New science behind low-carb training

By David Despain, Outdoors

University of Copenhagen sports physiologists first developed the "train low, compete high" protocol in 2005 for athletes looking for a performance edge. It encouraged the idea of double workouts every second day. In practice, athletes would eat breakfast to fuel their morning session, then skip lunch prior to their evening session, leaving muscles depleted of their glycogen stores.

The benefits were thought to be pretty straightforward: you force muscles into using glycogen stores more resourcefully by tricking them into becoming fat-burning machines. Dipping into fat reserves would prevent glycogen stores from depleting completely, so you'd lower your chance of "bonking," or running out of fuel, during a long endurance race.

But the dietary protocol hasn't stood up to the hype. "After over a decade of scientific research on 'train low' protocols, there have been no clear demonstrations of improved performance with competitive athletes at an elite level," says Louise Burke, a professor of sports nutrition at the Australian Institute of Sport.

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