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Air Supply

OXYGEN EQUALS FUEL: PRESENTING FOUR O₂ BOOSTERS TO HELP YOU SUCK MORE WIND BY KATE ASHFORD



INTERMITTENT HYPOXIC TRAINING

THE BIG IDEA

By administering periodic blasts of low-O₂ air, IHT teaches your body to adapt more quickly to oxygen-deprived environments. Think of it as high-altitude training without the altitude.

THE DETAILS

Used during WWII to prepare pilots for dog-fights, hypoxic generators for civilians were introduced in 1995. Industry leader Hypoxico Inc. has sold 900 systems in the U.S. alone (\$5,900; www.hypoxicent.com).

EXPERT OPINION

"We've helped people climb Everest through training with IHT," says Richard Pullan, director of the Altitude Centre in London. "Your body says, 'I need to adapt to make sure I get oxygen.' So it produces more red blood cells, which transport more oxygen."



VIAGRA

THE BIG IDEA

German researchers recently found that the little blue pill enabled 14 Swiss and German Everest climbers to better tolerate O₂ deficits, increasing their maximum exercise capacity.

THE DETAILS

At altitude, Viagra improves the body's ability to assimilate oxygen by relaxing and expanding blood vessels in the lungs, just like it does in the penis.

EXPERT OPINION

Don't book your ticket to Kathmandu just yet. "This study doesn't tell us Viagra's effect on endurance," says Robert Roach, associate director of the Colorado Center for Altitude Medicine and Physiology. Long-haul staying power, he says, not short-burst activity, is a climber's chief concern.



NASAL STRIPS

THE BIG IDEA

Popular in the NFL, these plastic strips adhere to the bridge of your nose, pull open the nostrils, and increase the diameter of the air passageways.

THE DETAILS

These O₂ boosts ease the burden on respiratory muscles. Conserved energy can be used to improve performance.

EXPERT OPINION

"Most people breathe through their mouths during exercise, so wearing nasal strips doesn't really increase the amount of air flowing in and out of your lungs," says Joseph O'Kroy, an associate professor of exercise science at Florida Atlantic University, who's conducted two studies on nasal strips. O'Kroy recommends strips only to athletes who use mouth guards.



INTERVAL TRAINING

THE BIG IDEA

Alternating between high- and low-intensity exercise engages both slow- and fast-twitch muscle fibers, forcing all muscle groups to learn to process more O₂.

THE DETAILS

Only maximum exertions, like sprinting, activate the larger, fast-twitch muscle fibers. Because they are seldom used, they fatigue more quickly than slow-twitch fibers.

EXPERT OPINION

"If you use a muscle, it has to find a way to increase its energy supply," says Joseph T. Nitti, M.D., author of *The Interval Training Workout*. When engaged, little-used muscle fibers develop more capillaries to carry more blood and more mitochondria to process oxygen. "It's like upping production in a factory."



THE UNVARNISHED TRUTH

"I'm anemic, which means my blood is extremely inefficient at bonding with oxygen. While other divers can spend over four minutes underwater, my effective underwater working time is about 2:35 to 2:45. To compensate I have to work relentlessly on my technique. There's no easy way out—strong, lean muscles and proper equipment are essential, but an unwavering commitment to attaining perfect form is much more important."

—YASEMIN DALKILIC, 25, women's record holder (151 feet) in unassisted constant ballast (free-diving with no guidelines, fins, or help to the surface)



BASIC TRAINING? GO FISH.

There's a reason why Navy SEALs are among the fittest humans on the planet. Instead of muscling up on a Bowflex or spinning their wheels on elliptical trainers, they reap the rewards of functional fitness. Wanna try? Created by Navy SEAL-turned-certified fitness instructor Phil Black, 34, FitDeck (\$19; www.fitdeck.com) is a set of 50 playing cards, each with a different basic training-inspired calisthenic (Bear Crawl and Duck Walk included) that can help you stay strong whether on the beach in Belize or deep in Yosemite's backcountry. "In outdoor pursuits, functional fitness is key," says Black, an avid adventure racer. "You're often on uneven surfaces, so you really need your stabilizing muscles to fire—you can't train those with a machine." One drawback? It takes courage to break out your Superman pose in plain sight. —M. B.