

Current Health²

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Defeat the Heat

How to keep cool when
the temperature rises



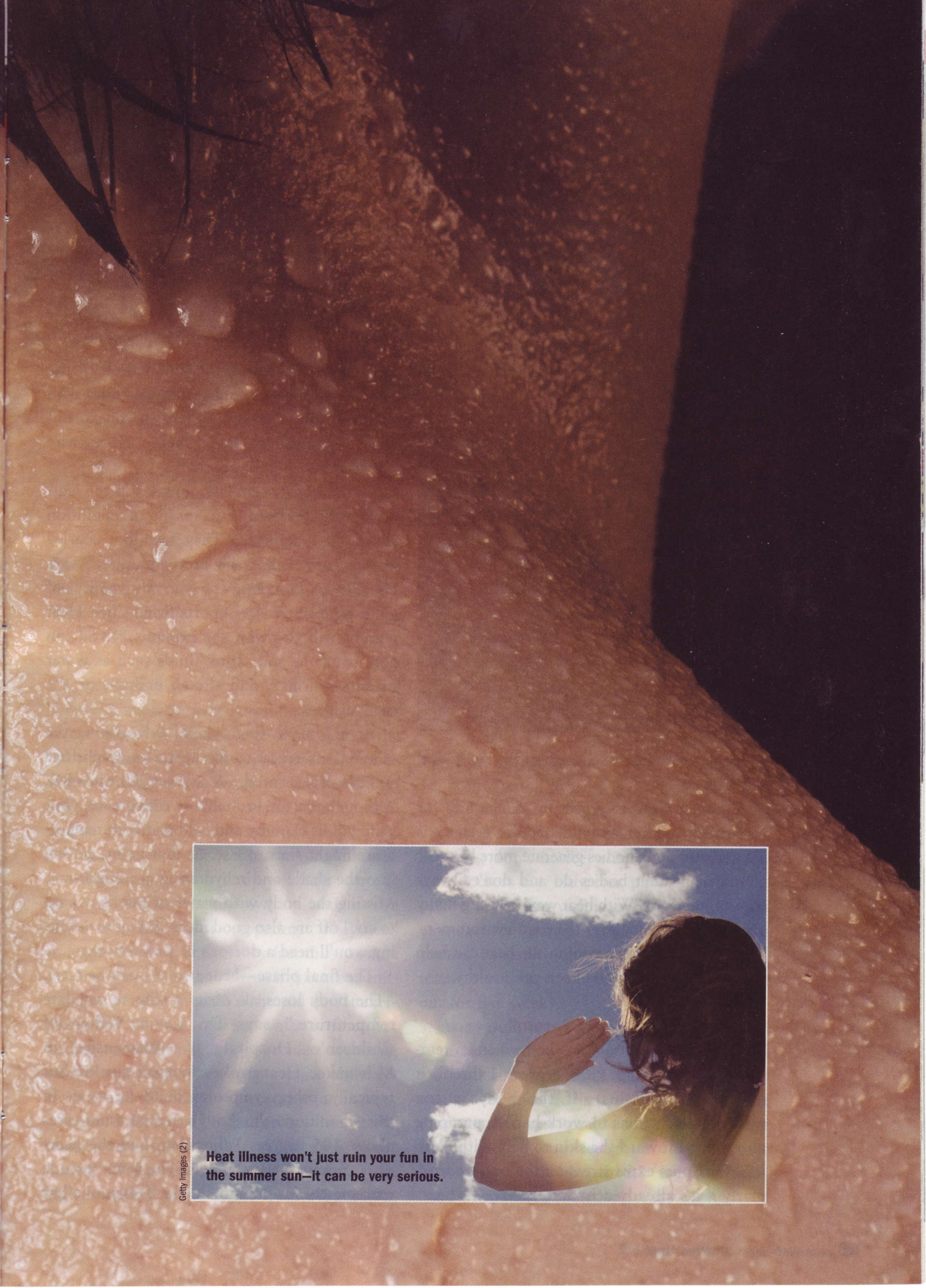
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Beat the Heat

Smart tips for staying cool

By Sarah Webb

Last summer, when Amanda R. of Anaheim Hills, Calif., was running on a cross-country course with her team near Big Bear Lake, she blacked out. “I got really dizzy,” she says. “I was out for a few minutes.” At first, Amanda assumed she was just tired and didn’t think she had a health problem. She did go to the emergency room, where she was released after tests and monitoring, but she fainted again several days later as she was talking with her coach. Another doctor ran more tests and told her she had a heat illness. “I had been running in heat all summer,” Amanda says. The doctor guessed that Amanda had blacked out “because we were in heat so much with not



Heat illness won't just ruin your fun in the summer sun—it can be very serious.

Getty Images (2)

A hot day, exercise, or a combination of the two can overwhelm almost anyone who isn't prepared. Heat illness is no joke.



Picture Press/Photo Library

enough water and not enough of the right kind of foods.”

Although heat is especially dangerous for very young children and older adults, even teens are at risk. Young bodies generate more heat per pound than adult bodies do and don't always cool as efficiently. With heat waves hitting many parts of the country over the past few summers, knowing how to keep cool in the heat can help you enjoy staying fit *and* keep you healthy.

The Body's Cooling System

The human body functions best when its temperature is around 98.6 degrees Fahrenheit (37 degrees Celsius). If the body is too warm, the heart has to work harder, pumping more blood toward the skin to help with cooling. That puts extra stress on the body, particularly if it's already dehydrated.

A small region in the brain, called the hypothalamus, works as the body's thermostat. If it detects that body temperature is ramping up, it will send signals to tell glands on the skin to sweat. The sweat glands release a liquid that's 99 percent water with a few other salts called electrolytes. As sweat on the skin evaporates, the body cools down. When the weather is very warm or during exercise, bodies get rid of most of their heat that way.

Breakdown

A hot day, exercise, or a combination of the two can overwhelm almost anyone who isn't prepared. Heat illness is no joke. If you start to notice symptoms, treat them right away because they tend to get worse.

As the body overheats, muscles in the legs, arms, or abdomen can spasm, a condition called heat cramps. “They feel like charley horses and tend to be pretty painful,” says Dr. Holly Benjamin of the University of Chicago Center for Sports Medicine. Heat cramps will go away, she explains, if you can get out of the sun, drink fluids such as water or sports drinks, and stretch or massage the sore muscles.

At the next stage, heat exhaustion, the whole body reacts to the heat. You might feel a little disoriented, dizzy, or light-headed. Although you are probably sweating a lot, your skin will be clammy and cold and your temperature might start to rise. At that point, getting into the shade and rehydrating are important. Misting the body with water or taking a bath to cool off are also good ideas. If you're vomiting, you'll need a doctor's help to rehydrate.

The final phase—heat stroke—can be fatal. “The body loses all of its ability to regulate temperature,” says Dr. Kevin Walter of Children's Hospital of Wisconsin in Milwaukee. Heat stroke can occur quickly, but typically, other symptoms build up to it. In this condition, the body's temperature rises above 105 degrees Fahrenheit, and the heart often pumps very rapidly. Symptoms include extreme confusion and shock. If someone has

Too Much Sweat?

Some people—up to 3 percent of the population—sweat excessively, even in cold weather. The condition, called hyperhidrosis, can affect the underarms, the palms of the hands, or the soles of the feet, and it often runs in families. (Excessive sweating over the whole body could be a symptom of another medical condition.) Doctors aren't sure what causes hyperhidrosis, but using special antiperspirants, medications, or other treatments can help.

Dr. Jeremy Burgess/Photo Researchers



Have you ever wondered what one of those tiny pores in your skin looks like up close? Don't sweat it—here's a germ's-eye view. The image shows a sweat pore on the palm of a man's hand. The pore is a tunnel through the outer layer of skin (epidermis) to the inner layer (dermis). The excess sweat of hyperhidrosis often starts here and on the soles of the feet at an average age of 13; excessive underarm sweat tends to develop toward the end of the teen years.

those symptoms, call 9-1-1, Walter says; he or she needs emergency treatment immediately. Without medical attention, a person can suffer stroke or kidney failure.

Prevention Is Key

There are many ways to stop a heat illness in its tracks before it becomes serious. Because the body requires water to sweat in hot weather or when working hard, replacing the fluids that are sweated away is important. Drinking when you're thirsty is not enough, says Walter. "Most athletes won't feel thirsty until they've lost 2 percent of their body weight in water," he notes, so they should hydrate both before and after practicing or competing. "They need to begin drinking before they feel thirsty when playing." The same holds true if you are spending time outside on a hot or humid day. If exercising for an hour or less, water is fine, but adding sports drinks is a good idea over long workouts because they help replace the electrolytes and salt found in sweat, Benjamin says.

Humid days can be dangerous, even if the temperature isn't that hot. "The air is more moist," Walter says. If the body is sweating, high humidity keeps sweat from evaporating

or cooling the body efficiently. On very hot and humid summer days, you should take the following precautions:

- Stay in an air-conditioned building whenever that is possible.
- Avoid being outside or exercising from 10 a.m. to 2 p.m., the hottest part of the day.
- Wear light cotton clothing or sport blends that draw sweat away from the body.

Know Yourself

Teens often don't want to stop and take a break or don't notice when they start to feel bad, doctors say. However, paying attention if you're not feeling well is incredibly important, as Amanda learned firsthand. She had just earned a varsity spot on the cross-country team, but after the blackouts, she had to sit out for five weeks.

As a result, Amanda has changed her habits. "I drink a lot more water," she says, "and put more salt in my diet. I'm eating more balanced meals." Amanda advises teen athletes to trust their coaches and speak up when they're not feeling well. "And recognize the difference between when you're tired," she concludes, "and when there's something really wrong." **CH2**