



FUTURETECH HEALTH OLYMPICS 2012

## 3 high-tech Olympic training techniques that sound like science fiction

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Endurance, performance and time. These are the holy-grail for any Olympic athlete. To possess even the smallest advantage in these areas could mean Gold. And everyone wants Gold.

So if you can't get the edge from performance enhancing drugs, what else can you do to push ahead of the competition? We've all heard about the advances in hardware that athletes can use to help them attain better performances — we're talking specialized swimwear, carbon fiber bike frames and boat shells and the like. We also know that athletes train with the most high tech items at their disposal, meaning suits with motion sensors and 3D cameras everywhere to help map the optimum performance.

But to get that edge, some athletes are turning towards some pretty strange training techniques. Instead of tweaking their tools, they are tweaking themselves, courtesy of some odd new methods. So much so, in fact, that this stuff sounds a lot like science fiction, and is rapidly becoming a reality in order to go for the Gold.



Photo Credit: Daniella Zalcmán/The Wall Street Journal

## 2. "Spaceship" Rides To Superhuman Performance

In some places around the world, people are willingly tucking themselves into egg-shaped pods. They're not crazy, nor are they trying to cosplay as spaceships. These pods are serious business; they're known as CVAC pods ("CVAC" for "Cyclic Variations in Adaptive Conditioning"), and they help athletes reach their peak performance.

These space-age pods have been a training method used on the sly for a while, but were recently outed by none other than the 2012 Australian Open winner, tennis champion Novak Djokovic, who willingly climbs in to boost his endurance.

Inside the pod, the user experiences changes in barometric pressure, temperature and air density, not unlike the simulation of high altitude you'd get from a hyperbaric chamber.

(\* ed. note: hyperbaric chambers are actually low altitude simulation, very low, as in well below sea level)

The CVAC takes a slightly more high tech approach however. It uses a computer-controlled valve and vacuum pump to simulate high altitude and compresses the muscles, but in this case it occurs at rhythmic intervals.

The effect on the body is something like a high intensity workout where your blood will carry more oxygen to your muscles. The CVAC manufacturers also claim it reduces lactic acid and could even stimulate mitochondrial biogenesis and stem cell production. The manufacturer recommends spending 20 minutes in the pod three times a week to see improved performance and endurance.

While some Olympic athletes who use the CVAC pod are pretty cagey about using the odd egg shaped chamber, Djokovic isn't shy about talking about it. He told the *Wall Street Journal*: "I think it really helps — not with muscle but more with recovery after an exhausting set. It's like a spaceship. It's very interesting technology."

Could the funny little egg really make a huge difference in performance? Who knows — but there are enough people that seem willing to try it to lift their game.

From where we sit — which is *not* in a pod — when you start talking about this thing possibly creating stem cells, we start to wonder if it is going to one day just start spitting out athlete clones.

Read the full article at: <http://www.dvice.com/archives/2012/08/3-completely-cr.php>