

EDGE OF CHAOS

MINDFUL ATHLETE TRAINING



DECEMBER 2021

THE ASCENT

THE MAT TEAM

We continue to strive for great content and hope you enjoy our December 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. Enjoy this month's edition!

THE CHAOS CORNER: THE 2004 ALCS

By Christian Franco

Comebacks are one of the most extraordinary events to witness in sports history. They give both fans and players a sense of nervous excitement and can be a marker to show true grit on the field. The act of coming back can be chaotic for both the winning and losing teams, but comebacks in the postseason are the ultimate emotional rollercoaster ride.

Witnessing a remarkable comeback can provide a framework for how to remain calm, hopeful, and collected when facing seemingly impossible odds. One of the most famous comebacks in sports history occurred during the 2004 ALCS between the Red Sox and the Yankees.



The year was 2004, Boston Red Sox versus the New York Yankees in the American League Championship Series. The Yankees and Red Sox have a long-standing rivalry stretching back over 100 years, and while the Yankees had established a winning dynasty lasting from the '90s into the 2000s, it had been



since 1918 since the Red Sox had won a pennant. Both teams came into the ALCS with playoff eliminations from the previous year, so both were extra hungry for the pennant. The Yankees quickly jumped to a 3-0 series lead against

the Red Sox, and up 4-3 in the ninth inning with the most dominant closer in baseball, it appeared the Red Sox season was over. Against the odds, the Red Sox miraculously won game four but still faced a 3-1 deficit. At that point, NO playoff team had ever come back from being down 3-0, so the odds were firmly against the Sox. However, they remained calm and collected, getting big hits at crucial



times while staying focused and engaged, and were able to win the next two to tie the series at 3-3. In Game 7, the Red Sox not only won; they completely dominated, winning by a score of 10-3. The comeback was complete as the swift change in momentum crushed the Yankees. The Red Sox pulled off the improbable by coming together as a team and embracing the chaos with their backs against the wall. They would then go on to win the World Series, as they carried their momentum and easily defeated the Cardinals.

When many teams face a large deficit, it is common to see them collapse and give up hope. However, the 2004 ALCS is a perfect example of what can happen if you never give up; it can be used as a framework to show trailing teams that deficits are merely a strong challenge rather than something negative or to be feared. The Red Sox were able to keep their composure and work as a team to fulfill their comeback, while the Yankees were crushed by the pressure and momentum of the other team. This series shows that by trusting your process, believing in each other, and working together, ANYTHING is possible despite the odds. Embracing the chaos is the first part of it!

TALK LESS, DO MORE: "SEEING GHOSTS"

By Jim Wing



When quarterback Sam Darnold was playing for the New York Jets, he was infamously caught on camera during a difficult game saying, "I'm seeing ghosts." What did he mean when he said that? When questioned after the game, his response was, "When I talk to the coaches, I've just got to be straight

up. For me, I've just got to see the field a lot better, that's kinda what that means. It was a rough night out there." Professional football is fast, much faster than college football, and clearly Darnold was having trouble adjusting. This brings about the million-dollar question: how can he "see the field a lot better?" In addition to solid coaching and on the field work, one method that may be useful is biofeedback.

Biofeedback helps athletes improve emotional self-regulation and focus and enhances the ability to shift focus by using sensory information from the mind and body. When a quarterback is under pressure, he must read the field, go through his check downs, and evade defenders attempting to sack him. That is a lot of information to process in only a few seconds. In these stressful moments, biofeedback trains an athlete to keep calm and regulate their breathing, activating the parasympathetic nervous system and preventing the freeze or flee response.



Biofeedback will also teach an athlete to shift from broad external focus to narrow internal focus while remaining calm. A broad external focus uses information from the environment to make an assessment. Formulating and executing a plan based on external stimuli is called internal focus. This focused decision-making process can be trained at the neuromuscular and neurological levels using neurofeedback, a division of biofeedback focused on neural awareness and development. Perhaps under pressure Darnold lost the proper focus, resulting in poor reads and interceptions. However, like core muscles, the human brain can be trained to learn new information and tasks. Biofeedback is the key to this training. If you are an athlete, I ask you this, how do you see the field?

THE LAB: NEUROPLASTICITY

By Jordana Ambros

As of 2021, there are well over 100,000 gyms and health and fitness clubs in the US. In simplest terms, people go to the gym to enhance their performance. You work out to strengthen your muscles, improve your health, and become more flexible while building endurance to perform longer. The brain is similar to the

body in that sense; like a core muscle, the brain and nervous system can be trained just like your body. The brain's ability to be trained like a muscle is related to neuroplasticity. Neuroplasticity is the brain's ability to change,



reorganize and adapt in response to experiences.

Throughout a workout, the muscle fibers are torn under strain, but, when supplied with proper nutrition and recovery, fuse to form a new muscle fiber that is bigger

and stronger. Your brain grows similarly; it is made up of many neurons, and strengthening your brain causes those neurons to rewire themselves to make new, stronger neural connections. As with training your body, these new connections occur over time and with repetition. For example, a basketball player who is having trouble making a layup will practice repeatedly, improving their skills and creating new muscle memories. The brain has changed, adapted, and rewired itself to make these connections with the mind and bodily movements stronger, and the actions of this improved layup are now coded as a new connection in the brain. Through training your brain like a muscle, new connections are always possible, and with infinite new connections come infinite new possibilities!

MENTAL STRENGTH TRAINING FOR TODAY'S ATHLETES: THE HOLIDAY HUMAN

By Priscilla Wiggins

What is mental fitness training for athletes, and how can mindful athletes apply what they learn here to their daily lives? At Mindful Athlete Training, we genuinely believe that mental fitness training does not and cannot exist in a vacuum. Our goal as a leading sports technology mental fitness organization is to create training programs that are accessible, digestible, trackable, and trainable. Our traditional athletes come to us looking for sport-specific mental strength training, but they walk away with so much more.

Each of the Mindful Athlete Training Lab systems has real-world applications beyond simple athletic uses, because at the end of the day, life itself is a performance. As everyday people, we are always preparing, making decisions, and responding to environmental stimuli, similar to the experience of any athlete. How we respond to both positive and negative stimuli influence our ability to perform, and thus also influence the outcomes of those stimuli.



During this holiday season, applying our training methodologies can be especially helpful for folks balancing feelings of joy, stress, uncertainty, and more.

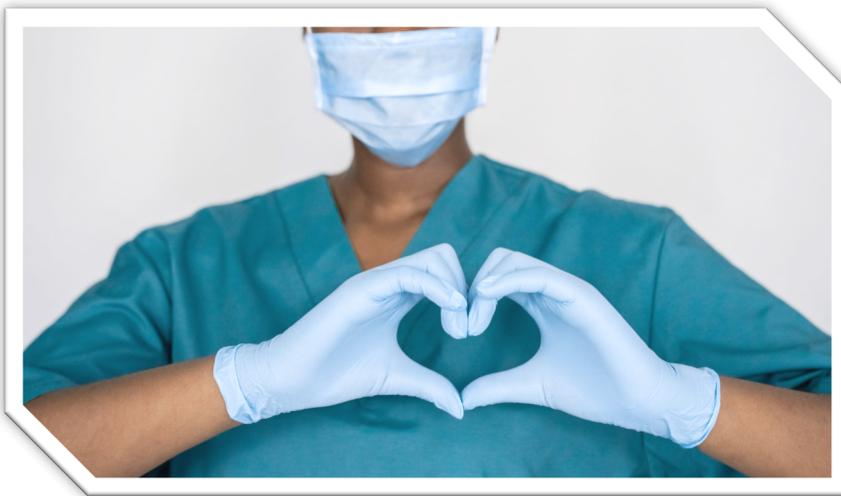
Beginning with Calm, the foundation of our training, athletes are trained to work on their deep breathing and relaxation techniques. As research on mindfulness and meditation can attest to, focusing on regulating the breath creates harmony among our physiological systems, regulates heart rhythms, and helps the body and mind stay calm under both positive and negative stimuli. As joyous as the holidays can be, stress and chaos are also inevitable with the rush of holiday shopping

and meeting the expectations of family members. If you are able to stay calm and regulate your physiological systems in the most stressful moments, you are almost guaranteed to be unstoppable and will be able to experience that joy to the fullest.

Next in our training progression is Focused, which measures EEG brain waves during various activities. On Focused, we emphasize an ability to flexibly shift between internal and external focus, with internal associated with internal cues and individual actions and external related to stimuli from the environment. Shifting between both is essential for athletes within their respective sports to appropriately attune to necessary information, but it is also vital for survival and decision-making in everyday life. During this time of year, it can be challenging to prioritize different tasks while balancing holiday stress, your own needs, and the needs of family members. Our Focused training can help with that very balance. As we learn through experience, life is all about prioritizing the right level and type of focus on events, people, and opportunities in each passing moment. Enhancing mental flexibility in your focus can be especially important for anxiety management, and properly directed focus can give confidence in the choices you make now and in the future.

and decreased satisfaction. Indeed, pre-pandemic rates of burnout in health care professionals were around 40%; they have now risen to 70% and are still climbing. Mental skills such as critical thinking, decision-making, impulse control, and attentional flexibility can accordingly be critically compromised, so it is paramount to implement appropriate recovery routines as quickly as possible.

Adding to the complicated equation is the patient-to-nurse ratio. It is no surprise that patient-to-nurse ratios often increased amidst the pandemic, which undoubtedly contributes to an increased rate of burnout, fatigue, and potential for errors in the healthcare field. Nurses are frequently assigned up to 9 patients per ONE nurse. This overscheduling can be overwhelming for even the most experienced in the field.



In these situations, recovery cannot simply be occasional. It goes beyond progressive muscle relaxation and stretching every now and then. Recovery must be about supporting the mind and body to receive necessary rest and recharge

daily. It is about a constant process of self-care and active recovery techniques that aim to keep the mind sharp and always prepared. Frequent active recovery will help prevent stress culminating to the point of total burnout and decrease fatigue and poor mental skills. These enhanced recovery skills will also boost patient outcomes; a sharper provider will always provide better care. We cannot expect to pour from an empty cup, and healthcare professionals are no exception!

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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 and safe holiday season, and remember to embrace your chaos!

