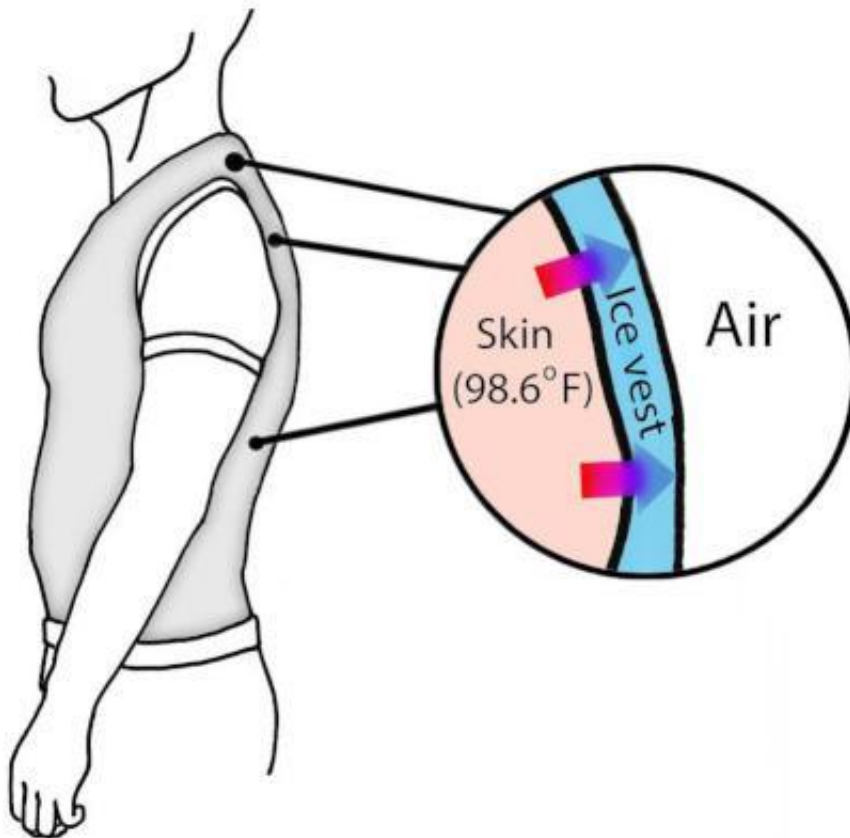


# Calorie-burning vest makes use of cold exposure

February 12 2015, by Nancy Owano

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"Give fat the cold shoulder." That is the catchy advice in a video of a scientist who believes he is on to something to support weight loss, and that is The Cold Shoulder calorie-burning vest. Dr. Wayne B. Hayes said it can help a person burn an extra 500 calories per day. Swimmers burn a

lot of calories in their workouts but swimming in cold water also contributes to the amount of daily calories burned. Olympic swimmers spend their time in water that is about 20 degrees Fahrenheit below their body temperature. This temperature difference extracts calories from their bodies. He said the difference makes them burn way more calories than exercise alone. The vest's basic concept is clothing with ice-pack inserts which serve to help burn calories. Actually, the effects of mild cold exposure on humans have been studied by scientists, with documents that discuss how mild cold exposure induces calorie burn. In April, a research paper from The Netherlands, by Wouter van Marken Lichtenbelt, Boris Kingma, Anouk van der Lans and Lisje Schellen was published in *Trends in Endocrinology and Metabolism*. The title was "Cold exposure – an approach to increasing energy expenditure in [humans](#)."

The authors suggested that regular exposure to mild cold may provide a sustainable alternative strategy for increasing energy expenditure. Obesity is linked not only to excessive food intake (energy intake) but also to physical inactivity (reduced energy expenditure). "In the past two decades major scientific and financial interests have focused on counteracting excessive [energy intake](#) to tackle 'diabesity'. This approach now appears to be rather disappointing in terms of Public Health and, until now, effective treatment strategies against obesity and T2D [type 2 diabetes] are still lacking." The paper's hypothesis was that the thermal environment affects human health – and more specifically frequent exposure to mild cold can affect [energy expenditure](#) significantly over sustained time periods.

Dr. Hayes said his vest solution showed it could burn about a pound of fat a week—about 500 [calories](#) a day. You wear the vest for two hours a day. The Cold Shoulder, with ice draped over the shoulder and across the back, worn against the body, lowers your skin temperature and forces the body to burn calories to generate heat to keep you at your core

temperature. Ice over the shoulders and across the back are comfortable places to put the ice, he said.

Hayes is a professor at the University of California, Irvine, and visiting scientist at NASA's Jet Propulsion Laboratory in Pasadena, California. He has turned to Kickstarter to help place the vest into large-scale production. "Although we have the designs and prototypes finished and our manufacturer stands ready to produce the vests, the cost of production is high unless we fulfill minimum order quantities." Pledge prices vary with types of offers and the information is up on Kickstarter. Since the start of the campaign a number of reward levels are already gone. Out of a \$13,500 [goal](#), he raised \$257,207 at the time of this writing.

Hayes makes a point of distancing himself from vendors of miracle solutions where one is told to continue eating anything, maintain a sedentary lifestyle and place all expectations on a pill, tablet, powder or magic bracelet. "Let's be blunt," he said, "there is no magic pill for [weight loss](#), and The Cold Shoulder is no exception to that rule. The cold, hard truth is that the foundation of weight control is your diet. In order to maintain a healthy weight, do what grandma told you: eat your veggies, cut the fat off your steak, and avoid junk food, especially sweets."



If one continues to eat junk, he said, no amount of [cold exposure](#) will help you lose weight. He cautioned, "don't expect that you can continue to eat junk food, wear the vest, and lose weight. You can't." The ideal candidate for vest-wearing success is someone already eating well, getting moderate exercise and who wants to accelerate calorie-burning efforts by burning excess calories while at rest.

**More information:** [www.kickstarter.com/projects/9 ... calorie-burning-vest](http://www.kickstarter.com/projects/9...calorie-burning-vest)

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