

HOT WEATHER HAZARDS

Keep cool under the summer sun.

by **Grant Harris**

Pete Rossi knows all about the hazards of working in hot weather. As the survey manager for Cella Barr Associates in Phoenix, Ariz., he's seen how a rising mercury can turn a productive worker into a victim of heat exhaustion.

Soaring temperatures during the summer can provide a sizable obstacle for surveyors all over the country. This is especially true when the air is humid and the work requires heavy exertion. Those that don't take the proper steps may find themselves victims of heat stroke.

One way Rossi has found to beat the heat is to get his crews working well before the full brunt of the summer conditions hit.

"Generally speaking, as we get closer to summertime, we move our working hours up tremendously," Rossi says. "We start at 4:30-5:00 in the morning. The crews are generally done around 1:00 or so."

Dr. Ronald Charles of the American College of Emergency Physicians says limiting the time spent outdoors in the summertime is a good idea. He also says the key to fighting heat stroke lies in three words: "fluids, fluids, fluids." Charles recommends a 50/50 mix of water and sports drink, which helps to keep workers hydrated and provides electrolytes to replace the salt lost in perspiration. He also cautions those taking any medications to discuss how their usage may affect working in hot weather. Certain drugs, like antidepressants and others taken to fight hypertension, can exacerbate the effects of the heat.

Another key element in fighting heat stroke is the proper attire. In many land surveying situations, those in the field crew are required to wear long pants and a long shirt, sometimes a vest. Dr. Charles suggests materials that "breathe well," noting that any fabrics that allow moisture to evaporate and the wind to pass through are preferable. Certain clothing manufacturers, like Glacier Tek Inc. in West Mel-



Illustration by Michael T. Powell.

bourne, Fla., also make specialty work gear. Glacier Tek's KoolJacket, for instance, is designed to absorb heat and use a semi-solid phase change material to maintain a comfortable 65° temperature. Rossi says the right headgear also helps.

"When I'm in the field I prefer a baseball cap with a handkerchief wrapped over my neck," Rossi says. "That way, I can always wet that down. It dries out rather rapidly, but it is a cooling process. You've got to take advantage of whatever shade you can get."

Monitoring the effects of the heat on coworkers is also necessary. Charles says those who may be lapsing into a heat stroke can start to exhibit erratic behavior and get dizzy from relatively simple motions. An increased heart rate may also signal the onset of dehydration. Rossi says these symptoms are often noticeable on hot days.

"They'll have dizziness, forgetfulness, non-attentiveness. You'll be

talking to someone on the radio and you can't even get a response," Rossi says. "They might start to lose concentration. That's when we say 'Hey guys, let's go take a break. Let's hit the shade and water ourselves down.'"

When a break becomes necessary, Charles recommends workers douse their head in ice. He also says ice should be placed in high blood-flow areas, like the groin and underarm, to help bring body temperature down.

Rossi says his workers are also equipped with mobile phones and the numbers for area emergency rooms in case anybody falls ill. In the end, Rossi says playing it smart and being prepared is the best way to keep safe.

"We have some people here who run from point to point when they're out in the field. I strongly discourage that as the weather gets hotter. I want them to keep the pace reasonable because it's not worth it to get a heat stroke over production." ▲

Grant Harris is POB's former associate editor.