

2005 Kiehl's Badwater Ultramarathon Race Magazine

# BADWATER ULTRAMARATHON

The Challenge of the Champions



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"We're Out There"



AdventureCORPS, an event production firm specializing in ultra-endurance and extreme sports events, is pleased to host the 28th Kiehl's Badwater Ultramarathon on July 11-13, 2005. A true "challenge of the champions," this legendary race pits approximately 80 of the world's toughest athletes - runners, triathletes, adventure racers, and mountaineers - against one another and the elements. Covering 135 miles (217km) non-stop from Death Valley to Mt. Whitney, CA in temperatures up to 130F (55 centigrade), it is the most demanding and extreme running race offered anywhere on the planet.

The start line is at Badwater, Death Valley, which marks the lowest elevation in the Western Hemisphere at 280' (85m) below sea level. The race finishes at the Mt. Whitney Portals at 8,360' (2533m). The Badwater course covers three mountain ranges for a total of 13,000' (3962m) of cumulative vertical ascent and 4,700' (1433m) of cumulative descent. The Portals are the trailhead to the Mt. Whitney summit, the highest point in the contiguous United States.

Now in our sixth year producing this race, AdventureCORPS is pleased to welcome the return of our title sponsor, Kiehl's Since 1851, the hair and skin care company founded in New York City in 1851. We also welcome the support of E-CAPS Endurance Supplements and Injinji Anatomical Interface Systems. We appreciate the ongoing support of the National Park Service, Furnace Creek Inn and Ranch Resort, Whitney Portal Store, and Lone Pine's Dow Villa, Seasons Restaurant, Pizza Factory, and Lo-Inyo Elementary School.

Special thanks go to all the people behind the scenes who help to make this race happen. An incomplete list of these generous folks includes Laurie Streff, Dan Dominy, Keith and Poosa Kostman, Mike Angelos, Dave and Margaret Nelson, Leon Draxler, John Wiley, Joe Garza Jr., Don Meyer, Anna Boldon, Mike Schafer, Adeline Goss, Jim Freim, Randy Klassen, Bruce Gungle, Marvin Snowbarger, Tracey Fawns, Jim Fawns, Dr. Lisa Bliss and David Bliss, Dr. Kent Wang, Kelly Clancy Garvey, Shayne Garvey, Mike Henebry, Scott Wall, and many others. We also extend special thanks to Kevin Fung for the design and layout of this Race Magazine.

Sincerely,



Chris Kostman  
Race Director and Chief Adventure Officer

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## GENERAL INFORMATION

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### GENERAL INFORMATION

**DATE:** Monday-Wednesday, July 11-13, 2005.

**DISTANCE:** 135 miles.

**WHO:** An international, invitational field of approximately eighty endurance athletes representing twelve or more countries and twenty or more American states. See the race roster for full details.

**MANDATORY RUNNER CHECK-IN:** 12:00-2:00PM, Sunday, July 10, 2005, Visitors Center Auditorium, Furnace Creek, CA. Every runner must personally attend at some point during the two hour timeframe. Photo identification is required for all runners. Please bring the completed Runner Check-In Form and signed waivers for all crew members and the runner. All paperwork must be complete before walking in the door. Photo identification is required for all runners.

**MANDATORY PRE-RACE MEETING:** 3:30PM to 5:00PM, Sunday, July 10, 2005, Visitor's Center Auditorium, Furnace Creek, CA. Runner and at least one crew must attend for the entire meeting. All crew members should attend.

**MEDIA:** There will be a brief meeting of all journalists after the Pre-Race Meeting in the auditorium. All media must register with AdventureCORPS. TV/video crews must have filming permits from National Park Service, United States Forest Service, and AdventureCORPS.

**STARTING LOCATION:** Badwater, Death Valley, CA, 280 feet below sea level.

**STARTING TIME:** 6:00AM, 8:00AM, and 10:00AM, Monday, July 11, 2005. Up to 30 runners per group. Runners and crews may attend only their assigned start time. Runners must check in at Badwater, ready to race, 30 minutes prior to their start.

**ENDING LOCATION:** The end of Whitney Portals Road, above Lone Pine, CA, on Mt. Whitney, elevation 8360 feet. The race does not continue up the Whitney Trail further onto the mountain.

**ENDING TIME:** The event is officially over 60 hours after each starting group, so either 6:00PM, 8:00PM, or 10:00PM, Wednesday, July 13, 2005.

**COURSE RECORDS:** Men's: Anatoli Kruglikov, 2000, Russia, 25:09:05. Women's: Pam Reed, 2002, USA, 27:56:47.

**RACE IDENTIFICATION:** Each entrant is assigned a race number for identification purposes. The race number must be worn on the front of the body, unmodified, unfolded, and visible at all times during the race. It may not be worn on the head or hat. Racer numbers are listed on the race roster.

**POST RACE GET-TOGETHER:** 6:00PM, Wednesday, July 13, 2005, Lo-Inyo Elementary School, Multi-Purpose Room, Lone Pine, CA. All racers are encouraged to complete the race in time for this event! Pizza and drinks will be served at this informal get-together. No charge.

**POST RACE BREAKFAST:** 8:00AM to 10:00AM, Thursday, July 14, 2005, Seasons Restaurant, 206 South Main Street, Lone Pine, CA. This will be an informal get-together, planned to provide one last opportunity for Badwater runners and crews to get together and share stories. Juice, coffee, eggs, muffins, yogurt, and the like will be provided. Room for 75 people total! First come, first served. No charge.

**AWARDS:** All racers who begin the event will receive up to five Kiehl's Badwater Ultramarathon race t-shirts, a hat, a Race Magazine, and a goodie bag. All racers who officially complete the event within 60 hours will receive a commemorative certificate, a finisher's medal, and a finisher's t-shirt. All racers who officially complete the course within 48 hours will also receive a commemorative Badwater Ultramarathon buckle.

**WEBCAST:** Spread the word that we will post time splits, commentary, and images on a regular basis for the duration of the 60 hour race at [www.badwater.com](http://www.badwater.com). We will post time splits, images, and much more, beginning a few hours after the start of the race. As for time splits, keep in mind

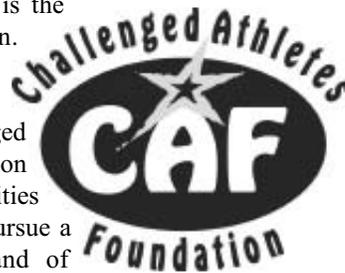


*Keith Kostman is the Webcast Guru.*

that the first time station is 17 miles into the race and it will take people several hours to get there. And remember, this is a webcast, not television. You have to be patient and keep in mind that you are not "viewing" the race in "real time." That said, it's going to be great! The webcast team and Race HQ will be set up in a hotel room in Furnace Creek on Monday, then in Lone Pine for the rest of the race.

**OFFICIAL CHARITY:** The official charity of the 2005 Kiehl's Badwater Ultramarathon is the Challenged Athletes Foundation.

One of the goals of the race is to raise awareness of, and funds for, this organization. The Challenged Athletes Foundation was created on the belief that people of all abilities should have the opportunity to pursue a life full of physical activity and of sports. Be they recreational or in pursuit of a gold medal at the Paralympic Games, people with a physical disability are limited only by their access to funding. Visit [www.challengedathletes.org](http://www.challengedathletes.org) or [www.adventurecorps.com.com/caf/](http://www.adventurecorps.com.com/caf/) for more info.



**DONATE YOUR LEFT-OVER GEAR:** After the race, when you're staring at coolers, folding chairs, umbrellas, and things you can't get on the plane with you, please donate them to a good cause, such as the Lone Pine Chamber of Commerce, Good Will of Santa Monica, and the Las Vegas Rescue Mission.

**PERMITS:** This event is held under permits from the Inyo National Forest, Death Valley National Park, California Department of Transportation, and Inyo County. (If one of them won't issue us a permit, this race is history. So don't screw up!)

**RENTAL CAR SPECIAL RATES:** Participants in AdventureCORPS events can receive special discount rates on cars and vans from Enterprise Rent-a-Car. Call 800-325-8007, 800-593-0505, or any local branch and mention account # 32C1631.

**DRIVING DISTANCES**

- Las Vegas Airport to Furnace Creek: 140 miles
- Los Angeles Airport to Furnace Creek: 250 miles
- Lone Pine to Las Vegas Airport: 240 miles
- Lone Pine to Los Angeles Airport: 210 miles

**DIRECTIONS TO FURNACE CREEK FROM SOUTHERN CALIFORNIA:** Here is the most direct

route from Los Angeles (or anywhere that passes through Mojave on the way to Death Valley): Reset odometer to zero in Mojave and take Hwy 14 north. At mile 20, veer right onto Randsburg Road. At mile 32.2, stay straight (not right). Go left at the t-intersection junction with Hwy 395 at mile 40.5. At mile 43.6, turn right on Searles Station towards Trona (easy to miss). At mile 50, a t-intersection, turn left to Trona. At mile 58.4, another t-intersection, turn right on Hwy 178 towards Trona. Pass through Trona, including its Texaco gas and mini mart, at mile 71.0.

At mile 104, you have two options. If it's nighttime or you don't like a little adventure, turn left towards Death Valley via Hwy 190. At mile 117.5, turn right at the t-intersection on Hwy 190 towards Death Valley. You will go over Townes Pass (elev. 4965'), pass through Stove Pipe Wells (gas, mini mart, hotel, and restaurant), then arrive at Furnace Creek at mile 170.

Your second option back at mile 104 is infinitely more fun and interesting, as well as even quieter. It's truly epic and feels like going back in time a few zillion years. So, at mile 104, if it's daylight and you have a working spare tire in your car, stay straight towards "Death Valley via Wildrose" instead of veering left as in option one. You will ascend over Emigrant Pass (elev 5318'). But first you'll go over three very short gravel stretches. They are only a few tenths of mile each and are easily passable in a normal car, unless there's a storm dumping on you. Be sure to check out the neat little oasis-like canyon you'll pass through. At mile 113.5, go left at the t-intersection towards Stove Pipe Wells and Furnace Creek. At mile 121 you'll summit Emigrant Pass. At mile 134.3, turn right at the t-intersection with Hwy 190 towards Furnace Creek. You'll pass through Stove Pipe Wells at mile 143.5 on your way to Furnace Creek, which you'll reach at mile 168. Voila!

**DIRECTIONS TO FURNACE CREEK FROM LAS**

**VEGAS AIRPORT:** From the airport take I-15 south several miles to exit for Nevada Rt. 160 and go west toward Pharamph 55.8 miles. There, make a left on Bell Vista Rd. and go to dead end (Armogosa Opera) House and make a right. Then go 1/10 mile and make a left of Stateline Rd. (becomes CA 190 once you enter CA) and continue straight to Furnace Creek.

**RACE HOTELS:** We have reserved blocks of rooms in Furnace Creek, Stovepipe Wells, and Lone Pine during our event. Use the information provided here to make your reservations and to secure the special rates that we have obtained for Badwater Ultramarathon racers, crew, and

## GENERAL INFORMATION

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2004 runner-up Ferg Hawke and crew break the tape.

staff. Do not delay in making your reservations; the Death Valley area is a very popular place during the summer.

### **Furnace Creek Inn and Ranch Resort (mile 17 on race route)**

Phone 760-786-2345, Fax 760-786-2307

Booking Number: 6595

Password: Badwater Ultra

Rates: \$105/night for one or two occupants; \$20 per room extra for each additional occupant; \$20 for a roll-away bed.; plus 9% tax and a \$2.50 energy surcharge. Reservations must be made by phone or fax. Do not use their website if you want to use these special rates or use rooms that we have blocked for our group. Be sure to use the booking number and password and be clear on exactly what type of accommodations you require. We have a block of 35 rooms reserved on 7/09 and 90 rooms reserved on 7/10.

### **Stovepipe Wells Village (mile 42 on race route)**

Phone 760-786-2387, Fax 760-786-2389

Password: Badwater Ultra

Rates: \$79/Standard: two beds; \$99/Deluxe - larger room with TV and fridge - with one or two beds; plus 9% tax. Reservations must be made by phone or fax. Be sure to use the password and be clear on exactly what type of accommodations you require. We have a block of 40 rooms reserved on 7/10.

### **Panamint Spring Resort (mile 71 on race route)**

Phone 775-482-7680, Fax 775-482-7682

Website: [www.deathvalley.com](http://www.deathvalley.com)

We will have the cottage set up as a way station for run-

ners and crews, but many runners choose to reserve their own room here as well.

### **Lone Pine (mile 122 on race route):**

#### **Dow Villa**

Yolanda Chavez, Manager

310 South Main Street

Lone Pine, California, 93545

800-824-9317, 760-876-5521. 760-876-5643 (fax)

Website: [www.dowvillamotel.com](http://www.dowvillamotel.com)

They have 45 rooms set aside under "Badwater Ultra."

#### **Alabama Hills Inn**

1920 South Main Street

Lone Pine, California, 93545

800-800-6468 (toll free), 760-876-8700, 760-876-8704

(fax)

#### **Mt. Whitney Motel**

305 North Main Street

Lone Pine, California, 93545

800-845-2362

#### **Lone Pine Budget Motel**

138 West Willow

Lone Pine, California, 93545

760-876-5655, 760-876-5738 (fax)

#### **Trails Motel**

633 South Main Street, PO Box 65

Lone Pine, California, 93545

800-862-7020

#### **Portal Motel**

425 South Main Street

Lone Pine, California, 93545

800-531-7054, 760-876-5930, 760-876-5517 (fax)



**WHAT TO BRING**

**GEAR:**

Flashlights and battery lantern.  
 Ice chests and large fluid containers.  
 Folding chairs and/or cot.  
 Umbrella, tarp, and/or canopy.  
 Garbage bags, plastic bags, baggies.  
 Utensils, plates, cups, etc.  
 Bucket or basin.  
 Scale for runner weighing during race.  
 Water sprayer.  
 Clipboard, pens, pencils, notepaper.  
 Duct tape, rope, cord, string.  
 Towels of various sizes.  
 Paper towels and toilet paper.  
 Camera and film, if needed.  
 Cellular phone (often won't work).  
 Satellite phone (recommended).

**FOOD AND DRINKS:**

Water and ice (lots and lots).  
 Electrolyte/fluid: E-CAPS, Gatorade, Club Soda, plus pretzels, peanuts, corn-nuts, salt, etc.  
 Carbohydrate: Sustained Energy, Hammer Gel, Perpetuum, fig newtons, pop tarts, plus watermelon, cantaloupe, oranges, and other fruit.  
 Caffeine: Soda, coffee, tea, cocoa, etc.  
 Other food: Bread, sliced turkey, cheese, peanut butter,

jelly, cup-of-soup, oatmeal, jerky.

**MEDICINES:**

Sun block, lip balm, etc. (provided by Kiehl's)  
 First aid kit.  
 Thermometer for body and outside air temperatures.

**FOOT BOX:**

Micropore tape (3M), Band-Aids, dressings, etc.  
 Compeed, Elastogel, Duoderm, etc., for pressure areas and blisters.  
 Swabs, needles, razor blades, tweezers, scissors, etc.

**RUNNING GEAR:**

Toe socks, "Tsoks," by Injinji. See [www.injinji.com](http://www.injinji.com)  
 Full coverage solar-protective clothing (white from head to toe).  
 Race number, worn unmodified and unfolded at all times.  
 Light-colored running shoes (several), including pairs one and two sizes larger.  
 Insoles, orthotics, etc.  
 Hat with long-bill or wide brim plus neck shroud.  
 Dark glasses, summit goggles, swim goggles.  
 Scarf or handkerchief.  
 Reflective gear (mandatory): strobe light, flashers, reflective vest. Awesome little strobes available from <http://www.roadid.com/?referrer=2305>



Logo and letterhead design,  
 Identity design, Illustration,  
 Brochures, Catalogs, Flyers

Contact: Kevin Fung • [yukitopia@mac.com](mailto:yukitopia@mac.com)

# LE DESERT

-BADWATER BECOMES A RACE-

By Richard Benyo

Originally published in *Runner's World*, August 1988

*The lowest, hottest, nastiest place in the United States lies only 146 miles away from one of the highest and the coldest. Need we say more?*

Badwater, California may be the hottest place on Earth. Temperatures in this Death Valley sinkhole generally run a few degrees hotter than in nearby Furnace Creek, where a high of 134F has been recorded. (The world record, set in the Sahara, is 136F.) Also the lowest point in the Western Hemisphere, at 282 feet below sea level, Badwater is as dry as it is hot. In an average year it receives only a couple of inches of rain.

In contrast, a mere 90 miles west as the buzzards soars, or 146 miles by road, Mount Whitney rises beyond the clouds to 14,494 feet, making it the tallest peak in the contiguous United States. On the top of Mt. Whitney, the temperature can fall to zero in midsummer.

The tantalizing proximity of Badwater to Mt. Whitney lures many adventurers, despite the obvious - and sometimes fatal - discomforts. Experienced hikers occasionally walk the course, taking about a week to complete it. And runners, at least since 1973, have chal-

lenged its torturous route, though few have made it all the way. Between 1974 and 1986, a steady trickle of thrillseeking runners mounted 70 attempts on the course. Four succeeded. The first was Al Arnold in 1977 in 84 hours, followed four years later in 1981 by fellow American Jay Birmingham in 75:34. The current world record of 56:33 was set by New Zealand's Max Telford in 1982, followed by American Gary Morris' 1983 effort in 76:38.

In 1986, two Californians, Tom Crawford and Mike Witwer, tried to organize an official race from Badwater to Mount Whitney. Twenty-two ultramarathoners signed on, but the event was cancelled when the organizers failed to obtain liability insurance - not for the runners but for the support crews. Crawford and Witwer, deciding to tackle the distance on their own, completed the course in 70:27.

On July 31, 1987 at 6:31 AM, five runners started the first race from Death Valley to Mount Whitney. Two women - Eleanor Adams and Jean Ennis - and three men - Crawford, Ken Crutchlow and David Bolling - began the course at the same time.

Adams, a 39-year-old Briton and the first woman to exceed 200 miles in a 4-hour race, wasted no time racing into the lead. Responding to an ad for the race, she had written, "My philosophy in life is to never pass up an opportunity. If you do, you never know when it'll come again."

Crutchlow and Adams were running as part of a British male-female team against the American team of Crawford and Ennis. Crutchlow, an expatriate English adventurer with an ego as large as his imagination, can lay claim to having started this running-through-Death Valley madness. In 1973, he teamed with Paxton Beale, a California hospital administrator, to finish the 146 miles in a running relay. Now 45 years old and 15 pounds overweight, Crutchlow planned merely to complete the course in a respectable time, hoping Adams' speed would carry their team to victory.

Crawford, 41, and Ennis, 40, a former polio victim who had just run her first Western State 100 the previous month, planned to run side-by-side to lend each other support. Bolling, a journalist, had been writing about Ken Crutchlow's magnificent obsessions and decided at



*Crawford and Ennis stayed in synch for the entire distance in 1987.*

the last minute to accompany the subject of his articles. In midafternoon of their first day, the five runners learned that they weren't alone. Gill Cornell, of nearby Ridgecrest, had set out on the course the previous evening at 10pm.

Crawford and Ennis came closest to Adams at the 52-mile point, where they narrowed the gap to 7 \_ minutes. But Adams revived during the night, when temperatures dipped under 100F. She encountered her worst period the next day, near the town of Keeler (108 miles). Having already lost 16 pounds, Adams, her strength flagging, was forced to adopt a routine of running 2 miles, resting 10 minutes, running 2 miles, resting 10 minutes.

By this time, Crawford and Ennis trailed by more than 4 hours. Blisters forced Crawford to stop frequently to have his feet retaped. At one point, Ennis sat down on the frying pan road and fell asleep.

With the assistance of an experienced mountain guide, Adams ascended Mount Whitney just before a savage hailstorm struck. She reached the top after 53:03, a new women's record and better than Max Telford's old course record. Crawford and Ennis got caught in the hailstorm Adams avoided, but still managed to complete the course together in 58:57.

And what of Kenneth Crutchlow, who

needed a time better than 65 hours if he and Eleanor Adams were to win the two-person team contest? Crutchlow and Bolling covered the course at what can only be called a pedestrian race, reaching the top of Mt. Whitney in 126:30.

The starting line for 1988 forms just the far side of Badwater, where the air is thick and the water scant.



# THE DANGERS OF RUNNING IN THE HEAT

By Jason Hodde, MS, ATC/L



Canadian Ferg Hawke, the 2004 runner-up, passes Keeler.

Running in hot weather can pose many dangers to ultrarunners. Although most runners are aware of the dangers of running for prolonged distances in hot and humid weather, many are also inadequately prepared for the intense stress placed on the body during these hot weather runs.

In July 2002, I participated in the 25th anniversary of the Badwater Ultramarathon, a 135-mile trek from the lowest place in the continental United States (Badwater Basin), through Death Valley National Park, and to the foot of Mount Whitney, the Whitney Portals, at an altitude of 8,360 feet (2,548 meters). The run was held in the middle of one of the most severe heat waves southern California has ever seen. In preparation for the run, I made sure my crew was aware of the signs and symptoms of heat illness, as well as how to treat me should problems occur. Although the most extreme weather is likely behind us for the year, the combination of moderate heat and humidity can still make some of those fall ultras dangerous to your health. Here are some of the dangers of ultrarunning in the heat, and preventative measures that can be taken to avoid potential problems.

## The Heat Index

The heat index is the apparent temperature felt by the body due to the combined effects of actual temperature and humidity. Most people understand that as the air temperature goes up, so does the heat index, but humidity also plays a role. As the humidity rises, the body is unable to efficiently evaporate the sweat it produces. Therefore, the perceived temperature is much higher than the actual air temperature. The loss of cooling efficiency thus makes exercise extremely dangerous.

	Air Temperature (Degrees F)										
	70	75	80	85	90	95	100	105	110	115	120
Relative Humidity	Heat Index										
0%	64	69	73	78	83	87	91	95	99	103	107
10%	65	70	75	80	85	90	95	100	105	111	116
20%	66	72	77	82	87	93	99	105	112	120	130
30%	67	73	78	84	90	96	104	113	123	135	148
40%	68	74	79	86	93	101	110	123	137	151	
50%	69	75	81	88	96	107	120	135	150		
60%	70	76	82	90	100	114	132	149			
70%	70	77	85	93	106	124	144				
80%	71	78	86	97	113	136	157				
90%	71	79	88	102	122	150	170				
100%	72	80	91	108	133	166					

Data from the US National Weather Service

Although it is convenient to use a single number to describe the apparent temperature your body feels, keep in mind that heat and humidity affect everybody differently. Several assumptions are made to calculate the heat index measurements in the table below. Specifically, the heat index assumes the body to be:

- 5' 7" (170 cm) in height
- 147 pounds (67 kg) in weight
- Caucasian
- At 98.6° F (37° C) body temperature
- Clothed in long pants and a short-sleeved shirt
- In shade

- Walking at a speed of 3.1 mph (5 kph)
- In a breeze of 6 mph (10 kph)
- Not dripping with sweat

Changing any of these factors can either increase or decrease the heat index from those shown in the table. Be aware that heat index values of over 100 significantly increase your risk of heat-related illness.

### Heat Illnesses

There are three major heat illnesses—and all of them can be exacerbated by ultra distance running and prematurely end an ultrarunner's race. In all cases, the main reason that runners experience heat illness is dehydration. If you replace lost fluids and electrolytes and are able to train your body to process a high volume of fluid in a short period of time, you significantly decrease the risk of experiencing these race-ending medical emergencies.

**Heat cramps:** Exercising in hot weather can lead to muscle cramps, especially in the legs. This is usually caused by imbalances or deficiencies in your body's electrolyte stores. A cramp is characterized by sharp, stabbing pain in the muscle and rarely works itself out on its own. On a training run earlier this year in Death Valley, many runners complained of cramps in their legs; I suffered from cramps in my diaphragm and had difficulty breathing for more than an hour! Cramps become less frequent with heat training, but for those of us unaccustomed to such extreme conditions, maintaining adequate hydration and electrolyte balance is critical to avoiding them. To eradicate cramps, you should stop running, drink fluids containing electrolytes, cool your body with wet towels, and immediately get out of the sun.

**Heat exhaustion:** Losing fluid and electrolytes through sweat leads to dizziness and weakness if the lost fluids are not replaced. Heat exhaustion is characterized by a moderate rise in body temperature, dizziness, nausea and vomiting, and a headache. You might also experience weakness, lack of coordination, heat cramps, heavier than usual sweating accompanied by moist and cold skin, and "goose bumps." Your heart rate may rise and you won't be able to run as fast due to fatigue. Many runners—even those who are well trained—will suffer from mild heat exhaustion after running for several hours in hot and humid conditions. If you experience the signs of heat exhaustion, stop running immediately and drink fluids containing electrolytes, cool your body with wet towels, lie down and elevate your feet a few inches above your heart, and immediately get out of the sun. Since heat exhaustion can lead to the most severe form of heat-related illness, heat stroke, seeking prompt medical attention for heat exhaustion is also highly recommended.



*Dr. Lisa Stranc-Bliss tends to Jody Lynn-Reicher during the 03 race.*

**Heatstroke:** In extreme cases heat can upset the body's thermostat, causing body temperature to rise to 105 degrees F or higher. This is a life-threatening situation that requires immediate medical attention. While it is common for untreated heat exhaustion to rapidly progress to heatstroke, heatstroke can (and does) occur without the signs of heat exhaustion being apparent. Symptoms of heatstroke include lethargy and extreme weakness, confusion and odd or bizarre behavior, disorientation and unconsciousness. Because heatstroke is a complete failure of the body's temperature regulation system, sweating ceases and the skin becomes hot and dry. Convulsions or seizures can occur as the brain begins to shut down. Coma and death are also possible in extreme cases. Heatstroke is a medical emergency that requires immediate medical attention. Call the emergency response system immediately! Get the runner out of the sun, remove all clothing, and immediately rub their body with ice or immerse the runner in cold water.

By staying properly hydrated and recognizing the early warning signs of heat illness, as a runner you can prevent a heat-related problem from becoming a life-threatening situation. As a volunteer, recognizing these heat-related dangers may one day help you save the life of a runner who has underestimated the intensity of the surroundings.



#### *About the Author:*

*Jay is a nationally Certified Athletic Trainer (ATC) licensed to practice in Indiana. He holds Master's degrees in Exercise Physiology and the Basic Medical Sciences, both from Purdue, with an emphasis on tissue repair and healing. He is currently pursuing a Ph.D. in Pathology, where his emphasis is on the immunopathologic response to soft tissue implants. Jay also works full-time as a scientist for Cook Biotech Incorporated, a medical device company in Indiana. He has completed over 60 ultramarathons, including the Grand Slam of Ultrarunning, but has yet to conquer the Death Valley heat.*



Joe Prusaitis is tended to by his crew in 03.

# THE DANGERS OF HOT WEATHER RUNNING

## DEHYDRATION, HEAT CRAMPS, HEAT EXHAUSTION, HEATSTROKE & HYPONATREMIA

By Claudio Piepenburg (Originally published by Road Runner Sports)

Running in hot weather can pose dangers to runners. Particularly dangerous is racing in hot, humid summer conditions. Here's how to protect yourself from these five serious (and potentially fatal) conditions.

### Dehydration

Dehydration is not limited only to the summer months, although it's probably more likely to occur during that time. Many physicians believe that most people are in a constant state of dehydration. Since coffee, tea, soda and alcohol act as a diuretic, anyone who drinks these fluids on a daily basis, and doesn't drink at least an equal amount of water, will probably be dehydrated. If the person is physically active, the potential for dehydration is even greater.

Working out in hot, humid conditions promotes sweating, which in turn can cause dehydration. Sweating is good for you because it cools your body, but when you lose too much water you become dehydrated. If you're already slightly dehydrated, sweating will only make it worse. It's important to maintain an adequate fluid intake all the time. Don't expect that you can make up for several days of not drinking enough by downing two cups of sports drink before your next long run or race. It's important to keep hydrated all the time. Once you start to feel thirsty, it's too late.

The average (sedentary) person needs a minimum of eight 8-ounce glasses of fluid a day. Runners need more: anywhere from four to eight quarts of fluid. That translates to at least sixteen 8-ounce glasses daily. Remember that diuretics don't count! Drink water and sports drinks, and if you don't have to worry about calories, fruit drinks or juice.

Two hours before your daily summer workout or a race, you should drink 16 ounces of fluid. Then ten minutes or so before you start to run, drink another one or two cups of water or sports drink. Drinking early and drinking often is the key. During a race you should drink six to twelve ounces of fluid every 15-20 minutes. If the weather is very hot, you may need to drink even more. Training in warm weather, you should drink at least every 35 to 40 minutes. (Remember you will have already had two 8-ounce glasses before you started.) If you're running a race shorter than 30 minutes, you probably won't need any water other than what you drank before the start. The same goes for the last few miles of a longer race. If you're racing or training for longer than an hour, drink sports drinks as opposed to strictly water.

Start drinking immediately after finishing a run, no matter if it was a race or a workout. Minimum is 16 ounces for every

30 minutes you ran. If you tend to sweat a lot, you'll need more. Weigh yourself after you've run. Drink at least 16 ounces of fluid for every pound you lose through sweating.

By monitoring the color of your urine you can tell if you're hydrated. It should be pale yellow or even clear. If it isn't, you need to drink more fluids. It's important that you retain the fluid, so be careful if you're urinating every fifteen or twenty minutes. To restore your fluid balance, eat something salty (a bag of pretzels, salted nuts, crackers or potato chips), then drink a sports drink. The salt will make you thirstier, so you'll take in even more fluid and urine production will decrease.

### Heat Cramps

Have you ever seen a runner bent over at the side of the road massaging their calves during a race? Chances are that he or she had heat cramps. Heat cramps are very painful (envision someone stabbing a knife deep into your muscles!) and rarely "work themselves out". The cramps occur because you've lost minerals through sweating and dehydration. Once you've reached the point of heat cramps, it's too late to try to replace fluids on the run. To make the cramps go away you should:

- Stop running
- Drink fluids immediately. The fluids should include sports drinks as well as water
- Massage the muscles once the pain begins to subside
- Cool your body with wet towels
- Get out of the sun

### Heat Exhaustion

Heat exhaustion is a very serious condition that can lead to heatstroke. The symptoms of heat exhaustion are:

- Dizziness
- "Goose bumps" (particularly on the torso and arms)
- Nausea (sometimes accompanied by vomiting)
- Moderate to severe headache
- Weak legs
- Lack of coordination
- Rapid pulse
- Heavy sweating often accompanied by moist and cold skin
- Muscle cramping

If you experience any of these symptoms you must:

- Stop running immediately
- Get medical attention

- Drink large amounts of fluids, including sports drinks
- Get out of the sun
- Lie down and elevate your feet above your heart
- Loosen your clothing

### Heatstroke

Heatstroke can be fatal. Unfortunately runners will sometimes ignore the symptoms of heat exhaustion (particularly in races longer than 10K) and will continue to push themselves until they're nearing a total thermoregulatory breakdown. The symptoms of heatstroke are very similar to those of heat exhaustion, but rapidly progress to:

- Disorientation
- Weakness in the legs to the point that the runner may fall
- Strange behavior (including flailing with the arms and shoving)
- "Fuzzy" thinking
- Rapid pulse
- Cessation of sweating and hot/dry skin
- Body temperature that may reach 104 degrees or higher
- Lack of consciousness
- Convulsions or seizures
- Coma

Someone suffering from heatstroke needs immediate medical attention. They should be moved out of the sun, cooled by either rubbing their body with ice or immersing them in cold water and given fluids intravenously.

### Hyponatremia

Within the last few years the condition known as hyponatremia has begun to attract the attention of sports medicine physicians, exercise physiologists, and the medical direc-



*Scott Weber gets the squirt that refreshes in 02.*

tors at some of the larger marathons around the country. Hyponatremia has been called water intoxication because of the symptoms it produces. According to Dr. Tim Noakes, Professor of Exercise & Sports Science Director at the University of Cape Town, "...a person with hyponatremia looks like he or she is mildly drunk. They can't concentrate normally...they forget what you were talking about and start to concentrate elsewhere."

Hyponatremia occurs when the body becomes dangerously low in sodium. It's caused when you literally take in too much water. Although scientists have known about it for a long time, it has only been in the last few years as more runners have been competing in marathons that it has become a concern. According to Dr. Noakes, fluid has to be ingested at high levels for several hours for hyponatremia to occur. He suggests that a runner would have to be drinking water regularly for at least four to six hours to develop the condition. So runners taking four to six hours or more to run a marathon are at particular risk.

Unfortunately, symptoms of hyponatremia tend to mimic those of severe dehydration and/or heat exhaustion. By giving the athlete more water to drink the hyponatremia becomes worse, as more and more sodium is flushed out of the system. If a runner with hyponatremia is given fluids intravenously, they can suffer a fatal reaction. Dr. Noakes

and other sports medicine professionals recommend that physicians and other medical personnel at road races be alert for the signs of hyponatremia. One of the earliest symptoms is a craving for salty food.

Although hyponatremia is rare, it's wise to be aware that it can occur, particularly if you're running a marathon in unusually hot weather. Hyponatremia serves as a reminder that water is good, but don't forget sports drinks, which replenish your body with the sodium, potassium and other trace minerals you lose through sweat. It's worth repeating: if you're going to be running (or racing) for longer than an hour, you should be drinking a sports drink as well as water.



### About the author:

*Claudia Piepenburg has been running for 21 years and is the current editor for Peak Run Performance. She holds or has held state age-group records in Michigan, North Carolina, Florida, Tennessee and Virginia. In 1990, she was ranked 18th fastest masters woman in the world and 8th fastest masters woman in the U.S. in 1990 and 1991. She competed in the 1988 Olympic Marathon Trials, was 20th woman overall in the 1987 Boston Marathon and women's winner of the 1986 Virginia Beach Marathon. If you have questions or comments for Claudia, she can be reached at [cpiepe@roadrunnersports.com](mailto:cpiepe@roadrunnersports.com).*

### Medical Risks in the Badwater Ultramarathon

This 135 mile race is probably the most physically taxing competitive event in the world. It also has considerable medical risks. All runners and crews must appreciate these two facts both before and during the race.

Heat illness and heat stroke are serious risks. These can cause death, renal shutdown, and brain damage. It is important that runners and crews be aware of the symptoms of impending heat illness. These include: nausea, vomiting, headache, dizziness, faintness, irritability, lassitude, weakness, and rapid heart rate. Impending heat stroke may be signaled by a decrease in sweating and goose bumps, especially over the chest.

Heat stroke may progress from minimal symptoms to complete collapse in a very short period of time. Deaths and renal shutdown (kidney failure) have been reported in other ultra-marathons. Adequate conditioning is mandatory.

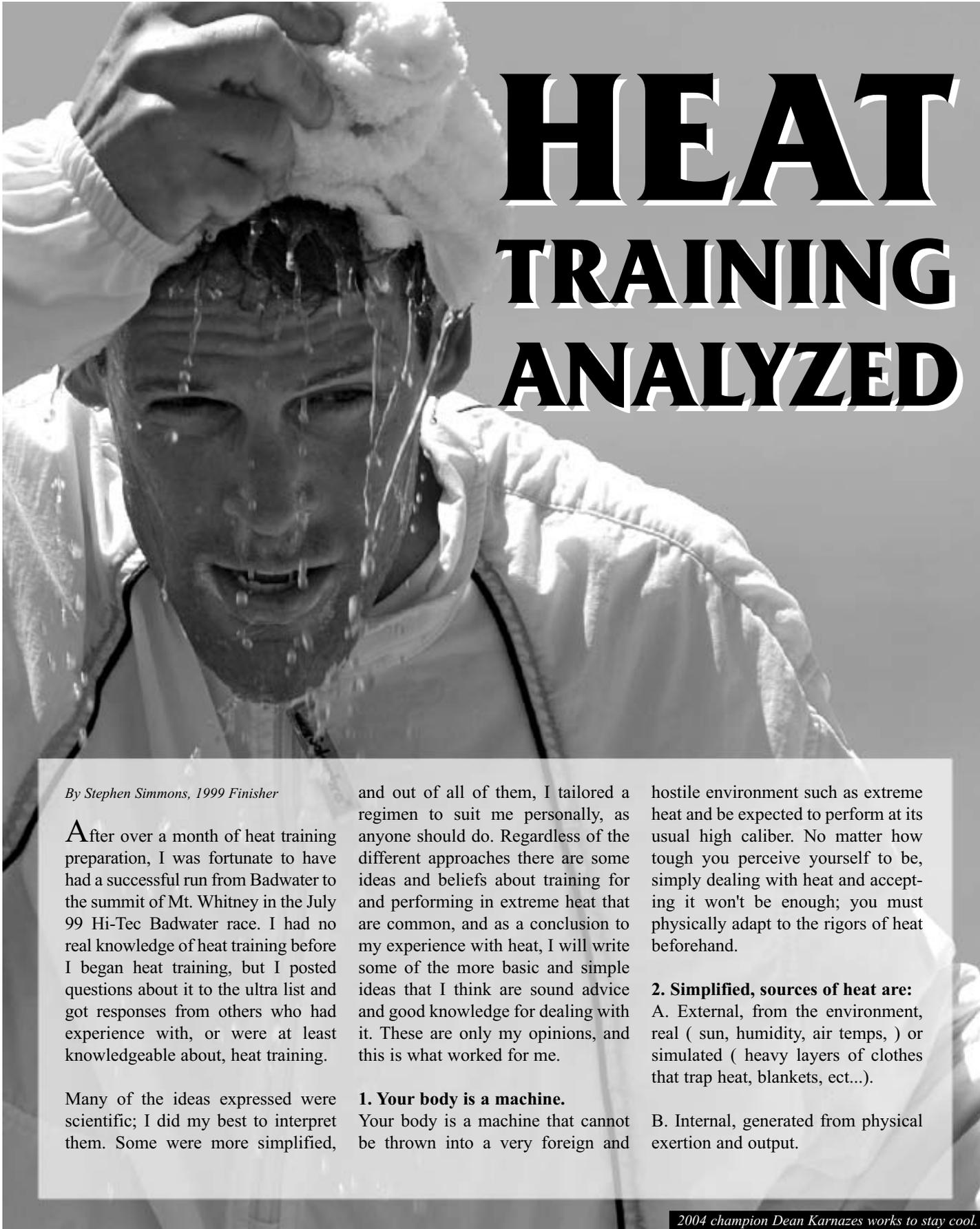
Adequate fluid and electrolyte intake is the most important preventative for heat illness. Runners may well require dozens of gallons of fluid during this race. Proper pace is crucial.

The high altitude plus exertion can also produce various degrees of altitude sickness. This can lead to severe lung and brain swelling, and even death. The main treatment is rest, and especially to get to a lower altitude.

Blisters are also a problem on this course, with pavement temperatures perhaps reaching 200 degrees. Proper foot care & preparation are essential for having a successful race.

Remember, you are responsible for your well-being while participating in this race. There are no aid stations. Know where your limits are and know your body. Your acceptance of invitation to this race declares that you are aware of the risks & potential health problems.





# HEAT TRAINING ANALYZED

*By Stephen Simmons, 1999 Finisher*

After over a month of heat training preparation, I was fortunate to have had a successful run from Badwater to the summit of Mt. Whitney in the July 99 Hi-Tec Badwater race. I had no real knowledge of heat training before I began heat training, but I posted questions about it to the ultra list and got responses from others who had experience with, or were at least knowledgeable about, heat training.

Many of the ideas expressed were scientific; I did my best to interpret them. Some were more simplified,

and out of all of them, I tailored a regimen to suit me personally, as anyone should do. Regardless of the different approaches there are some ideas and beliefs about training for and performing in extreme heat that are common, and as a conclusion to my experience with heat, I will write some of the more basic and simple ideas that I think are sound advice and good knowledge for dealing with it. These are only my opinions, and this is what worked for me.

#### **1. Your body is a machine.**

Your body is a machine that cannot be thrown into a very foreign and

hostile environment such as extreme heat and be expected to perform at its usual high caliber. No matter how tough you perceive yourself to be, simply dealing with heat and accepting it won't be enough; you must physically adapt to the rigors of heat beforehand.

#### **2. Simplified, sources of heat are:**

A. External, from the environment, real ( sun, humidity, air temps, ) or simulated ( heavy layers of clothes that trap heat, blankets, ect...).

B. Internal, generated from physical exertion and output.

*2004 champion Dean Karnazes works to stay cool.*

C. Both

### 3. When enduring extreme heat it is most important to stay cool internally.

A. By adding coolant. Drinking lots and lots of cold water and ice, the colder the better.

B. By keeping physical effort to a minimum.

### 4. External cooling.

People naturally sweat to cool off. In extreme heat however, your body might not sweat enough to cool you off, or, the outside environment might be so hot and dry that any perspiration evaporates off your body before it can have any cooling effect on it. Either way, sweat can be simulated by wearing very lightweight or cotton material clothing, long sleeve and preferably covering the legs also, and "continuously" soaking, spraying or saturating the clothing with cold water. The wet clothes against the skin will have the same cooling effect as sweat

### 5. The combination of keeping cool internally by:

A. drinking lots of cold water,

B. generating as little internal heat as possible by keeping physically exertion to a minimum,

C. and cooling externally by producing outside coolant in the form of artificial sweat should keep most people cool in the hottest environments if a person has these resources available.



*Dean Karnazes encourages an "ice cream headache" with a bucket of ice water in 00.*

### 6. Humidity.

When considering the temperature performing in, take humidity into consideration. From experience I know humidity is a silent killer. It is rare in the West, common in the East. Humidity zaps strength, dehydrates a person very quickly, and does these things suddenly without warning. A warm humid day is probably more dangerous than a very hot dry day.

In my opinion, the best way to deal with humidity is respect it. Even if it doesn't feel that hot, prepare for it by taking it easy and drinking lots and lots. Basically the same as for dry heat; that's why I say, above all else, respect it.

### 7. Regardless

Regardless, to perform in a hot environment at a race like Badwater some heat must be generated internally, and heat must be endured. To do so you must teach your body to adapt to the heat by teaching your body to sweat more, and locate a tolerable medium between physically pushing yourself and yet not overheating internally.

### 8. Over-dressed heat training.

A. Can be dangerous. Use good judgment and train in a safe environment, particularly one that is safe from traffic.

B. In the heat of the day, either go the whole nine yards and train in many heavy layers right from the start and run very limited mileage to understand how you will personally react to it, or, start with more routine mileage with perhaps just a sweatshirt and cold weather cap and add more layers and increase mileage as you adapt.

C. Drink lots and lots of water. Drive to pre-determined spots along your route and put cold water and ice out, or always be close to a source of cold water.

D. Pace yourself. It's easy to feel just as strong at the start, aside from feeling heavy, than normal. It "won't" last. Remember to generate as little internal heat as possible and plan on lots of walking.

E. Be prepared for nausea. In my opinion this results from the large amount of water in your stomach. Consider salt, rock salt, and E-Caps supplements to assist with this.

F. Keep up your energy. Just like in normal training, if you run for x amount of time, energy is needed, and even though you might not feel like eating, you must. You might require less energy intake than normal however.

Liquid energy is one of the better or "easier" ways to supplement energy in the heat.

G. Keep your wits. The heat is something that can be very overwhelming mentally. If you start to panic or get the slightest bit confused or dizzy, slow down, sit in the shade, recover and cool down. You won't be able to escape the heat in the actual environment, however, so if at all possible, cool down by resting and minimizing your effort rather than by taking off any clothing. Tolerating the overwhelming heat can be a big moral victory, but when it comes down to it, safety is your main concern.

H. Make sure others know what you're doing, where you're training, when to expect you.

I. Know the symptoms of heat exhaustion and heat stroke. Prevention is easier than treatment.

J. The frequency of over-dressed training sessions is up to an individual. For me, I opted for about 2 extreme heat sessions a week, and then added one lesser element of heat to each regular training session, by running normally but in the heat of the day, or in the evening wearing a sweatshirt and hat, just always enduring a little more heat than I normally would in order to build an overall tolerance and acceptance for heat. My most extreme heat sessions consisted of wearing a Coolmax t shirt, a sweatshirt, a thick, insulated navy working jacket topped with a rubber, non-breathable, dark green raincoat and cold weather hat. Plus sweatpants off and on, and towards the end of my preparation gloves as well.

K. Run / Walks with climb from 1-2 hours average. Maximum heat endured dressed like so, 90 degrees + 100 % humidity for 4 hours, 9 miles with climb. Overall 10-11 "extreme overdressed sessions" over 5-6 week period before Badwater.

#### **Important advice.**

Have a good crew who has knowledge of what it takes to keep you going in the heat. My crew was very experienced and kept handing me another water bottle of ice water even before I could finish the one I already had. I probably wouldn't have drunk quite as much had it not been handed to me so often. Have your crew think for you and keep you hydrated.

#### **Personal race notes.**

Temps at Badwater were lower than normal in 1999 but humidity was high. I stayed well hydrated throughout the



*Two-time champ Pam Reed stays cool in 04.*

race, wore Solar Eclipse sun hat, long sleeved Sun Precautions shirt, shorts. Wore cotton pajama pants some. Very dependable crew misted me down often and I stayed cool and never once suffered with the heat. Successful finish.

Heat-wise, I suffered much more enduring the heat during my over-dressed training than I did during the actual race. In my opinion I was able to perform well because I had physically adapted to heat and had mentally learned to accept heat, in addition to the cooling methods we used during the race.

GOD bless.



# 3D COURSE MAPS AND VIEWS

By Doug "Dog" Sloan

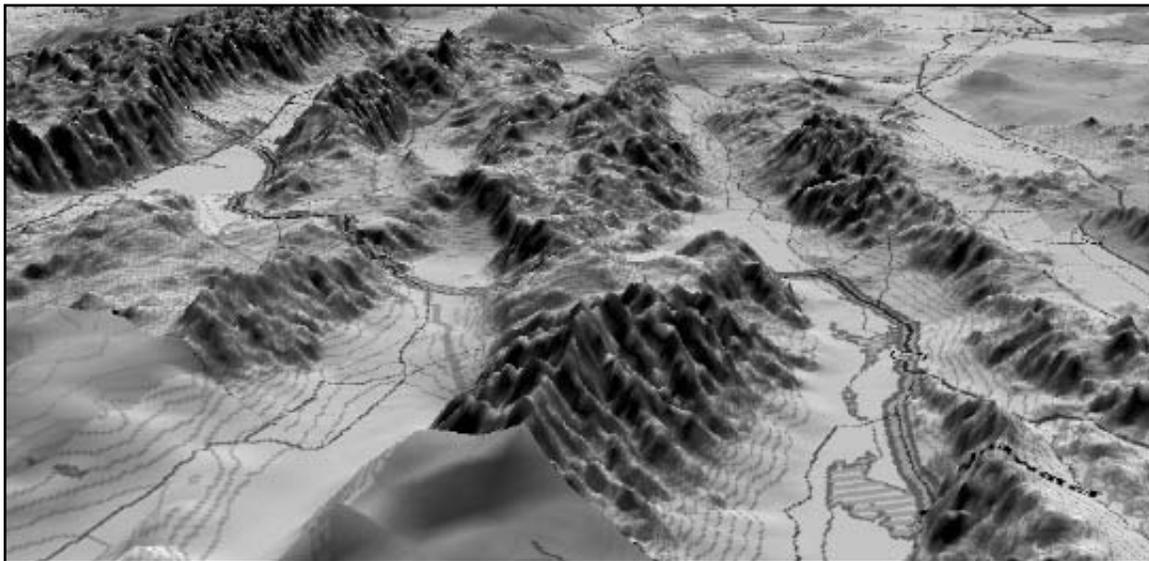
## KIEHL'S

SINCE 1851

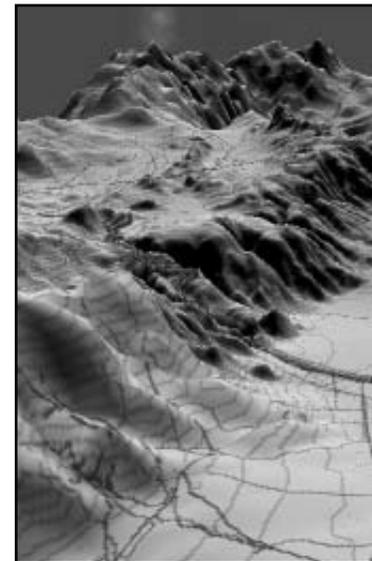
### BADWATER ULTRAMARATHON

The Challenge of the Champions

2005



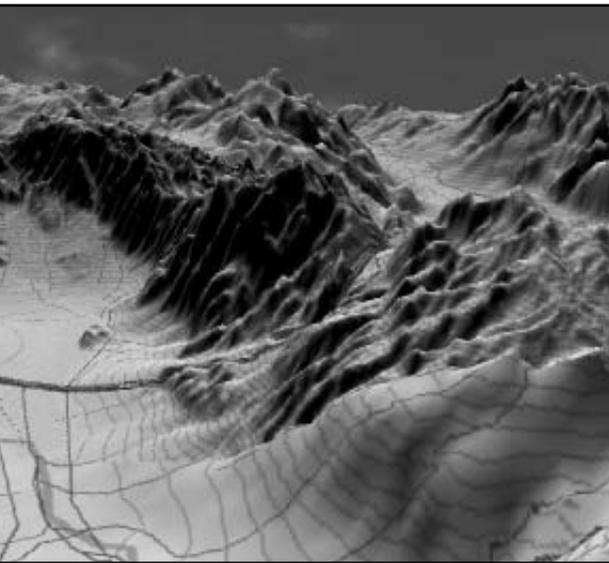
From Badwater, looking north-west at the entire route.



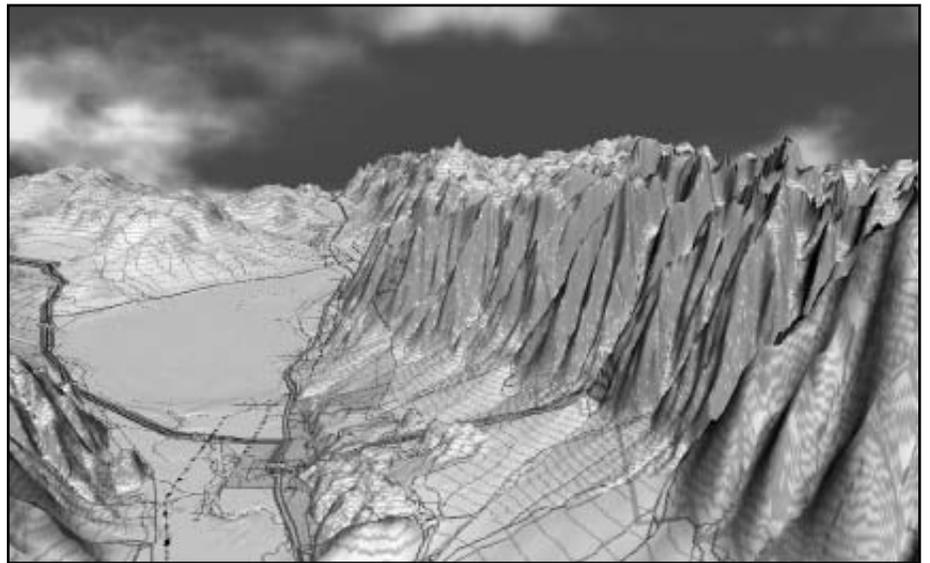
Panamint Valley, looking north.



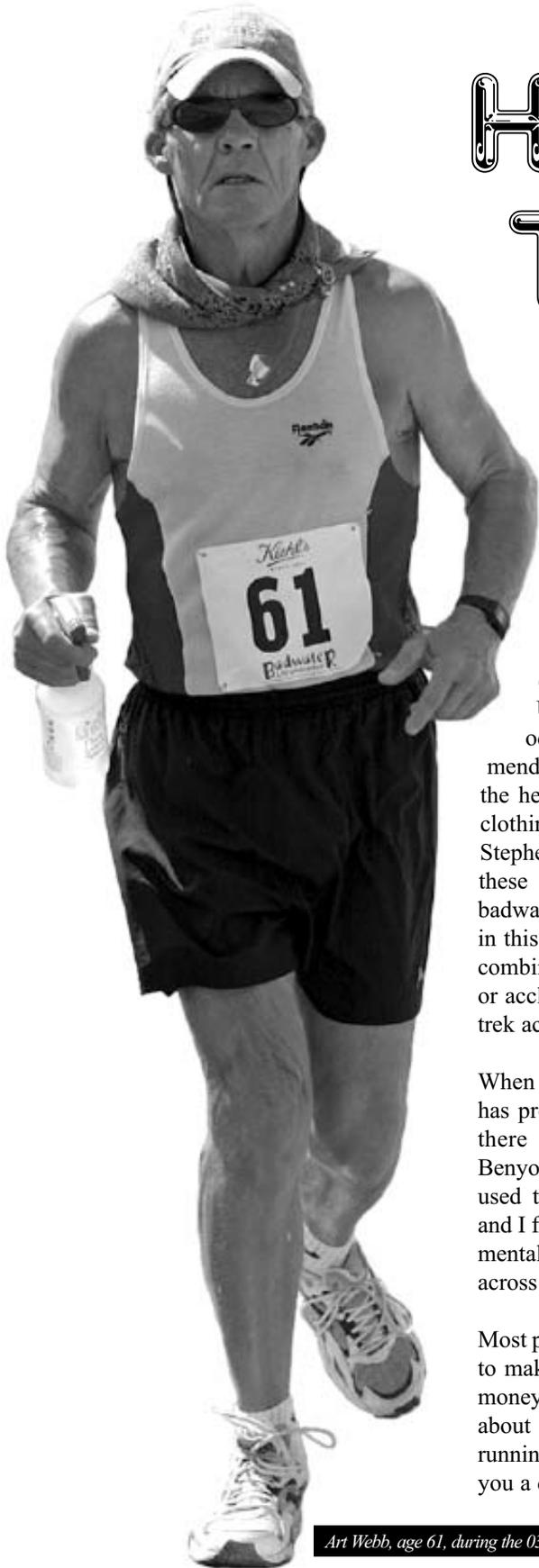
Overhead view of race course.



Looking north to Hwy 190 and Townes Pass on right.



Looking south in the Owens Valley, towards Lone Pine and Mt. Whitley on the right.



*Art Webb, age 61, during the 03 race.*

# HEAT TRAINING IN A SAUNA

*By Arthur Webb, six time finisher*

There are a number of ways to train for all the heat one will encounter in the Badwater Ultramarathon. Two effective methods are training in the desert, recommended by Dr. Ben Jones, and simulating the heat conditions by wearing layers of clothing while running, as suggested by Stephen Simmons. Definitive articles by these two gentlemen are posted on the badwaterultra.com website and elsewhere in this race magazine. Either method or a combination of both should help one adapt or acclimatize to the heat for a successful trek across Death Valley.

When desert heat is not available and one has problems running in lots of clothing, there is Tom Crawford and Richard Benyo's bake in the sauna option. I have used their method in a modified format and I firmly believe that it has been instrumental for my four successful journeys across Death Valley.

Most people don't have a sauna, so one has to make use of the local fitness center. If money is a problem, just let them know about Badwater and the charity you are running for and they will probably make you a deal.

Have no fear for there is still plenty of time to complete a training program. I won't begin mine until the last week in June.

1. The sauna serves two extremely important functions. First, it prepares the body to deal with the blistering heat out in Death Valley. Secondly, but equally as important, it gets the body used to drinking and processing the tremendous amount of liquids you are going to need to survive and finish this incredible race.

2. Heat training in the sauna should take no more than four weeks; usually three weeks is enough. When you have to wear a sweater or light jacket at work or around the house because you feel a little chilled, you are acclimated. It is best to stop sauna training at least three days before the race. You will need the time to super hydrate and the effects of heat adapting will not start wearing off for several weeks.

3. Train every day, although you may have to take a day off to completely hydrate yourself. If there is a steam sauna available, use it one day a week. Two years ago, at Badwater, tropical storms lashed the area for several days and it became

extremely hot and humid. Fortunately, I had rotated between dry and steam saunas in my training and was ready for anything. It made a huge difference.

4. The goal is to stay in the heat of the sauna for as long as possible. If you attempt any kind of rigorous workout inside the sauna you will have to leave it too soon, which defeats the purpose. So, just be content with simply sitting on the planks or doing a light abdominal workout. Save your harder workout for your daily run. I find it easier to run my daily 10 to 20 miles first and then go lay down in the hot box. Running after a session is extremely difficult. Save this time for re-hydrating.

5. Be patient. Begin at low temperatures and gradually work towards hotter sessions. The first day I usually start at 110 degrees and stay as long as possible. Sometimes when it gets unbearable I leave for a few minutes and take a cool shower before going back inside. The first few days are the hardest but as the days go by you will be able to raise the temperatures and stay in longer. By the fourth week, you should be able to handle 30 minutes at 180-degrees. Below, I have added a sample four-week regimen that I have used every year.

6. Drink, drink, drink. It is extremely important to continuously hydrate inside the sauna in order to replace all the liquids you will be profusely sweating out. This will simulate the conditions you will be facing in the desert and after three weeks the body will be able to efficiently process all the liquids it will be going to need.

I usually take in three 2-liter bottles of ice water. Two bottles are for drinking and the third is for rinsing the body; it acts as a coolant for a minute or so, which helps you stay in the sauna longer.

7. Time constraints. You may be pressed for time because of all the training. I suggest you taper on the mileage and hit the sauna or forget the run and just bake in the box.

Everyone has run more than enough at this point in time. Skip a run or two; the heat training is much more important. It will probably do you some good taking a day off. You will benefit more by spending some time getting blasted in the sauna.

8. Recovery. Immediately after the sauna I lay down on a bench in another room in order to let the body cool off. You will sweat again for ten to fifteen minutes while you reenter the normal world. Then take a nice long cool show-

er before continuing to hydrate for the rest of the day. Constant liquid intake is essential; drinking will enable you to start the next day fully hydrated and you will be able to continue to properly train.

9. Race Day. Pace yourself and make sure you wear a complete sun-protective suit and hat anytime the sun is out. It is much better if you keep the jacket and hat wet as suggested by Stephen Simmons. I have kept mine wet during the heat of the day and it has made an enormous difference. It probably cools you off by 10 or 20 degrees. My crew uses a super-soaker (large squirt gun) and blasts me with cold water every few miles. You will discover that if the suit gets dry it may keep out the ultra violent rays, but it also tends to retain the heat and you start baking inside. It is also best to keep the water from running into your shoes because large ugly blisters will develop. If you get lucky, "The Blister Queen," Denise Jones can help you here.

**Art's Heat Training Schedule**

Day	Minutes in sauna	Temperature
1	30	110
2	45	110
3	30	120
4	45	120
5	30	130
6	45	130
7	30	140 (steam)
8	45	130
9	30	140
10	30	140 (steam)
11	45	140
12	60	140
13	30	150
14	Rest Re-hydrate	
15	30	150
16	45	150
17	45	150
18	30	160
19	30	160
20	30	140 (steam)
21	Rest Re-hydrate	
22	30	160
23	45	160
24	30	170
25	30	170
26	30	180
27	30	180
28	45	180

That's it. Other than a few days in the steam sauna all other days are in the dry sauna. Do the best you can and remember even a couple of weeks will help you out. Good Luck. It would be nice to see everyone finish this fantastic race.



## OFFICIAL RULES

### General Race Rules

1.) There are three starting times for the 2005 Kiehl's Badwater Ultramarathon (6am, 8am, and 10am on July 11, 2005), but all racers in all groups are competing in the same race. Runners and crews may attend only their assigned start time. Runners must check in at the start line, ready to race, 30 minutes prior to their start time. Starting Groups are assigned by the race director and are non-transferable. Split times will be collated throughout the race to maintain overall standings. There are only two divisions: men's and women's. The racer to arrive at the finish line in each division with the lowest overall time, based on their starting time, will be considered the winner.

2.) The race number must be worn on the front of the body, unmodified, unfolded, and visible at all times during the race. It may not be worn on the head or hat.

3.) The clock does not stop for any reason until the race course officially closes 60 hours after each designated official start time.

4.) Running must always be single file, on the far left side of the road or off the left side of the road, facing traffic (pacers, too).

5.) Racers must make their presence known at all Time Stations located in fixed locations along the route. Runner times into the Time Station will be recorded.



*Thanks to John Radich for these wise words.*

6.) The race ends at the Mt. Whitney Portals. If you choose to hike to the summit, please remove any official race logos and be sure to have the appropriate permits from the Forest Service.

7.) Racers, crew, and staff must not litter, mar, or pollute the landscape or environment.

8.) All racers, crew and staff must display courtesy, good taste, decorum, and sportsmanship at all times. Nudity is specifically not allowed.

### Legal and Bureaucratic Issues

1.) All racers must follow and complete the entire application and entry process, filling out all forms and paying all necessary fees.

2.) All racers must sign the Entrant Contract.

3.) All racers and crew must sign the Accident Waiver and Release of Liability / Release of Name and Likeness

4.) All race vehicles must meet the minimum requirements of property damage and personal injury liability automobile insurance for the state of California. All vehicle drivers must be fully licensed.

5.) All racers and at least one crew member for each entrant must attend Racer Check-In and all of the Pre-Race Meeting. Those racers who do not complete the scheduled check-in and attend the meeting will not be allowed to participate. No exceptions.

6.) All racers must be willing to submit to a drug urine test before, during, or after the race. If any USOC banned substances are detected, the racer will be disqualified from competition and listed as **DISQUALIFIED FOR DOPING** in the final standings of the race.

7.) No TV, film, or video crew, person, producer, director or other broadcast media representative may accompany or cover any racer or the race itself without the specific written permission of the Race Director. All film crews must sign a Non-Exclusive Licensing Agreement and pay a Rights Fee. Additionally, Death Valley National Park will also require payment of a filming fee and signature of a filming agreement.

8.) All racers and crew must pay the Death Valley National Park Entrance Fee of \$5 per person or \$10 per car. Proof

must be brought to Runner Check-In on July 10. Runners will not be allowed to check-in for the race without proof of paying the Park Entrance Fee.

9.) All entrants must bring one U.S. dollar (or more) in a sealed envelope to the pre-race meeting. Please write the runner number on the envelope. This envelope will not be returned.

### **Support Crew**

1.) Each racer must be accompanied by a support crew comprised of at least one four-wheeled motor vehicle and two crew members at all times. Each racer must have his or her own personal support crew and vehicle; crew and support vehicles may not be shared, except informally in the spirit of the event, i.e., crews may lend assistance to other racers or crews.

2.) Runners must progress under their own power without drafting, helping, pushing, supporting, or any other type of physical assistance. Runners may not use walking sticks, ski poles, or the like. Crewmembers may not carry an umbrella or shade cover for a runner.

3.) Runners may not be accompanied by more than one pacer at any given time. Additional crew members that are handing off supplies to the runner and/or pacer must be off the roadway at all times (i.e. left of the white line on the shoulder).

4.) Runners must not run abreast with other runners or with pacers on the roadway. All running must be single-file on the roadway. If runners or pacers want to run next to one another, they must be OFF the roadway, i.e. left of the white line.

5.) Crewmembers may not use illegal drugs, stimulants, or dope, as well as alcohol of any kind, during the race or at any race events or activities.

6.) Runners under the age of 60 may not be accompanied by pacers or moving crew members between Badwater and Furnace Creek.

7.) Crewmembers may not utilize bicycles for any reason at any time during the race.

### **Support Vehicles**

1.) The support vehicle may not be wider than 78" in width, as stated in the manufacturer specifications. Small Cars, Minivans, and SUVs are recommended. All motorhomes, RVs, oversize SUVs, vans, and trucks, or other types of oversize vehicles are strongly discouraged, even as a secondary support vehicle. Also, if a racer has only one support vehicle, it may not be wider than 78".

2.) All support vehicles must have their headlights on whenever the engine is running, 24 hours a day.

3.) All race vehicles must have highly visible signage on the back of the vehicle stating "CAUTION RUNNERS ON ROAD." This type of sign can be made, for example, using yellow, white, or pink adhesive shelf paper with at least 6 inch letters. Magnetic, reflective, professionally made signs for this purpose can be made to order by your local sign shop. Additionally, all runners will receive two race-legal caution signs at Runner Check-In that may be used as well or instead.

4.) All support vehicles must have their racer's name and race number easily visible on all four sides. This type of sign can be made, for example, using yellow, white, or pink adhesive shelf paper with at least 6 inch letters. This should be done in advance of coming to Death Valley.

5.) Vehicle windows may not be blocked or obstructed with any signage, paint, or the like.

6.) Only one support vehicle is allowed for each racer at the Start Line before the race and then between the Start Line and Furnace Creek during the race. This support vehicle may not be an RV or motorhome. No RVs or motorhomes are allowed between the Start Line and Furnace Creek.

7.) No RVs or motorhomes are allowed between the Lone Pine and the Finish. Due to a severe parking shortage at the finish line, no more than two vehicles per runner may be on the Whitney Portals Road and/or parked at or near the finish line.

8.) Vehicles must "leapfrog" the runner at all times. Attempt to make each "leapfrog" at least one mile or more in length. Racers may not be "shadowed" (driving a vehicle at the runner's speed) and vehicles must not "caravan" (drive together, like a train, at any speed). Driving may never be at the speed of any racer. Driving must be done at the speed of traffic, never slowing down to encourage, talk

to, or lend assistance to any racer while moving. All assistance must be provided by pedestrian crew members; handing off of supplies from the vehicle is never allowed.

9.) Vehicles must be parked completely off the road surface whenever they are stopped (with all four tyres right of the white line). Many areas of the route have very little shoulder for parking so care must be taken in choosing stopping places. When stopping/parking, vehicles may not stop on the left side of the road. All stopping/parking must be on the right side of the road, off the roadway.



*You do NOT want to go for a ride in this vehicle.*

10.) All vehicles must obey the vehicle code laws of California at all times.

### Safety and Medical Issues

1.) Remember, at all times and in all situations, safety is the most important issue. This means safety for racers, crew, staff, and the general public. The roads are not closed for this event and are, in fact, quite busy with tourist and local traffic.

2.) I.V.s (intravenous fluids) are not permitted during the race. If a racer receives an I.V. during the race, for any reason, then that racer is disqualified and may not complete the course officially.

3.) Racers and crewmembers/pacers must wear reflective material facing in all four directions, as well as blinking LED lights facing front and rear, at night. Racers and crewmembers are encouraged to wear reflective material during the day as well.

4.) Racers are responsible for both their own and their crew's actions; crews are responsible for both their own and their racer's actions.

5.) Always look and listen both ways before crossing the highways. Remember that drivers will not expect to encounter a racer or parked vehicle out on the course. Remember we are on public roads. Racers should not cross over the highway more than necessary; crew should cross the highway carefully to bring assistance to their racer.

6) All entrants and crew must study "Medical Risks in the Badwater Ultramarathon," "Dangers of Running in the Heat," and "The Dangers of Hot Weather Running".

### Leaving the Course or Withdrawing

1.) Every inch of the course must be traveled by each racer. In the event of a routing error, e.g., wrong turn, the racer may be driven back to the exact original spot where he/she left the course and continue running from that location. There will be no allowance made for lost time or miles run in the wrong direction.

2.) If a racer needs to leave the course, his/her crew must note the exact location with a numbered stake in the ground. This numbered stake must be visible from the road in both directions. The racer must then resume the race from the same place that he/she left it. The numbered stakes will be provided to all runners at Runner Check-In. Racers may only leave the course for appropriate reasons such as rest or medical attention. Focus must be kept on the speedy completion of the course.

3.) If a racer withdraws, he/she or his/her crew must contact Race Headquarters or a Time Station immediately. Name, reason for withdrawal, time of withdrawal, and miles completed must be stated. All racers and crew who drop are encouraged to come to the finish line and both post-race events to greet and celebrate with their fellow racers and crew.

4) All Emergency Evacuation costs for participants or crews will be borne by that person or their heirs. The race organizers are in no way liable or responsible for emergency evacuation.

### Awards

1.) All racers who begin the event will receive up to five Kiehl's Badwater Ultramarathon race t-shirts, a hat, a Race

Magazine, and a goodie bag. All racers who officially complete the event within 60 hours will receive a commemorative certificate, a finisher's medal, and a finisher's t-shirt. All racers who officially complete the course within 48 hours will also receive a commemorative Badwater Ultramarathon buckle.

**Rule Enforcement and Penalties**

- 1.) Race rules are designed to provide a safe and fair experience for everyone involved and to help ensure our ability to produce the race again next year.
- 2.) Major rule infractions by racers or their crew, especially those regarding "cheating," will result in immediate disqualification of the racer.
- 3.) Other, lesser offenses will result in the following cumulative time penalties:

- First Penalty: One hour
- Second Penalty: Disqualification

4.) Time penalties are imposed by stopping at the final Time Station in Lone Pine to serve his/her time. The race and clock will continue while the penalized racer waits out his/her penalty time. A Race Official will be present to oversee this process.

5.) The Race Director has the authority to overrule any rule or invent a new rule based on extenuating circumstances. The Race Director has ultimate authority in regards to all rules, their interpretation, and their enforcement. There is no "appeals committee" or "appeals process."

**Finally**

- 1.) Have fun and keep smiling!



**MISSION**

The mission of the Challenged Athletes Foundation is to provide opportunities to people with physical disabilities to pursue an active lifestyle through physical fitness and competitive athletics. The Challenged Athletes Foundation believes that involvement in sports at any level increases self-esteem, encourages independence and enhances quality of life.

**WHAT DO WE DO?**

Established in 1997, the CAF is a unique organization that recognizes the athletic greatness of people with disabilities and supports these efforts by providing grants for training, competition and equipment needs. Grants are awarded to persons with any type of physical disability and for a wide range of sports. The CAF does not discriminate by age, disability, sport or level of ability. The hundreds of athletes that the CAF has assisted range from world class athletes competing on an international level to those who are recently disabled and desire to become more active. Grants are distributed once a year with applications being accepted year round.

**WHY DO CHALLENGED ATHLETES NEED FUNDING?**

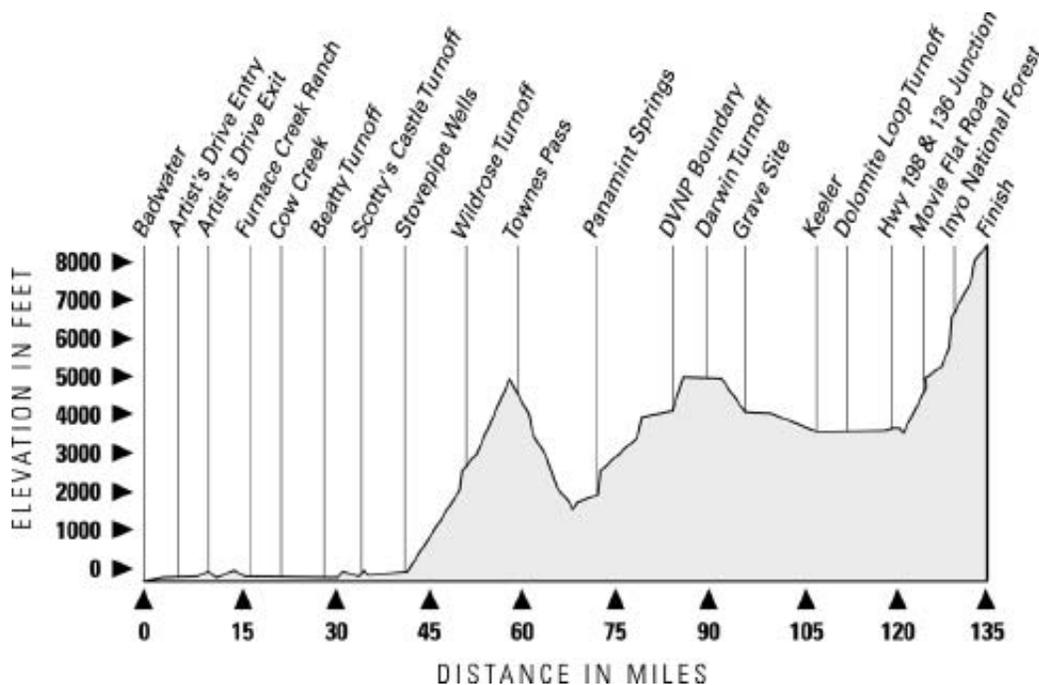
There are 49 million people living in the US with a physical disability. Equipment to be active for someone who is disabled is very expensive and therefore prohibitive for many to pursue an active lifestyle. Funding through the CAF helps make it possible for more people to gain self-esteem through sports. If you're a family with three children, one with a physical disability, you can buy two bikes at Wal-Mart for less than \$200 – for the third, you must purchase a handcycle that runs upwards of \$1,500.

**FUNDRAISING**

The ten-year goal of the CAF is to create a \$1,000,000 endowment fund that will continue to assist physically challenged athletes indefinitely. Of the revenue generated, 80% will be set aside for the endowment fund or be used for individual grant payments. To date, the CAF has provided over 1200 grants and raised over six million dollars.

**Challenged Athletes Foundation 2148 – B Jimmy Durante Blvd. Del Mar, CA92014**  
**Tel: 858.793.9293 www.ChallengedAthletes.org**

**COURSE DESCRIPTION**



**Badwater, Death Valley**

The race begins here adjacent to a pool of saltwater located at the lowest place in the Western Hemisphere.

**Furnace Creek Ranch, Mile 17.4**

The first oasis in our journey. A gas station, small general store, hotel, restaurant, camping, and ice machine are available.

**Stove Pipe Wells, Mile 41.9**

A small market, gas station, restaurant and motel. This is not open 24 hours.

**Townes Pass (4956'), Mile 58.7**

Long ascent, then long descent, followed by approx. 12 long straight miles. It's a steep and narrow road with limited opportunities to park. Support vehicles, crews, and runners must be cautious and extra aware of the traffic.

**Panamint Springs Resort, Mile 72.3**

Restaurant, gas station, and motel with limited hours. A long, steep climb follows on a steep and narrow road with limited opportunities to park. Support vehicles, crews, and runners must be cautious and extra aware of the traffic.

**Father Crowley's Turnout, Mile 80.2**

This isn't the top. The road continues to rise to 5000' over rolling hills, then eventually descends into the Owen's Valley.

**Keeler, Mile 107.8**

A small mining town with no facilities.

**Lone Pine, Whitney Portal Road, Mile 122.2**

Lone Pine offers the weary runner and crew all the amenities of a real town: fast food, pizza, restaurants, motels, gas stations, grocery stores, and more, not to mention our Webcast Headquarters. Restock here for the climb to the portals. Turn left onto the Whitney Portal Road to begin the final leg, the longest and steepest climb of the race. Temperatures will steadily decrease. Be prepared with extra layers of clothing and rain gear the final few miles. Be sure your support vehicle is completely off of the road and that you do not block traffic.

**Mt. Whitney Trailhead, (8360'), Mile 135**

Congratulations! You have finished the most extreme running race in the world! A small diner/shop are open daylight hours. There is also a stocked fishing pond and a campground.

# FURNACE CREEK 508



"WHERE THE WEST IS WON!"

You are invited to join this non-stop, 508 mile bicycle race from Santa Clarita through Death Valley and the Mojave Desert to Twenty Nine Palms. Produced by AdventureCORPS since 1990, but founded in 1983 by John Marino, the 2005 edition celebrates the 22nd anniversary, and 31st edition, of this incredible race.

Revered the world over for its epic mountain climbs with 35,000 feet of cumulative elevation gain, its stark desert scenery, and its desolate roads, Furnace Creek 508 is one of

the toughest but most gratifying endurance challenges available, bar none. Known as "The Toughest 48 Hours in Sport," Furnace Creek 508 is "Where the West is Won!" Solo, tandem, and two- and four-rider divisions are offered in this exciting and unusual bicycle race.

**DATE: October 8-10, 2005**

Live Webcast Throughout the Weekend at [www.the508.com](http://www.the508.com)

## WHY "THE 508" IS ONE-OF-A-KIND

- Over 120 competitors from around the world!
- Desolate, epic, and legendary route!
- Awesome pre-race banquet and meeting with movie theater-size video presentation!
- Furnace Creek 508 Hall of Fame Inductions!
- Your own unique Animal Totem: your spirit guide or alter-ego for life!
- Nifty 508 goodie bag schweg and Race Magazine!
- Insane webcast with over 1,000 images posted during each race!
- Classy finisher's medal and coveted Official Finisher's Jersey (but only if you finish!)

**Visit [www.the508.com](http://www.the508.com)**  
to download the entry form  
and to register for our free  
email newsletter!

**Back by popular demand!**  
Fixed Gear Division!  
Just one gear and NO COASTING!  
(no aerobars, either)

**AdventureCORPS Expedition Cycling Events coming in 2006** (no support crews allowed):

2006 Furnace Creek 508 Expedition Ride, April!

2006 Trans-America Cycling Classic: SF to DC, 3,127 miles with three week time limit, June/July!

Once again proudly serving as the original RAAM Qualifier and John Marino Competition event. AdventureCORPS proudly sponsors & supports the Challenged Athletes Foundation and Major Taylor Association. The 508 is sponsored by E-CAPS, Hammer Nutrition and Injinji Tetratsoks.



AdventureCORPS:

638 Lindero Canyon Rd. #311, Oak Park, CA 91377 USA

[www.the508.com](http://www.the508.com) / [OutThere@adventurecorps.com](mailto:OutThere@adventurecorps.com)

## OFFICIAL RACE ROUTE

<i>Landmark</i>	<i>Distance (mi.)</i>	<i>Elevation (ft.)</i>	
Badwater	0	-282	
Telescope Peak Sign on L.	1.8	-200	
Wide Shoulder on R.	3.1	-200	
Natural Bridge on R.	3.5	-170	
Devil's Golf Course on L.	5.5	-165	
Artist's Drive entry on R.	7.9	-165	
West Side Road on L.	10.5		
Artist's Drive exit on R.	11.6	-70	
Mushroom Rock on R.	12.9	-170	
Golden Canyon on R.	14.4	-165	
Hwy 190 & 178 – Go Left	16.4	0	
<b>Furnace Creek Ranch on L.</b>	<b>17.4</b>	<b>-165</b>	<b>-First Time Station on Left after entrance</b>
Chevron Gas and ice on L.	17.6	-165	
Visitor's Center on L.	17.7	-170	
Harmony Borax Works on L.	19.0	-170	
Cow Creek on R.	20.7	-170	
1st Marathon	26.2	-170	
Beatty, NV turnoff on R.	28.3	-165	
Salt Creek turnoff on L.	30.7	-165	
Sea Level Sign on L.	31.9	0	
Scotty's Castle turnoff on R.	34.7	-130	
Sea Level Sign on L.	35.2	0	
Sand Dunes turnoff on R.	35.8	0	
Devil's Cornfield sign on R.	36.1	-80	
Sand Dunes on R.	39.9	0	
<b>Stovepipe Wells Village</b>	<b>41.9</b>	<b>0</b>	<b>-Second Time Station on Right before Store</b>
Mosaic Canyon turnoff on L.	42.1	5	
1000' elevation sign	46.6	1000	
2000' elevation sign	50.5	2000	
Wild Rose turnoff on L.	51.0	2500	
2nd Marathon	52.4	2800	
3000' elevation sign on L	53.3	3000	
4000' elevation sign on L.	55.7	4000	
2nd Radiator Water Tank on R.	58.5	4900	
Townes Pass summit	58.7	4965	
4000' elevation sign on R.	61.5	4000	
Vista Point (view of Whitney)	62.2	3500	
3000' elevation sign on L.	63.8	3000	
2000' elevation sign on L.	66.1	2000	
Adopt-a-Highway sign on R	67.7	1800	
Panamint lake bed, east edge	68.1	1640	
Panamint lake bed, west edge	69.1	1640	
Trona turnoff on L.	69.8	1750	
<b>Panamint Springs Resort</b>	<b>72.3</b>	<b>1970</b>	<b>-Third Time Station on Left at Resort</b>

2000' elevation sign on L.	72.9	2000	
<b>Darwin Falls turnoff</b>	<b>73.3</b>	<b>2500</b>	<b>-Dangerous, narrow area! - miles 74 to 81*</b>
3000' elevation sign on L.	75.8	3000	
3rd Marathon	78.6	3400	
4000' elevation sign on L.	80.2	4000	
Father Crowley's Point on R.	80.2	4000	
DVNP Park Boundary	84.9	4200	
Saline Valley turnoff on R.	86.0	4800	
5000' elevation sign	87.0	5000	
<b>Darwin turnoff on L</b>	<b>90.1</b>	<b>5050</b>	<b>-Fourth Time Station on Left at turnoff</b>
5000' elevation sign on L.	92.4	5000	
Grave Site on R.	96.3	4100	
27.5 mile post marker	100.0	4050	
4000' elevation sign on L.	101.6	4000	
Hwy 136 & 190 – go straight	102.9	3935	
4th Marathon	104.8	3800	
Keeler	107.8	3610	
Adopt-a-Highway sign on R.	108.5	3605	
Dolomite loop turnoff on R.	112.6	3600	
Dolomite loop turnoff on R.	116.9	3610	
Owen's River	117.7	3610	
Hwy 190 & 395 – go Right	120.3	3695	
<b>Dow Villa Hotel on Right</b>	<b>122.3</b>	<b>3610</b>	<b>-Fifth Time Station on Right at Dow Villa</b>
Portal Road light – go Left	122.4	3610	
Tuttle Creek turnoff on L.	122.9	3770	
LA Aqueduct	123.0	3855	
Lone Pine Creek	124.1	4200	
Movie Flat Road on R.	125.1	4590	
Lone Pine Creek	125.3	4800	
Horseshoe Meadow on L.	125.5	5000	
Cuffe Ranch turnoff on R.	126.7	5100	
Olivas Ranch turnoff on L.	128.0	5300	
<b>Lone Pine Campground on L.</b>	<b>129.0</b>	<b>5700</b>	<b>-Dangerous, narrow area! - miles 129 -135*</b>
Lone Pine Creek	129.2	6000	
Inyo Nat. Forest sign on R.	129.5	6400	
Large pullout on R.	130.8	6890	
5th Marathon	131.0	7000	
Switchback to left	131.7	7215	
Vista Point	132.4	7400	
"Campsites 39-44" sign on R	133.3	7700	
Meysan Lakes trailhead on L.	133.5	8035	
Family Campsites	133.7	8100	
Overflow Parking	134.3	8200	
Finish	134.4	8360	

**Official distance is 135.0 miles. Remember all car odometers have error. Distances above are accurate in a relative sense, but you may find variation in the overall distance, as we did when creating the above routesheet.**

**OFFICIAL ROSTER****2005 OFFICIAL RACE ROSTER****6:00 AM START**

#	M/F	First Name	Last Name	Age	City	State	Country	Nationality	History
57	M	Norm	Albert	48	Dumfries	VA	USA	USA	Rookie
6	M	Ruben	Cantu	62	Santee	CA	USA	USA	Veteran
32	M	Mark	Cockbain	32	East Hunsbury		UK	UK	Veteran
70	M	Jack	Denness	70	Rochester		UK	UK	Veteran
64	M	John	Dodds	54	Arlington	VA	USA	USA	Rookie
35	M	Greg	Eason	35	Little Rock	AR	USA	USA	Veteran
23	F	Sigrid	Eichner	64	Berlin		Germany	Germany	Rookie
62	M	Holger	Finkernagel	62	Bad Berleburg		Germany	Germany	Veteran
56	M	Miles	Hilton-Barber	56	Derby		UK	UK	Rookie
58	M	Geoffrey	Hilton-Barber	58	Shongweni		South Africa	South African	Rookie
60	M	Frank (Jim)	Ingalls	60	Wichita Falls	TX	USA	USA	Rookie
55	M	Daniel	Jensen	55	Sioux Falls	SD	USA	USA	Veteran
79	M	Flip	Jergens	48	Standerton		South Africa	South Africa	Rookie
73	M	Mark	Kahler	46	El Dorado Hills	CA	USA	Germany	Rookie
38	M	Karlheinz	Kobus	38	Sinsheim		Germany	Germany	Rookie
81	M	Mario	Lacerda	48	Colatina		Brazil	Brazil	Rookie
34	M	Stephane	Lemaitre	34	Juniville		France	France	Rookie
83	M	Mike	Lynch	41	Sparta	NJ	USA	USA	Rookie
42	M	Frank	McKinney	42	Delray Beach	FL	USA	USA	Rookie
59	M	Klaus	Micka	59	Saarbruecken		Germany	Germany	Rookie
44	M	Greg	Minter	44	Los Angeles	CA	USA	USA	Veteran
75	M	Ian	Parker	54	Irvine	CA	USA	UK	Veteran
88	M	Bernhard	Sesterheim	59	Leiwen		Germany	Germany	Rookie
78	M	Wayne	Simpson	43	Leeds		UK	UK	Veteran
45	M	Charlie	Vincent	45	Monaco		Monaco	UK	Veteran
10	M	Scott	Weber	52	Mount Shasta	CA	USA	USA	Rookie

**8:00 AM START**

#	M/F	First Name	Last Name	Age	City	State	Country	Nationality	History
19	F	Noora	Alidina	46	Palm Harbor	FL	USA	Jordan	Rookie
48	M	Thomas	Betz	48	Petite-Rosselle		France	Germany	Veteran
22	F	Marianne	Blangy	42	Chaussin		France	France	Rookie
18	M	John	Butterick	54	Tampa	FL	USA	USA	Veteran
76	M	Patrick	Cande	48	Papeete		French Polynesia	France	Veteran
31	M	Patrick	Cruywagen	31	Cape Town		South Africa	South African	Rookie
65	M	Jason	Dorgan	39	Madison	WI	USA	USA	Rookie
66	M	Andrew	Elder	34	London		UK	UK	Rookie
15	F	Shannon	Farar-Griefer	44	Hidden Hills	CA	USA	USA	Veteran
41	M	David	Harper	41	Clermont	FL	USA	USA	Rookie
67	M	Rob	Harsh	34	Plainfield	IL	USA	USA	Rookie
53	M	Juergen	Hofmann	53	Eisenberg		Germany	Germany	Veteran
72	M	Carl	Hunt	54	Roxbury	CT	USA	USA	Rookie
46	M	David	Jackson	46	Lexington	KY	USA	USA	Veteran
47	M	Tim	Kjenstad	47	Henderson	NV	USA	USA	Rookie
82	M	Rainer	Lösch	46	Bischofsheim		Germany	Germany	Rookie
74	M	Dan	Marinsik	46	San Jose	CA	USA	USA	Veteran
24	M	Jean Jacques	Merienne	52	Les Eyzies		France	France	Veteran
85	M	Jean Michel	Monot	45	Punaauiā		French Polynesia	France	Rookie
86	M	Jack	Murray	44	Los Angeles	CA	USA	USA	Rookie
36	M	Nathan	Ochsner	36	Katy	TX	USA	USA	Veteran
71	M	Pierre	Ostor	48	White Bear Lake	MN	USA	France	Veteran
28	F	Judit	Pallos	28	Newport Beach	CA	USA	Hungary	Rookie
77	M	John	Radich	50	Monrovia	CA	USA	USA	Veteran
99	M	Dave	Remington	64	Spokane	WA	USA	USA	Veteran
26	F	Nikki	Seger	43	Chicago	IL	USA	USA	Rookie
27	F	Christine	Sell	41	Bischofsheim		Germany	Germany	Rookie
84	M	Thorsten	Treptow	39	Cologne		Germany	Germany	Veteran
20	F	Nancy	Warren	39	Wilton	CA	USA	USA	Rookie

10:00 AM START

#	M/F	First Name	Last Name	Age	City	State	Country	Nationality	History
97	M	Lahcen	Ahansal	34	Zagora		Morocco	Morocco	Rookie
21	F	Marina (Mimi)	Anderson	42	Matfield		UK	UK	Rookie
61	M	Gérard	Bavato	47	Villefranche de Lauragais		France	France	Rookie
5	M	Christopher	Bergland	39	New York	NY	USA	USA	Veteran
63	M	Gérard	Cain	49	Juan les Pins		France	France	Rookie
43	M	Charlie	Engle	43	Greensboro	NC	USA	USA	Veteran
2	M	Ferg	Hawke	48	Surrey	BC	Canada	Canada	Veteran
68	M	Jack	Humphrey	48	Louisville	CO	USA	USA	Rookie
100	M	Scott	Jurek	31	Seattle	WA	USA	USA	Rookie
33	M	Said	Kahla Dr.	54	Kirchheimbolanden		Germany	Germany	Veteran
80	M	Guido	Kunze	39	Muehlhausen		Germany	Germany	Rookie
13	M	William	Maples	41	Winchester	CA	USA	USA	Veteran
16	F	Linda	McFadden	42	Modesto	CA	USA	USA	Veteran
54	M	William	Menard	54	Venice	FL	USA	USA	Veteran
12	M	Manoel de Jesus	Mendes	45	Brasilia		Brazil	Brazil	Veteran
14	M	Adalberto	Mendoza	53	Los Angeles	CA	USA	Mexico	Veteran
87	M	Stéphane	Pelissier	36	Lanta		France	France	Rookie
4	F	Pamela	Reed	43	Tucson	AZ	USA	USA	Veteran
9	F	Jody-Lynn	Reicher	42	Midland Park	NJ	USA	USA	Veteran
3	F	Monica	Scholz	38	Jerseyville	ON	Canada	Canada	Veteran
40	M	Matthew	Sessions	40	Port Moody	BC	Canada	Canada	Rookie
30	F	Jacqueline	Simonsen	43	St. Albans	VT	USA	USA	Rookie
50	M	Mike	Sweeney	50	San Rafael	CA	USA	USA	Rookie
39	M	Steve	Teal	39	Phelan	CA	USA	USA	Rookie
11	M	Michael	Tilden	38	Holtville	CA	USA	USA	Rookie
17	M	Marshall	Ulrich	54	Idaho Springs	CO	USA	USA	Veteran
89	M	Albert	Vallee	46	Chauvigne		France	France	Rookie
49	M	Roy	Wallack	49	Irvine	CA	USA	USA	Rookie
7	M	Arthur	Webb	63	Santa Rosa	CA	USA	USA	Veteran
90	M	Ray	Zahab	36	Chelsea	QU	Canada	Canada	Rookie



*Living legend Jay Birmingham finished his second Badwater 23 years after the first. With his Dana College Cross Country team in support, he was faster than in 1981!*

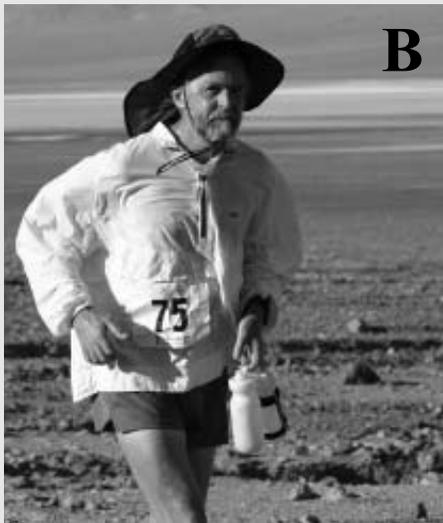
Special thanks to the 2004 race staff!





1: Chris Kostman with the 6am wave  
 2: Joe Garza and Jon Friedline  
 3: Video Superstar Dan Dominy  
 4: Keith and Poosa Kostman sandwich Leon Draxler  
 5: The Posse: Kelly Clancy-Garvey, Erika Gerhardt, Laurie Streff  
 6: Stephen Matsuda, Mike Angelos, Jon Friedline  
 7: Dr. Joe Zimmerman, part of the awesome medical team  
 8: Luminaries Richard Benyo, Rhonda Provost, Tom Crawford  
 9: Jamie and John Wiley, ever cool in SPW  
 10: Omniscient, omnipotent, omnipresent Gumby  
 11: Laurie with the Kiehl's gals, Gracia Walker and Thuy Vo

## More Memories from 2004



*A. Germany's Robert Wimmer during the 04 race.*  
*B. Ian Parker made it three-in-a-row.*  
*C. Dr. Lisa Stranc-Bliss, the medical director in 2003 and 2005, raced in 2004.*  
*D. Major Curt Maples ran the simultaneous "Baghdad Badwater" in 2004, a 135-mile solo benefit for Iraqi schoolchildren.*  
*E. Ten-time finisher Jack Denness, 69 years young, in 2004.*



# The Death Valley Cup

**The Death Valley Cup** recognizes male and female athletes who complete both the Badwater Ultramarathon running race and the Furnace Creek 508 bicycle race in the same calendar year. This is a form of recognition for those athletes who complete both races in the same year, and also an actual plaque that is awarded each time an athlete breaks the current overall record for either the men's or women's divisions. Thus, there are, at any given moment, two Death Valley Cup Record Holders, as well as an ongoing, slowly increasing list of Death Valley Cup Finishers. To earn this recognition is a very significant achievement in endurance sports and especially for those athletes who have come to know and love Death Valley and its environs.

## Current Death Valley Cup Record Holders

**Kaname Sea Lion Sakurai**, 36, Nagoya, Japan  
2000 Badwater, 27:52:14, 3rd place  
2000 Furnace Creek, 32:31:56, 2nd place  
=60:24:10 total time\*

**Monica Scarlett Fairy Cup Scholz**, 37, Jerseyville, Ontario, Canada  
2004 Badwater, 29:22:29, 1st female, 3rd overall  
2004 Furnace Creek, 44:29:15, 2nd female, 27th overall  
=73:51:44 total time

(\*To receive the Death Valley Cup plaque, these combined record times must be broken.)



*Monica Scholz breaks the tape at the 2004 Furnace Creek 508*

## Death Valley Cup Finishers

**Marshall Unicorn Ulrich**, Ft. Morgan, CO  
1996 Badwater, 33:01, 1st place  
1996 Furnace Creek, 38:32:45, 16th place  
=71:33:45 total time

**Angelika Cat Castaneda**, San Diego, CA  
1999 Badwater, 36:58, 1st place  
1999 Furnace Creek, 43:46:40, 3rd place  
=80:44:40 total time

**David Jackass Jackson**, Lexington, KY  
2002 Badwater, 47:12:30, 25th place  
2002 Furnace Creek, 38:56:12, 15th place  
=86:08:42 total time

**Del Spider Scharffenberg**, Portland, OR  
1997 Badwater, 48:16, 13th place  
1997 Furnace Creek, 42:15:26, 10th place  
=90:31:26 total time

**Charlie Lizard Liskey**, Somis, CA  
1996 Badwater, 58:26, 14th place  
1996 Furnace Creek, 39:32:08, 17th place  
=97:58:08 total time

For information on Furnace Creek 508, visit: [www.the508.com](http://www.the508.com)



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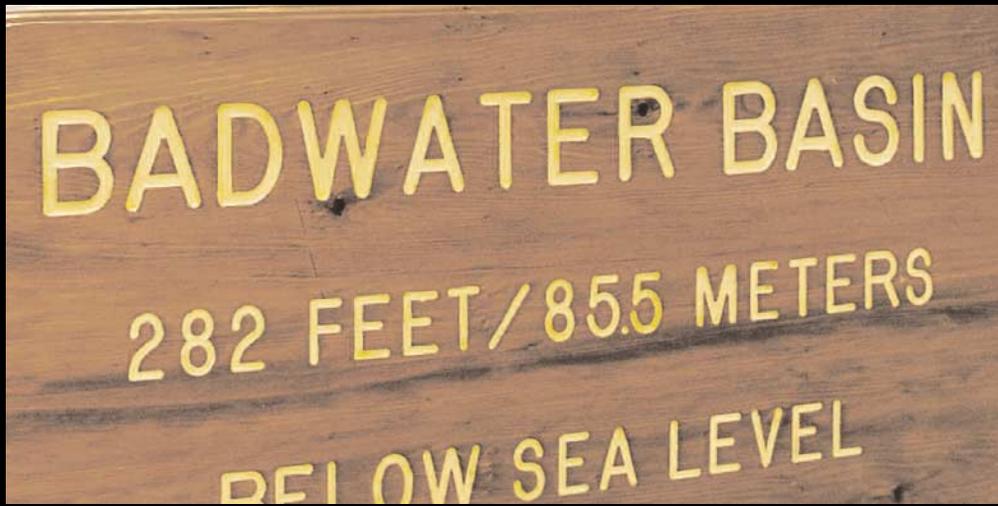
Monica Scholz



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