

# EDGE OF CHAOS

## MINDFUL ATHLETE TRAINING



JANUARY 2022

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## THE ASCENT

### THE MAT TEAM

Happy New Year! Mindful Athlete Training had a fantastic 2021, and we are excited for what 2022 will bring. In 2021, we provided elite mental fitness services to NFL players, D-1 athletes, Air Force Pilots, and E-sport gamers. In 2022 we are positioned to be one of the most innovative companies in North America and are excited to have you with us!



We continue to strive for great content and hope you enjoy our January issue of *Edge of Chaos*! The *Edge of Chaos* is the transitional zone of bounded instability that engenders a constant dynamic interplay between order and disorder (Complexity Labs, 2016). Physicists have shown that adaptation to the *Edge of Chaos* occurs in almost all systems, given feedback. If there is anything you would like to see featured or changed, please let us know at [info@mindfulathletetraining.com](mailto:info@mindfulathletetraining.com). Enjoy this month's edition!

## THE CHAOS CORNER: SUPER BOWL LI

By **Christian Franco**

At Mindful Athlete Training, we emphasize accepting chaos as it comes and never allowing doubt to overwhelm us, despite the odds. By embracing chaos, even seemingly impossible situations can change with the belief that we can make that change ourselves. In one of the most impressive comebacks in professional sports, the 2017 New England Patriots showed that resilience makes anything possible. They embraced the chaos, and their performance ultimately embodies what it means to be a Mindful Athlete.



The Super Bowl is the paramount game of the NFL season, when the two best teams square off for the title, etching their names in history along the way. The stakes are at their highest, and not surprisingly, so too was the chaos in Super Bowl LI on February 5, 2017.

The New England Patriots, a Super Bowl favorite in the Brady-era, found themselves matched up with the Atlanta Falcons, who had never won a Super Bowl and had not made the title game since 1998. Despite being the underdogs, Atlanta got off to an incredible start, and by halftime, the score was a lopsided 21-3 in favor of the Falcons. The Falcons scored another touchdown



at the beginning of the third quarter to then make it a 28-3 score. It appeared that the Falcons had the game figured out from both an offensive and defensive point of view, and the seemingly unstoppable Patriot's offense had been shut down the entire first half. However, the story dramatically changed when chaos caught up at the end of the third quarter. The Patriots scored to make it 28-9, and over the final

quarter, scored again, and again, and AGAIN to tie the game 28-28 by the end of regulation. The Patriots completed the comeback in OT, winning the game 34-28.

The role of chaos cannot be understated in an incredible 25-point comeback spanning just over 15 minutes of football. The Falcons, believing they had the game in hand, became complacent and were unable to adapt to the unexpected swing in momentum, becoming crushed by the chaos. The Patriots embraced chaos, used it to their advantage, and held the Falcons scoreless while also putting forth an unprecedented offensive explosion in just over a quarter of play on the clock. We at Mindful Athlete Training admire the Patriot's resilience, determination, and courage that day because what they accomplished embodies the values we hold as a company.

## TALK LESS, DO MORE: NAOMI OSAKA

By Jim Wing

At Mindful Athlete Training, people often say, "Hey, you should really work with \_\_\_\_\_" and insert the name of a high-level athlete that has experienced public challenges with mental strength. In 2021, we often heard this, as many athletes became the center of attention after speaking out about mental

wellness. This includes twenty-four-year-old professional tennis player Naomi Osaka. In 2021 Osaka was ranked thirteenth in the world and ranked as high as number one in the past. In June, she shocked the world when she refused to participate in a post-match news conference at the French Open and later withdrew from the tournament, citing mental health concerns. In truth, we would work with Osaka the same way we would with most of our athletes, and it all starts with training the neurological and physiological structures that encourage stress management.

In working with someone in Osaka's position, traditional sports psychology might focus on pure cognitive behavioral therapy (CBT) to help recognize and restructure maladaptive thoughts. Maladaptive thoughts can cause stressful feelings and emotions, resulting in avoidant behavior such as refusing to attend a press conference; targeting them is a natural place to start, and CBT is one of the most supported methods in the treatment of depression and anxiety. However, if CBT were coupled with biosensor technology such as heart rate variability (HRV) to manage physical symptoms, the results would be even more robust.



HRV technology gives a person real-time feedback about their stress management. Better stress management is achieved through training by engaging the parasympathetic nervous system using breathing techniques. Controlling your breathing in times of stress helps to "de-escalate" feelings of anxiety or panic, and the visualization of this de-escalation on a screen is enormously reinforcing.

If Osaka came to Mindful Athlete Training, we would start by getting to know her with a typical interview. We would then get her in the lab for a bioQ-Mental Fitness Assessment to identify and quantify her current strengths and areas for improvement. After putting the pieces of information together, we would customize a plan centered around stress management in and out of the lab. We gear all our coaching to the individual, so we would look to use examples from Osaka's own life to make the training as relevant to her as possible. Given time, Naomi would have the knowledge coupled with training to proactively combat any challenge that she faces.

# THE LAB: TOBIAS HARRIS- BELIEVER IN BIOFEEDBACK!

By Jordana Ambros

Many people underestimate the demands of being a professional basketball player. Each NBA team plays 82 games in under six months and flies up to 50,000 miles per season. According to ESPN, over the 2018-19 season, the average NBA team played every 2.07 days, had 13.3 back-to-back sets, and flew the equivalent of 250 miles a day for 25 straight weeks. NBA players often wake up early in the morning, catch a flight to play later that same day, then catch another flight after the game to return home or to another state for another game. Sometimes they fly all morning, play in the evening, and get a hotel room to play the next day. All of this traveling can significantly impact an athlete's focus. Instead of mentally preparing for their game, they are focused on making the flight on time, ensuring they have all of their equipment, settling into a hotel, or packing up again to catch another flight. Such is no different for



Philadelphia 76ers forward Tobias Harris, but he is a shining example of a high-level performer who uses biofeedback to help manage these stressors.

When traveling to and from games, Tobias Harris utilizes an electroencephalogram (EEG) machine to enhance his level of game focus. An EEG machine records a person's brain waves, and the levels of relevant waves can be seen on the screen in real-time. When working with EEG, Harris will watch a video for 45 consecutive minutes, with optimal levels of focus maintaining the video playing. If his level of concentration drops below a certain level, the video will stop. This reinforces what it feels like to be focused, how to maintain

concentration, and how to get focused quicker. By constantly practicing, Harris can more readily return to a focused state in games.

Not only does Harris utilize EEG, he utilizes heart rate and breath monitoring as well. Similar to how we use our CALM equipment, Harris utilizes software to discover balance through relaxation and recovery. Proper recovery is so important to Harris he starts the process as soon as the buzzer goes off. When he enters the locker room, he immediately places a heart rate monitor on his



finger and a breathing belt around his waist. With feedback from the software on his iPad, he slows his breathing and heart rate until he achieves the score he wants. Playing almost any sport increases the stress hormone cortisol, which can suppress melatonin levels and keep you awake at night. Controlling your heart rate and breathing can decrease your cortisol levels, helping you to relax and focus, which is beneficial at all stages of performance. Being relaxed while performing

allows you to make better decisions, increasing your level of play, and being able to relax afterwards allows you to prepare for the next competition properly. Harris stated, "I've got to be able to function the next day at the top level." He is mindful of what his mind and body need to perform at an optimal level. Our ideal vision is that every athlete follows in his footsteps!

## MENTAL STRENGTH TRAINING FOR TODAY'S ATHLETES: WORKING WITH A SOCCER PLAYER (PART 1)

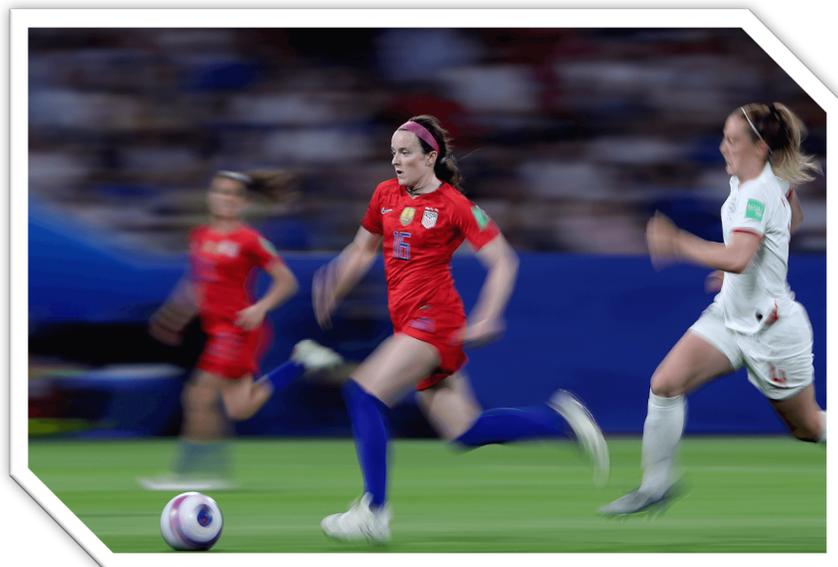
**By Priscilla Wiggins**

At almost all levels, soccer is one of few sports that does not utilize timeouts or stoppages throughout a game. This fact brings about many vital facets of the game, the most important being the athlete's ability to self-regulate and self-correct in real-time. This is not to devalue or minimize this ability within other sports, but it provides an interesting landscape of an athlete's ability to maintain high performance through the duration of competition. We are currently working with two high-level youth soccer athletes, and in a two-part series, we would like to give you insight into their training. In part 1, we will briefly describe how

we apply our technology to a soccer player before discussing said application directly in February's edition.

Working within our foundation of Calm (HRV), it's essential for soccer players and all athletes to build habits around regulating their breathing in relaxed and stressful moments. Because of the stop-and-go nature of soccer competition, we can be creative in mimicking that environment within our performance lab while hooked up to HRV, or heart rate variability. Only when our athletes have a strong base understanding of high coherence, or optimal levels of calm, within HRV are they ready to be challenged to stack chaos into HRV activities.

Regardless of one's position on the field, numerous focal points require attention throughout competition, and our Focus training can better equip you to shift among them. Within the Focus domain specifically, we aim to help our athletes fluidly shift between narrow, internal focus and broad, external focus. This flexible shift is integral to sustained success throughout 90 minutes of competition on the soccer field. An example of that narrow internal focus is dribbling the ball down the middle of the field as a center midfielder, making split decisions about which surface you will use and how much strength you will use behind the ball in your next step. An example of broad, external focus is assessing your teammates' runs and movement around you to help inform your next decision to dribble, pass, tackle, shoot, etc. As you can imagine, it's essential to keep in tune with both levels of focus on the field because decisions have to be made quickly while assessing many different options.



Finally, training for sustained success in Engaged, or NMT, is the bread and butter of success on the soccer field. Utilizing skills learned in Calm and Focus can help any footballer put it all together to execute the correct timing of the next move. As mentioned earlier, soccer can be very stop and go, so we like to incorporate different variables of timing, speed, duration, and chaos to help you make the correct decision under any circumstance or pressure. This is done by enhancing neuroplasticity, something we emphasize early and often.

Next month we will take these concepts and discuss how we apply them directly to one of our young star soccer players. This unique peer behind the curtain will give a great view of what training at Mindful Athlete Training actually looks like!

## NON-TRADITIONAL TRAINING FOR NON-TRADITIONAL ATHLETES: MINDFULNESS IN THE MILITARY

**By Taylor Golkin**

“In sports, an athlete needs to be in the zone regardless of how loud a crowd is roaring with screams. Instead of listening to the audience, the player must be in the moment when taking their shot. This applies no differently to the Army.”

-LT. Gen. Walter Piatt, Director of Army Staff



What impact do high-stress scenarios and expectations associated with the military have on mental fitness and development? Our military is capable of extraordinary things; however, when rest, recovery, and attention to stress are mishandled, these individuals are often left struggling. In fact, as many as 50% of veterans experience significant difficulties post-active military status such as PTSD, depression, and anxiety. Our soldiers are outfitted with the most cutting-edge physical armor in combat, but what about the equally necessary mental armor?

The Army has recently observed success incorporating mindfulness to help improve soldiers' readiness, stress management, and ability to stay in the moment. We know that mindfulness trains the brain to stay in the present moment, keeping us grounded in what is happening around us. The Army is using this idea in the STRONG project to manage stress in the moment and help manage symptoms associated with post-deployment stress and post-traumatic stress disorder. Neuroscientist Amishi Jha currently leads research on the STRONG project, which uses computer-based testing and brainwave recording to identify how resilience training may improve ways the brain can pay attention, be situationally aware, and manage stress. Through her research, she has found that just 24 hours of mindfulness training for Marines led to significant improvements in both mood and cognitive function. This is very

similar to the work we do in our lab, where performers can visualize a shift of attention and their reaction to stress to enhance their own cognitive and neurological function. Being aware of how our body feels during these shifts is also crucial for managing stress and situational awareness. At Mindful Athlete Training, we have the tools to help individuals manage their health both in and out of our mental fitness lab. We believe our brave military members can significantly benefit from programs like the STRONG project, and seeing these tools utilized in the “real world” is the next step towards wellness for all performers, heroes, and people alike.



## 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. We hope you have a wonderful start to the new year, and remember, embrace your chaos! Make this your year!

