The Zone: A Measurable (and Contagious) Exemplar of Mind–Body Integration

Eric Leskowitz, MD

Editor’s Note: On re-encountering long-time integrative rehabilitation specialist Eric Leskowitz, MD, last fall, I urged him to consider a JACM commentary. Dr. Leskowitz is a holistically oriented psychiatrist who leads the Integrative Medicine Task Force at Spaulding Rehabilitation Hospital in Boston, was a member of the Department of Psychiatry at Harvard Medical School for 20 years. Leskowitz, an avid sports fan, replied with this commentary based on his intriguing work with The Sports, Energy and Consciousness Group. The remarkable interdisciplinary initiative invites those interested to its second annual “Sports, Energy and Consciousness Festival” on June 23–25, 2017, in San Rafael, California. —John Weeks, Editor-in-Chief, JACM

On a Sunday evening this past February, over 110 million Americans watched a football player named Tom Brady lead his New England Patriots team to the biggest come-from-behind overtime victory in the 51-year history of the NFL Super Bowl championship. After the game, commentators and players alike noted Brady’s cool demeanor and unwavering concentration, knowing that every single element of his game had to function perfectly to overcome an unprecedented 25-point deficit. All knew that Brady was in what is known on the street as “the Zone”—the near-mythical state of mind–body alignment that all athletes (elite and recreational) seek, but that most never master.

Many athletes, coaches, and psychologists interested in this phenomenon believe it need not be a random once-in-a-lifetime occurrence. Rather, achieving this state can be facilitated by a range of practices that include many modalities from the world of alternative and complementary medicine. These innovators have developed training methods that enable their students to intentionally enter this so-called flow state.1

Because the inner experience of these athletes is so transcendent and life altering,2 sport is more and more being seen as a forum for spiritual questing, for attaining a state of alignment of body, mind, and spirit. That is why Esalen Institute cofounder Michael Murphy once said “Sport is the yoga of the West,” and why it may in fact be the path most commonly chosen to help us to touch our spiritual core.

A multidisciplinary group of these explorers with which I am involved recently coalesced to form The Sports, Energy and Consciousness Group to share their work and to use state-of-the-art advances in holistic medicine to document, measure, and understand what happens physiologically and psychologically in that specific altered state of consciousness.3 Here are some salient points from an emerging database, highlighting several key training modalities:

- **Mindfulness**—Probably the best known of the consciousness disciplines, many athletes use the language of meditation to describe how they stay totally focused on the game in the present moment rather than being distracted by their internal mental in applying those insights to sports. Brain state measurements of meditators have documented a wide range of changes—from cortical thickening4 to enhanced neuroplasticity.5 But thus far these electroencephalogram (EEG) and magnetic resonance imaging (MRI) studies were all done in the laboratory, not on the playing field, during moments of whole-body integral awareness.

- **Biofeedback**—A form of biofeedback using heart-rate variability (HRV) has proven useful in enhancing mind–body coordination and shortening reaction time,6 presumably because of the increased autonomic balance achieved by people in the state called “heart coherence.” Consider an application: the observed 37 msec decrease in reaction time would enable a baseball player to perceive a 90 mph fastball as though it was only traveling 80 mph. A key feature of the flow state is the sense of time slowing down or stopping.

- **Energy psychology**—This novel form of psychotherapy uses exposure, desensitization, and a somatic component of self-tapping acupuncture points. It is an effective treatment for anxiety. An application: free throw shooting percentages of college basketball players increased by 21% in one study after only one 15-min treatment session.7 In-game use of this technique by the MVP of the NCAA World Series was recently shown
on national TV.\textsuperscript{8} Also, energy psychology has been shown to alter gene expression, another tangible variable that is amenable to study with respect to sports performance.\textsuperscript{9}

Real-time measurements are not feasible with these particular methods, but two other techniques enable direct assessments on the playing field, in moments when the subject is actually functioning as a flow Zone player.

- **Acupuncture meridian balance**—Gas discharge visualization (GDV) devices can assess electromagnetic activity in the various acupuncture meridians.\textsuperscript{10} Using portable GDV units, measurements can be obtained immediately before and after a game, or after a mental training session designed to induce the flow state.
- **Neurofeedback**—Quantitative EEG (qEEG) with a wearable headband\textsuperscript{11} is able to distinguish various states of brainwave activity (from alpha dominance to beta, theta, and delta) during the athletic event itself. This makes this modality of unique interest because the wearer can report when he or she enters and leaves the Zone and correlate those reports with the qEEG output.

Future studies could solidify these preliminary findings by correlating real-time physiologic measurements with athletes’ subjective descriptions of being in or out of the Zone. Also, different domains of impact could be studied, from the cellular (DNA) to the anatomic (MRI) to the physiologic (HRV, EEG), to the subtle energetic gas discharge visualization (GDV) to the spiritual (self-report of transcendent states of consciousness).

The logical extension of these findings with individual athletes is to ask what happens when several people are in the Zone together. One study showed that heart coherence can spread to nearby people through an apparent entrainment of zones together. A study showed that heart coherence can influence the brain in a way that is amenable to study with respect to sports performance.\textsuperscript{9}

**References**


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