



Surviving the Sun

A Matter of Degrees



At first light Monday morning, May 17, Big Bend air patrol spotted the missing man's pickup near Glenn Springs. He had been reported "overdue" by family members the previous afternoon. By 9:30 a.m. and 88°F, the ground crew reached the vehicle--abandoned and high-centered atop a boulder on the backcountry road. The scene displayed signs of futility: haphazard diggings in the rock-hard roadbed, a broken shovel handle, tools strewn about, scattered tracks, and a broken watch with its time frozen at 11:30 a.m. Sunday. Footprints departed the scene, trekking north into the desert. By 1:00 p.m. and 96°F, searchers had traced the prints over seven difficult miles. When the tracks disappeared on the sun-baked surface, a lost baseball cap, broken branches, and a discarded undershirt reidentified the trail. At 3:00 p.m. and 101°F, a grim-faced search party discovered a dropped canteen, still three-quarters full, and an abandoned day pack. Finally, at 4:00 p.m. and 104°F, the lost man was found underneath a creosote bush. He had been dead for most of the day. The official report stated that the cause of death was "exposure."

DANGERS OF DEHYDRATION

Visitors are drawn to Big Bend National Park by grand vistas, interesting plants and animals, backcountry recreation, and solitude. However, the allure and excitement of Big Bend can disguise its harsh character. High temperatures, low humidity, and a constant dry breeze can lead to dehydration, heat exhaustion, heat stroke, and even death.

The hot dry air causes perspiration to evaporate quickly-cooling the body. Internally, the body values "coolness" far more than it values water and will freely give up sweat to keep cool. Up to a quart of sweat is lost hourly at 100°F in the sun. Although the process of water balance in the human body is complex, one fact is simple: our internal water reserves are crucial and the water lost by sweating must be replaced.

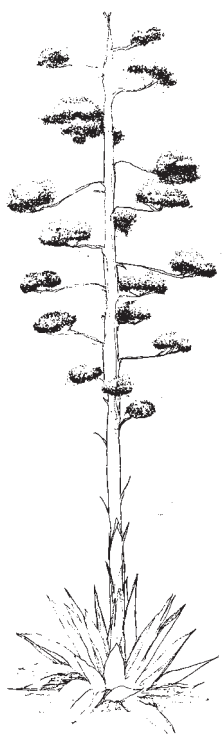
Dehydration decreases mental efficiency, upon which all of our actions depend. As fluids become depleted, a person loses sensitivity to the environment and may not recognize physical hazards. Reasoning and problem-solving skills are diminished, making it difficult to make correct decisions.

When water is not replaced, blood thickens and the heart has to work harder to pump it around. Fatigue, headache, nausea, and crankiness are all symptoms of initial dehydration. Thirst may NOT be an indicator. When feeling thirsty, a few sips may quench the thirst sensation without improving the internal water deficit.

At a 5% water loss (equivalent to what an adult may sweat during a backpack trip on the Marufo Vega Trail, or a hike to Mule Ears), an adult will often have muscle cramps, become dizzy, feel short-of-breath, experience tingling extremities and exhaustion. Waves of nausea will destroy the desire to drink. Dehydration at this level is extremely dangerous. It must be prevented!

A 10% water loss is critical. Generally, a person will still have the ability to rehydrate themselves. Beyond a 10% water loss, however, a person must rely on someone else to save their life. A 15-20% water loss may result in death.

Death from dehydration can be prevented...



Big Bend Survival Tips

Visitors to the Chihuahuan Desert constantly face heat gain and water loss. The more you are active in the sun, and the hotter the temperatures, the more water you need. Whether walking, backpacking, or day-hiking, you need to make efforts to conserve your internal water reserves.

REDUCE YOUR ACTIVITY

Follow the example of desert wildlife. In the afternoon they are mostly inactive to conserve water loss. During the warmest days, generally from May through August, avoid hiking in the lower elevations after noon. The hottest part of the afternoon usually occurs around 5:00 p.m. and the desert may not cool off until well after midnight.

FIND SHADE

Shade in the desert means the difference between excessive heat gain from the radiant sun and sheer comfort. In an emergency, a person resting in the shade will survive longer than someone exposed to the sun.

DRINK YOUR WATER

Don't try to conserve the drinking water you have. Whether strolling in the Basin, or hiking the South Rim Trail, you must DRINK your available water. A reliable sign of dehydration is the color of your urine. Normally clear to faint yellow, urine darkens to a deeper yellow as the body dehydrates. People have died in the desert with water in their canteens. They rationed their water while their bodies dehydrated.

REDUCE ALCOHOL & CAFFEINE INTAKE

Caffeinated beverages and alcohol require more internal water reserves to eliminate than they retain. Electrolyte sport drinks are not water substitutes. Water is the best remedy for dehydration and listlessness.

PROTECT YOUR BODY

Our sensitive skin burns easily; it needs shade, sunscreen, sunglasses, and proper footwear. Dehydration is accelerated by exposed skin, so keep your clothing on. Wear long-sleeved, loose-fitting, light-colored clothes. Be sure to cover your brain by wearing a hat.



In The Backcountry

Heat-related illnesses can and do quickly strike unprepared people. Park visitors have died from dehydration, and yet most people have the capacity to handle desert situations if they know and follow a few basic tips.

LEAVE A TRIP PLAN

Communicate your plans with others. Let a friend or family member know your route and expected return. If you fail to return as scheduled, they should notify a park ranger.

BE PREPARED

Be prepared for the unexpected. Imagine your vacation turning for the worse --maybe a disabled vehicle on the Old Ore Road, or an overestimation of your physical ability in the backcountry.

CARRY ALL WATER

Never rely on springs for your only source of drinking water. What will you do if the spring you counted on is dry or contaminated once you arrive? Carry ALL your necessary water...at least one gallon per person per day.

STAY PUT

If you become lost or stranded, stay put. You may be uncomfortable, have to wait a day, miss a meal, but may probably be alive when rescuers arrive.

BE HONEST WITH YOURSELF

Know your physical limits and capabilities, before you have to depend upon them. Recognize when you are overheated or feeling dehydrated. Self-aid and first-aid can prevent mild heat-related illness from turning into another desert fatality.



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