

## As South Florida heats up, ice immersion cools the body—fast

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Deanna Young, 31, lowers herself into a 100-gallon tub filled with ice water at her Delray Beach gym. After 45 minutes of cardio and strength exercises in the intense Florida heat, she wants to cool off fast.

Submerging into the frigid water, her body instantly feels a cold jolt, but then relaxes as she concentrates on the therapeutic benefits.

"It takes a lot of the inflammation away," she said. " It's so energizing. When I get out of the tub I feel like a million bucks."

Whether for wellness or [emergency response](#), ice immersion has become a go-to for improving health as the heat index soars to record highs in Florida.

Throughout the state, firefighters carry giant plastic, ice-filled bags to quickly cool people suffering from heat stroke; high schools equip athletic trainers with ice tubs and polar pods to treat [student athletes](#) suffering heat exhaustion; the Army rolls out its arm ice immersion and ice sheeting techniques to cool down heat victims fast; and spas and gyms offer ice baths to restore and rejuvenate after heat exposures.

"Ice will lower your temperature rapidly," said Rob Simonelli, director of Slash Fitness in Delray Beach, which has been offering ice baths for about two years. "It has a lot of recovery benefits."

Simonelli's gym offers a workout experience called "Fire & Ice" that begins with a 45-minute outdoor workout underneath the South Florida sun and ends with a therapeutic soak in a tank filled with 100 pounds of ice water. Each week, as many as 40 people take an ice bath, and Slash goes through about 500 pounds of ice daily to refill the tubs. Anyone who goes in must shower first—and get medical clearance. He urges his bathers to ease in slowly, building up to about five minutes.

"Once you learn how to tolerate the [cold temperature](#), there are benefits to the body," Simonelli said. However, he acknowledges that anyone taking the plunge needs to be cautious: Prolonged cold exposure can increase your risk of hypothermia.

In Wellington, several spas target equestrians and athletes, touting the anti-inflammatory benefits of ice baths, relief from muscle pain, along with heightened mental clarity and energizing effects. In Fort Lauderdale, wellness centers advertise yoga or sauna sessions followed by an ice bath to stimulate circulation.

## **Ice cocoons to the rescue in emergencies**

Overheating is one of the most common and most serious dangers in Florida, and this summer is setting new record highs in temperature and humidity, and multiple heat advisories. Emergency medical responders are turning to ice baths to quickly cool overheated Floridians.

"We have to recognize that we have heat emergencies in Florida," said Dr. Benjamin Abo, an emergency medicine physician on Florida's west coast. "It's not just the temperature. It's also what someone is wearing, their activities, their health conditions, the medications they are taking that affect their ability to compensate with heat."

Marathon runners, outdoor workers and even pickleball players are susceptible to heat strokes, as is anyone who overexerts themselves in scorching temperatures without enough hydration.

Abo has led efforts in Miami Beach, Naples, Bonita Springs, Sanibel and Gainesville to instruct and equip first responders to place patients suffering from heat-related illnesses in zippered bags that engulf the body, then pack them with ice cubes and water, until the body cools to safe levels. "When their core body temperatures come down, we take them out of the bag and do passive cooling instead of active," Abo said.

This type of ice immersion has saved several dozen lives in Florida, he said. The full body ice immersion bags are being routinely deployed in emergency rooms and on ambulance calls. When emergency responders

get the 911 call, they fill the bags with water and ice before heading out.

Five minutes in a full body bag can lower core body temperature by as much as 1 degree Fahrenheit. "One degree of internal cooling makes a significant difference," Abo said.

"It's important to recognize heat stroke can happen," Abo said. "We have to figure out how to decrease the rate of what's happening, and when it happens know how to handle it."

In most cities in Broward County, emergency responders mist patients with water and fan their bodies to cool them, then rush the patient to a nearby hospital. More recent guidance has taught responders to put ice or cold water on a patient's major arteries in the groin, neck and other areas. Jim Roach, medical director for the Broward Sheriff's Office, said he is watching activity in other parts of the state and considering putting the body cooling bags in all ambulances.

"I think it's a promising treatment, and we want to look to see how we can implement that into our systems in Broward County," Roach said.

## **Cramps? Exhaustion? Student athletes may turn to ice baths**

In Broward and parts of Palm Beach counties, high schools use ice baths to prevent student athletes with cramps and [heat exhaustion](#) from getting heat stroke.

Raphaella Albites, program manager for U18 sports medicine with Joe DiMaggio Children's Hospital, said schools have coolers of ice water at athletic practices, and most have 300 gallon tubs for immersion if needed. The trainers typically place the tubs near the field, ready to be

filled in an emergency or to help athletes rejuvenate tired muscles.

"In Broward, we also use polar pods, kind of like a sleeping bag," Albites said. "We put the kid in it, add ice water and zip it up. It will lower the body temperature quickly. Sometimes we will do it precautionary if someone has bad cramps, is dizzy, has headaches, or is nauseous."

Albites said the gold standard to prevent heat stroke is a Polar Life Pod, but schools also use a tarp and cold water. "It cools the body relatively quickly and allows the body to reset," she said.

The longer a person's body temperature is elevated, the more likely he or she will face organ damage or other health issues. "That is what we are trying to prevent," Albites said.

At U.S. Army bases, firefighting training centers and college athletic departments, another technique involving ice has become a fast cool-down solution. All it takes is a bucket of ice water to submerge the forearms and biceps—basically the arm from the elbow down.

"This is when the body temperature is elevated and they are not a heat casualty yet, but just resting isn't enough," said Lt. Col. Dave DeGroot, who runs the Army Heat Center at Fort Moore in Georgia. DeGroot says the arm is easily accessible and doesn't weigh a lot. It can easily be dunked in the ice bucket.

The Army has used this method at its training facilities to bring its soldiers' core temperatures down and suggest it for anyone overcome by heat.

But if someone shows signs of an altered mental state, a different method should be used while waiting for an EMT to arrive, DeGroot said. The method is ice sheets, which are bed linens dunked in ice water

and wrapped around the body. "While it doesn't work as fast as full body ice water immersion, you can avoid someone dying from [heat stroke](#)," he said.

With heat advisories almost daily this summer, the most important way to avoid a heat casualty is to use ice or ice water and get someone cooled off fast, DeGroot said. "It could be life-saving."

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