds rest between sets

2 x 200 meters, with 40 seconds rest between sets

1 x 250 meters

### C-5

Classic 1500 set (for you triathletes out there):

10 x 150 swim at projected race pace

Do every 7-10 days or so. Begin with 40

seconds rest between 150s; whenever you can hold all sets at your projected race pace, reduce the rest periods by 5 seconds.

## D - Component Training

Workouts using kicking and pulling apparatus such as fins, kickboards, hand paddles, and buoys.

### D-1

Multi-mode series.

1400 meters for time:

200 meters kick

200 meters with buoy

200 meters with buoy and paddles

200 meters with paddles only

200 meters with paddles and fins

200 meters with fins

200 meters swim

### D-2

How many rounds can you complete in 20 minutes?

100 meters kick (no fins)

100 meters pull

100 meters swim

Record rounds and fractions.

### D-3

Time each 25-meter set:

16 x 25 meters kick, with fins and kickboard; hold board perpendicular to the surface with half of it underwater

16 x 25 meters pull with paddles and with ankles wrapped in tire tube (or with belt and drag chute)

### D-4

1000 meters for time:

200 meters kick

200 meters pull

150 meters kick

150 meters pull

100 meters kick

100 meters pull

50 meters kick

50 meters pull (no fins)

### D-5

One minute rest between sets. Velocity assisted (i.e., use paddles and fins):

12 x 50 meters sprint

Record average 50-meter time,

## E - Multi-Stroke Swim Training

Substitute sidestroke for breaststroke if needed. Use fins on butterfly if needed.

### E-1

For total time:

25 meters back, 25 meters free, 25 meters breast; 25 meters free

50 meters back, 50 meters free, 50 meters breast, 50 meters free

75 meters back, 75 meters free, 75 meters breast, 75 meters free

100 meters back, 100 meters free, 100 meters breast, 100 meters free

125 meters back, 125 meters free, 125 meters breast, 125 meters free

### E-2

One minute rest between 100s:

10 x 100 meters individual medley (25 butterfly, 25 back, 25 breast, 25 free) Record best and average 100-meter times.

### E-3

3 x 400; one minute rest between 400s:

1. Alternate 25 meters fly and 25 meters back

2. Alternate 50 meters back and 50 meters breast

3. Alternate 100 meters breast and 100 meters free

Record total time for all three 400s.

Tim Morrison was a swim coach from the club to the university level for many years in Cincinnati and Seattle. He has run his own "SwimFit" business, (an overall fitness program with swimming as a core mode) in Chicago for the past ten years.

David Salo's book *SprintSalo* includes not only a season's worth of workouts but also an elaboration of the principles and physiological underpinnings of the training approach described here.