

## Ellen Glickman Explores the Science Behind the Cold Water Plunge

Exercise Physiologist Revisits 40 Years of Research to Separate Hype from Hard Data on Cold Exposure

KENT, OH, UNITED STATES, August 13, 2025 /EINPresswire.com/ -- With cold plunges dominating wellness headlines and social media feeds, <u>Ellen Glickman</u>, a leading authority in exercise physiology, is offering a science-based perspective grounded in decades of research.

"In 1993, I led one of the first studies to examine prolonged cold-water immersion that included 90 minutes at 18°, 22°, and 26° Celsius, and its effects on thermoregulation and plasma beta-endorphin levels," explained Ellen Glickman. "We discovered that body composition mattered. Men with



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higher body fat (18–22%) had a lower stress response, shivered less, and maintained core temperature with fewer calories burned than their leaner counterparts."

The study, published as Glickman-Weiss et al., 1993, split participants into low-fat (8–12% body

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fat) and high-fat groups, controlling for factors like age, gender, ethnicity, surface-area-to-mass ratio, and diet.

"It wasn't just a dip in the pool," Ellen Glickman shared. "It was about understanding how our bodies handle cold stress over time."

Fast forward four decades, cold exposure has evolved into a wellness trend embraced by athletes, biohackers, and weekend warriors alike. Ellen Glickman points out those

modern methods, from ice baths and cold plunges to cryochambers and cold showers, vary greatly in their physiological impact.

"Water conducts heat about 25 times faster than air, so an ice bath is a far greater stressor than a cold shower," Ellen Glickman noted. "That rapid heat loss triggers vasoconstriction, potentially aiding recovery and lifting mood through hormonal responses like increased dopamine and endorphins. But your body's makeup, age, fat percentage, even gender, plays a huge role in your response."

While cold showers can offer a quick vasoconstriction effect, Ellen Glickman cautions that research is still inconclusive about their impact on muscle recovery, mood, or inflammation. Cold plunges, on the other hand, deliver shorter, more intense exposure designed to shock the system, but more studies are needed to confirm their specific benefits in post-exercise recovery.

Ellen Glickman also points to cryochambers, which expose the body to extreme cold (-166°F to -220°F) for just 2–4 minutes.

"These cryochambers are designed to induce a stress response, ramping up anti-inflammatory hormones and redirecting blood to the core. But whether those fleeting moments lead to long-term performance gains is still an open question," Ellen Glickman said.

Cold exposure, Ellen Glickman reminds us, is not new.

"Consider the Korean pearl divers of Pusan who have braved icy waters for centuries. The question isn't whether humans can adapt to cold, it's whether we can harness that adaptation to improve recovery, performance, or health outcomes. And for that, we need more rigorous, controlled studies," she said.

Ellen Glickman's advice for those intrigued by the cold plunge craze:

"The science is promising, but it's not one-size-fits-all. Your body, your goals, and the type of cold exposure you choose will determine your outcome. Whether you're chasing recovery, a mood boost, or just curious, approach it informed and stay tuned as we continue to dive deeper into the data."

## About Ellen Glickman:

Ellen Glickman is a leading expert in exercise physiology with an extensive portfolio that includes approximately 125 scientific journal publications, three technical reports, and a book chapter. A Fellow of the American College of Sports Medicine (FACSM), Ellen Glickman serves as a reviewer for prestigious journals, including Medicine in Science and Sport and Exercise. Recognized for her engaging lectures at national and international conferences, Ellen Glickman has partnered with Orbital Research Inc. to advance the field of environmental physiology through innovative technology. She earned her Ph.D. from the University of Pittsburgh and has held academic positions at Louisiana State University and Kent State University.

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Please visit: <a href="http://www.ellenglickman.com/">http://www.ellenglickman.com/</a>

For more information or to schedule an interview with Ellen Glickman, please contact Dan Rene

at 202-329-8357 or dan@danrene.com

Dan Rene
Dan Rene Communications
+1 202-329-8357
dan@danrene.com
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