

Head In The Game

The performance enhancer for your brain: How elite athletes are using EEG to get a mental edge

By **BRANDON SNEED**
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In 2008, Olympic beach volleyball superstar Kerri Walsh Jennings and her partner, Misty May-Treanor, won gold at the Beijing Summer Olympics. That was Walsh Jennings's second gold medal. But then, in 2009, she watched as, in her words, her life "fell apart." She was married to a fellow volleyball player, and she was pregnant with their first child—but she was constantly on edge, or distracted, or otherwise not a good version of herself, and the result, she says, is that she and her husband were "on the verge of walking away from each other."

Telling this story in late 2014, she said, "I had this beautiful life, and on paper, I had everything I ever wanted, but I wasn't living my life, and I wasn't enjoying it."

A friend of hers told her about Mike Gervais, saying, "I called him for help with volleyball, but he helped me with my life."

So Kerri called Gervais, and, she says, they worked hard for two years. "We did a lot of work," she said. "And he . . . helped me find myself and get out of my own way, as an athlete, and as a woman."

In 2011, about fifteen months before the 2012 summer games in London, Gervais said Kerri should try Neurotopia. "And anything Gervais says for me to do," she said, "I will do until I die." She got all hooked up in more or less the same way Dan Chartier hooked me up. "The gel actually improved my hair," she said. "So I was grateful for that."

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Then she did her assessment test, which for Neurotopia was a twenty-minute continuous performance test consisting of tapping a touch screen when a dot appeared. That's it. The whole time she went through an entire range of emotions, everywhere from saying to herself *I'm kicking butt!* to *I'm failing!*

When she finished, she got her brain map, which Neurotopia produced differently from how Chartier did mine. Since they were trying to connect with athletes like her, instead of giving her several different views of a brain all lit up in reds and blues, she received a large hexagon-shaped graph with ten rings, resembling a target. Each point of the hexagon was labeled— Activation Baseline, Stress Regulation, Max Activation, Impulse Control, Focus Endurance, Focus Capacity—and scored on a scale of one to ten. The scores were indicated by a dot on the corresponding line of the ring, with better scores landing farther from center. A line connected each dot, creating a vivid picture of her brain.

Kerri's reaction was, in her words: "Holy hell! This is so exciting!"

In some ways, Kerri's EEG performance was amazing. For instance, the fastest a human brain should be able to process visual stimuli is about three hundred milliseconds, and yet Walsh Jennings's average response times were even faster than that—and she made few errors. She was also great at focusing and then sustaining her focus.

However, one area of her map cratered inward, almost creating the appearance of a brain in collapse. "First of all," Kerri said when she saw that, "am I gonna die? What is that? Why does my brain do that?"



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Her two problem areas were activation baseline and stress regulation. To explain, Gervais told her, "You're a Ferrari . . . You go sixty to one-twenty.

And you stay at one-twenty. You pull up to your house, pull into your garage, put it in park, and your foot is still on the gas, pedal to the metal, even in park.”

In other words, although her brain was excellent at focusing and working hard, this came from a constantly high level of brain activity that in turn worked against her when she needed to, say, go home and relax. A common problem for people striving for high performance.

“And I go, ‘Oh my God, that’s exactly how I feel every day,’” Walsh Jennings said. “I feel like I’m burning the candle at both ends. I feel like I’m going too fast, especially when I get in an uncomfortable situation.”

To see it on a screen like that snapped something in Walsh Jennings. She said, “My brain works this way because it thinks it’s working perfectly, but it’s not. I can change it. I can train it like it’s a muscle.”

Getting used to the training took some time. She sat in a chair with electrodes that were hooked into a computer attached to her head, looking at a big computer monitor, flying a ship through space with her mind. When she calmed her brain enough, the spaceship flew well. She felt like she was getting punked at first, but she committed to and trusted it.

At home, with her family, she learned to actually be there when she was there. Her relationship with her husband improved. Life began to feel as beautiful as it looked on paper.

The 2012 London Olympics came with Kerri facing her share of challenges. Not only was she thirty-three years old, entering that era of life when athletes’ bodies begin working against them rather than for them, and not only had she given birth to her first child about a year earlier—she was also five weeks pregnant.