Before Taking Icy Plunge, Just Know 'Cold-Shock' Health Risks

By Erik Lief — January 3, 2018

Three days before human hoards rushed into the Atlantic from a Brooklyn shore on New Year's Day, three sharks up north, in the same ocean off Cape Cod, wound up doing something that doesn't usually happen. That would be ... freezing to death.

While these two events are only tangentially related, what binds them is a condition called "cold-shock," which is what marine biologists believe likely killed the sharks. It's also what doctors warn legions of temporarily-off-kilter, winter swimmers they'll experience when taking the so-called "Polar Bear Plunge," a frigid, semi-naked event held annually since 1903 on the first of the year at New York's Coney Island.

Luckily, none of the estimated several hundred plungers avoided the fate of those sharks [2]. But these humans did voluntarily expose themselves to the – literally – breath-taking feeling when warm skin comes into contact with near-freezing water. That combination creates the involuntary response of inhaling a giant gasp of air.

Yet, while this annual gathering is uniformly perceived as a harmless, quasi-crazy act of frivolity and personal expression, it's not without risk, which in some cases, depending on one's physical condition, can actually be fatal.

Participants were required to sign a liability waiver for this particular event. And at 17 degrees the crowd size was significantly lower than the thousands attending in previous years, like the roughly 2,000 in 2014. Meanwhile, the air temperature last Jan. 1 was roughly 50 degrees.
They were also encouraged to consult a physician beforehand. But that doesn't mean they did, and with the water temperature this Jan. 1 at a near-freezing 37°F – much colder than 48°F just two years ago – the heart can be significantly strained from pumping blood. In addition, many of these folks don't just run in and run out; Polar Bear members often stay in the water for as much as 10 minutes.

Also, if cold-shock occurs under water when taking the plunge, there can be serious consequences.

"This can be incredibly dangerous," reported Popular Science [3], in speaking with a Joseph Herrera, the director of sports medicine at Mount Sinai Medical School, "since you have no control over how and when it happens, it could occur when you are underwater, causing you to take water into your lungs. Depending on how much water you inhale and how long it takes you to get back to the surface, you could end up drowning."

This isn't just a warning for those who are relatively frail or out of shape; healthy "plungers" can be similarly at risk. Moreover, when the skin-exposed body is met with these extremely low water temperatures blood vessels constrict, with blood naturally rushing away from extremities and towards vital organs; the heart and brain.

What about the supposed "benefits" of subjecting one's self to the icy bath? Some feel it fortifies you against disease, by making your body and its defenses "tougher." There's only one problem with that idea: there's no scientific evidence to back that up.

Given that this also serves as a fundraising event, all of this is not to say the Polar Bear Plunge is something to absolutely stay away from. Instead, in case you're considering doing something like this at a similar event this winter elsewhere around the country, it's simply good to know – going in – the related health risks that exist. And make sure you're physically up for it, so do consult your doctor before taking the plunge.

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