

Defying Gravity

The machine that makes implausible running possible

BY SABRINA GROTEWOLD

● Running fast is fun. And it's even more fun when you cheat.

I recaptured the euphoria I felt as a child, dashing around a track for 100, 200, 400 meters, nobody close to my heels, when I ran on the Alter-G, or anti-gravity, treadmill. The belt felt similar to those found on any average treadmill, but as I stepped into the neoprene shorts and zipped into the pressurized, airtight enclosure that covered the entire belt, I knew this would be no ordinary run.

Air gushed around my legs, lifting me up slightly, as the machine calibrated my body weight. The control panel contained all of the familiar buttons of a household treadmill—time, distance and incline—but it also included up and down arrows that increase or decrease body weight in one-percent increments. Reducing my weight by as much as 80 percent within seconds of rapid air gushing and bobbing upwards meant that I could literally relive the effortless days of my track-stomping youth, when the lung-burning burden of an all-out sprint required little more than the desire to have the wind whip through my hair faster.

Cheating gravity within the safe confines of the Alter-G made it easy to want to run faster, longer. I could definitely understand why elite runners like Kara Goucher, Dathan Ritzenhein and Paula Radcliffe use the machine to log extra miles or maintain fitness while recovering from injuries.

I suffered negligible consequences—sore hamstrings the next day—after

completing the day's second run at a sub-6:00 per-mile pace for 30 minutes on the Alter-G.

Developed by NASA research scientist Robert Whalen to keep astronauts fit in space, the treadmill's pressurized, sealed cockpit allows users to experience a low-gravity environment. The machine remained an uncommercial prototype until 2004, when Whalen's son, Sean, a budding entrepreneur getting his master's degree at Stanford, contacted Alberto Salazar, marathon champion and venerable coach of the Nike Oregon Project, to evaluate the treadmill. Blown away, Salazar gave Whalen \$15,000 to improve the prototype. With Salazar's input, the Whalens

refined the machine, launched a business and sold their first \$75,000 anti-gravity treadmill to pro basketball team, the Washington Wizards. Nike purchased three Alter-Gs as well. Recently, the Whalens are focused on the medical and rehabilitation market: In 2009, they sold 30 newer, lower cost (\$24,500) machines to hospitals and physical therapy centers to help patients recover from surgeries or cope with debilitating disorders such as vertigo and diseases like Parkinson's.

While an at-home prototype has yet to be unveiled, inquisitive runners can test the Alter-G at any number of facilities across the country—visit www.alter-g.com/product/find-an-alterg for details.



The Alter-G provides a low-impact way for injured athletes to reach the aerobic capacity of their regular workouts.