

HEALTH

Study of the Day: Cold Can Help Runners Recover From Exercise

Extreme temperature whole-body cryotherapy repairs athletes' damaged muscles much faster than radiation or rest, new research shows

HANS VILLARICA | DEC 15, 2011

Whole-body cryotherapy in extreme temperatures repairs athletes' damaged muscles much faster than radiation or rest, new research shows



PROBLEM: Though recovery is a critical part of an athlete's training, few studies have tested the methods typically used to repair muscle damage caused by intense

exercise.



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METHODOLOGY: Researchers led by [Christophe Hausswirth](#) of the National Institute of Sport, Expertise, and Performance in Paris recruited nine seasoned runners to perform three sets of a simulated trail run designed to induce muscle damage over the course of three weeks. Immediately, a day, and two days after a training session, the investigators employed one of three recovery approaches -- cryotherapy, far-infrared or heat therapy, or good old-fashioned rest.

RESULTS: Whole-body cryotherapy, wherein the participants were exposed to temperatures as cold as -166°F, was the most effective recovery aid. One session conducted one hour after exercise enabled the runners to gain back maximum muscle strength much faster than the other strategies. Three sessions performed after 48 hours also accelerated recuperation more than the other two methods over the same time period.

CONCLUSION: Athletes benefit more from cryotherapy than from exposure to far-infrared radiation or no treatment. Hausswirth explains in a statement that this method enhances "post-exercise recovery in well-trained runners by limiting the maximal force loss and sensations of pain."

SOURCE: The full [study](#), "Effects of Whole-Body Cryotherapy vs. Far-Infrared vs. Passive Modalities on Recovery from Exercise-Induced Muscle Damage in Highly-


Trained Runner," is published in the journal *PLoS One*.

Image: Yuganov Konstantin/Shutterstock.

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