

EDGE OF CHAOS

MINDFUL ATHLETE TRAINING



OCTOBER 2021

THE ASCENT

THE MAT TEAM

We hope you enjoyed our first-ever edition of Edge of Chaos released last month. We appreciate your support and want to thank you for a great launch! One of our main goals of the inaugural edition was to help you peer behind the curtain and to share what goes on behind the scenes at Mindful Athlete Training. As we progress, be on the lookout for articles about applications of our methodology to more real-world examples, athlete showcases, and much more. We grow through feedback, so please share any you might have at info@mindfulathletetraining.com. Enjoy!

THE CHAOS CORNER: CHAOS; MIRACLE AT THE NEW MEADOWLANDS

BY CHRISTIAN FRANCO

In the NFL, every game involves “chaos” in one way or another. The most memorable games have been ones involving substantial chaos; furious comebacks and gut-wrenching chokes. These games show that a team embracing chaos together can accomplish incredible things in the face of challenge and near-impossible odds. One of the most memorable examples of this from recent years is the Miracle at the New Meadowlands, a game now forever revered in Philadelphia.

December 19, 2010. Philadelphia Eagles at New York Giants. With both teams pushing for a playoff spot, this Week 15 contest was crucial. For the visiting Eagles, the first half was an absolute disaster. After being dominated for two



quarters, they entered the locker room at halftime down 24-3. At this point, it would have been easy to throw in the towel as the game looked to be already over; the pressure and the chaos seemed insurmountable. But no, this team made a conscious decision to embrace the chaos and not be rattled.

Things were looking up for the Birds when they scored in the third quarter to make it 24-10, but whatever momentum they gained was quickly deflated when the Giants scored again in the fourth quarter to make it 31-10 with 8 minutes left. This was it, the exact moment that chaos was at its highest. Many fans had left or were drowning the team in boos; very few believed there was even a chance for a comeback. However, head coach Andy Reid, quarterback Michael Vick, and other team leaders were among those few.

Instead of shying away or benching starters, the Eagles struck quickly on their next possession with a long touchdown to tight end Brent Celek. Immediately following, kicker David Akers surprised the Giants with an onside kick, which the Eagles recovered. At that point in NFL history, onside kicks were only successful about 18% of the time. Following two incredible improvised



scrambles from Vick, the Eagles scored again to make it a 7-point game with five and a half minutes left. The defense held firm to give the offense another chance, and again Michael Vick put the team on his back with elusive scrambles and pinpoint passes, engineering another score to tie the game with just over one minute left. As time wound down, the score was tied 31-31, and every indication was the game would go to overtime. After a crucial sack on third down, the Giants were forced to punt the ball back to the Eagles with just 14 seconds remaining. The game landed in wide receiver DeSean Jackson's hands, as he had one chance for a return. Most sensible players would only try to give the offense a chance to throw a Hail Mary or go to overtime in this situation, but not Jackson. After first fumbling the ball, he made one of the most memorable plays in sports history, returning the kick 65 yards to score as time expired; the first and only walk-off punt return touchdown to win the game in the history of the sport. Game over; the 21-point comeback in less than 8 minutes was complete.

Ultimately, the Eagles never doubted themselves. An exuberant Vick was caught on camera in the locker room dancing as he yelled, "keep bobbing and

weaving, keep bobbing and weaving." Team leaders spoke of playing as a family and sticking together; when you do this, anything is possible. Jackson reflected after the game: "I really wanted to do something crazy, I know everybody wants to give me a hard time: 'He does this. He's arrogant. He's a showboat.' . . . I'm not going to change." He knew how people felt about him; instead of letting it go to his head and doubting himself, he used it for motivation, played his game, and made one of the biggest plays in NFL history. Meanwhile, Giants coach Tom Coughlin said, "I've never been around anything like this in my life. It's about as empty as you get to feel in this business, right there." He and the rest of the Giants team were utterly stunned by the defeat.

This game exemplifies the duality of chaos. One side embraced the chaos, saw it as a challenge, and overcame the odds when no one else believed. The other side crumbled, allowing four touchdowns within 8 minutes, and their comfortable lead completely melted away. It is an important lesson that has happened in only a handful of NFL games, but shows that by embracing the chaos, playing as a team, and focusing on your training and game plan rather than the possible outcome, a team can defy the odds and write their names in history.

TALK LESS, DO MORE: WHY BIOFEEDBACK?

By Jim Wing



There are many benefits for those who train their Mental Fitness. One of the most significant catalysts in this training is the incorporation of biofeedback and biosensor technology. Biofeedback is the use of electronic technology to allow athletes to observe their psychophysiological states in real-time. When an athlete can observe their present state, they can manipulate their functioning using specific techniques such as diaphragmatic breathing and attention shifting. This process allows the athlete to understand and apply what it means to be calm, focused, and engaged in high-stress situations. Biofeedback is not a recent technology; it was first introduced in the 1960s and has undergone extensive scientific review since.

Biofeedback gives athletes an active way to address whatever issue they are struggling with and a trackable method to train. This training can address anything from performance anxiety, negative self-talk, and inability to stay focused. While traditional forms of sports psychology such as imagery and reflection have some degree of success, biofeedback stands out due to its

immediate, concrete, and active methodology. This aspect is crucial because it allows sports psychology to be tangible rather than intangible for athletes. Biofeedback technologies are common among the elite; Heart Rate Variability (HRV) has been used with the Navy SEALs, 76ers forward Tobias Harris has spoken about using electroencephalogram (EEG) for 45 minutes every day he is on the road, and fellow NBA star Steph Curry has noted working with neuromuscular timing technology to speed his reactions. Growing elite-level involvement shows that the sports-related biofeedback movement is well underway.



THE LAB: KNOW YOUR BIOQUOTIENT

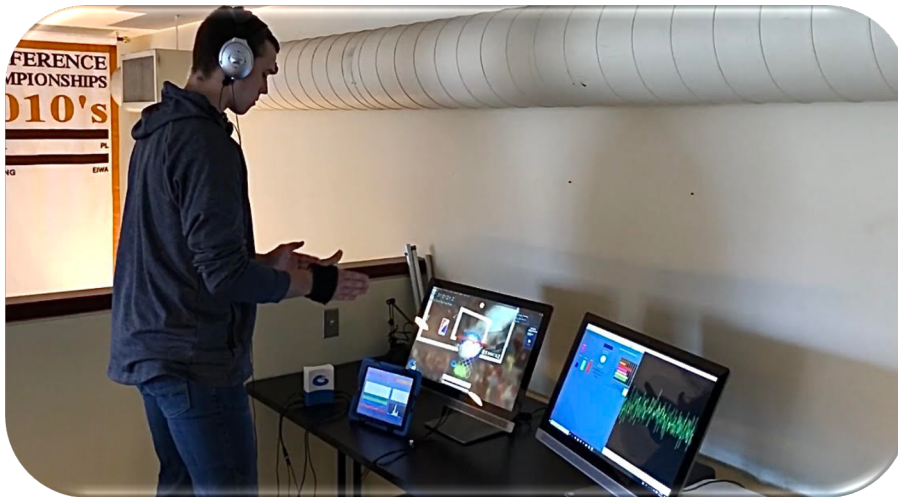
By Jordana Ambros



How do you handle life's most challenging moments? Athletes and life performers have all experienced adrenaline-rich, stressful, and chaotic situations. How do you mentally and physically feel during those situations? Were you able to take notice of the internal and external sensations and modify when needed? At Mindful Athlete Training, we answer these questions with the first and only mental fitness metric of its kind: the bioQuotient® (bioQ®).

We believe key components to an athlete being successful are their ability to remain calm, get focused, stay engaged and integrate all systems for optimal performance. Therefore, each component has inspired the equipment we use in our Lab. We can assess four domains with our bioQ®-Mental Fitness Assessment (bioQ®-MFA); Mental Strength, Endurance, Recovery, and Flexibility (SERF) with each being measured and scored to identify strengths and areas for development. This mental fitness assessment allows us to see physiological

responses, which our mental strength coaches use to program training plans. These customized plans help athletes to manage their autonomic responses in stress-evoking situations, ultimately enhancing their mental game.



Following a bioQ®-MFA, the athlete receives a comprehensive feedback report and training plan. A customized plan allows us to maximize your personal strengths and

enhance current areas for development to take your game to the next level. Just like taking a pre-test in school to see what you know and what you don't, our mental fitness metric is our starting point for all of training, and with it we can effectively begin your journey to becoming more mentally fit!

MENTAL STRENGTH TRAINING FOR TODAY'S ATHLETES: OUR HISTORY

By Priscilla Wiggins

It is no secret that what we do at Mindful Athlete Training is unique, but how did it all come about? Everything we do here started with the idea of using biosensor technology to give athletes real-time insight into performance, an idea our founder, Dr. Lee Picariello, began to conceptualize over a decade ago. His early work focused on different methods and technologies to answer this question, and about five years ago he began utilizing the biofeedback systems we still use today. Over time this evolved into a vision to create a lab-like environment that could harness the effects of these systems for best performance outcomes, and thus the Mindful Athlete Training program and The Lab were born. The Lab we know



today consists of three separate biofeedback systems; Calm, Focused, and Engaged.

Implementing these systems with athletes began in 2016 with local athletes in our Newtown, PA Basecamp. This foundational work was spurred in connection with Jeff Manto, a 30-year veteran of Major League Baseball as a player and coach. Following conversation and collaboration, Dr. Picariello created a comprehensive metric that athletes could use to inform their mind-body integration in performance. From this, the bioQ®-MFA was born. The early version of bioQ® gained traction when an opportunity to present it to Major



League Baseball arose, and our research, assessment, and training programs were well-received. Following this opportunity, in 2018 Dr. Picariello and the Mindful Athlete team were invited to the SABR Analytics Conference, where they presented their findings on bioQ®. This opportunity led to an invitation to present on the MLB Network, where Dr. Picariello and Dr. Stevens showcased our bioQ®-MFA in front of a fascinated audience. This presentation officially recognized us as a leader in mental fitness training, which opened the door to new clients and partners in early 2019. We then began working with half a dozen colleges and universities, which fostering more interest and community connections.

The COVID-19 pandemic, while challenging, gave us the opportunity to look inward and dedicate important time to refining our product with research and development; among other things this resulted in a meta-analysis addressing mental fatigue as a key performance inhibitor, which was recognized by MIT Sloan Business School. Following our journal submission, we were fortunate to connect with EMG Sports, which led to opportunities to work with elite-level athletes. We worked with our first EMG Sports athlete in January of 2021 and have since worked with a host of NFL athletes both virtually and in-person in our performance Lab. In the spring of 2021, we had the opportunity to travel to Dorale, Florida, to demonstrate bioQ® and our mental fitness training programs at the Rick Smith Performance Center and established our first-ever satellite MAT coaches based in Florida. Most recently, we opened our doors to the public with our first ever open house.

From the beginning of Mindful Athlete Training in 2016 to now, we are immensely proud and excited about the growth of our training programs, and we have now trained over 100 athletes. These athletes come from everywhere from the local softball diamonds to the ultra-competitive college ranks of Villanova University, Penn State University, University of Louisville, Temple University, Boston College, University of Connecticut, University of Southern California, and many more, to professional levels from the NFL and MLB. Our Mindful Athlete Team has grown to the largest it's ever been, with 15-active staff members, including sports psychologists, mental strength experts, biofeedback technicians, and former collegiate athletes. Our bioQ® metric continues to develop and grow as a better predictor of mental fitness, and we have recently branched into the Esports world and are beginning to make our mark. We've continued to evolve our training regiments in our performance lab to meet the needs of a diverse clientele. In addition to our work with athletes, the various applications of the bioQ® metric have led us to take initiative for pro bono work with first responders, the local medical community, members of the military, and a new wave of holistic corporate training with global business personnel seeking their 1% difference. We truly believe the sky is the limit for where we will go next!

NON-TRADITIONAL TRAINING FOR NON-TRADITIONAL ATHLETES: FIRST RESPONDERS

By Taylor Golkin

Burnout:

Merriam-Webster Dictionary: feelings of energy depletion or exhaustion, increased mental distance from your position, and reduced professional productivity.

Coherence:

Merriam-Webster Dictionary: a state of calm, focus, heightened awareness, and balance



How often have you felt burnt out at work? Made a mistake that you would "usually never do," or experienced work-related anxiety or total loss of productivity? On a global scale, employee burnout is increasing rapidly. Nearly

all people have encountered a time when stress and fatigue have begun to impact their work; this is especially true for first responders post-COVID-19. At Mindful Athlete Training, our work is not limited to just helping athletes manage their stress, but with all professionals in the same way.



First responders and medical personnel are specifically susceptible to experiencing something called secondary traumatic stress. Secondary stress is when stress reactions and symptoms occur due to exposure to someone else's traumatic experiences rather than from direct exposure. What are the signs? Excessive worry or fear of

something bad happening, feeling "on guard" most of the time, or having nightmares or recurring thoughts about a traumatic event are common. Stress and burnout within medical teams and first responders are considered today's "silent crisis" due to long hours, repeated traumatic exposure, lack of sleep, high physical demands, and lack of resources and support. In our lab, we focus on supporting these professionals with traditional therapeutic interventions and manage the effects of stress on the mind and body using real-time feedback.

Our goal is to help professionals identify and combat the signs and symptoms of burnout in the workplace, such as feeling "not good enough," feelings of hopelessness, detachment or feeling alone, and decreased sense of accomplishment. Our hope is that our innovative approach to stress reduction allows for professionals and athletes alike to visualize what stress looks and feels like while learning internal awareness and self-regulation, additionally promoting physiological coherence. In training, we specifically focus on recovery to enhance the threshold for mental fatigue, thus limiting the effects of burnout. We are currently in the process of offering our services to an increasing number of first responders, as this is a significantly important population and one we feel we can make a difference with.

THE DESCENT

THE MAT TEAM

Thank you for reading! Next month we will continue to detail applications of our work, discuss more real-world examples, and much more. Stay tuned for more exciting content, and remember to embrace your chaos!