

Peak Performance

Few people would seem to be less in need of attention training than professional musicians, world-class athletes, and the like. “Seem” is the operative word here, for even someone who is at the top of their game can benefit – sometimes a great deal (e.g. the Italian soccer team) – from removing physical and emotional blockages through the appropriate use of flexible attention. Flexible attention refers to the ability to shift one’s attention to a more open awareness when narrow focus is not required. Many high-functioning people have the idea that the harder they push, the better they will perform, though that is often not the case. Rather, everyone needs to know when to push hard and when not to, when to narrow focus and when to use diffuse or other styles of attention. Those who perform only in narrow focus are often “hyper-focused” and expend much energy fighting their own tense, overly excited physiology, which further increases muscle tension and raises heart and respiratory rates.

Narrow focus also engenders performance anxiety. When a baseball player suddenly can’t throw to second base, a golfer can’t putt without hitting the ball too hard, or a piano player can’t relax enough to play a piece with feeling, it’s in part because they are trying too hard – are so intent in their narrow focus – that they can’t even consider diffusing, and as a result, seize up to some degree. The ability to flexibly attend is one of the primary factors that make the difference between a good musician and a great musician – or athlete or student or corporate executive.

Researchers who asked the question, ‘How do the brains of peak athletes function during performance?’ monitored a team of championship archers at Arizona State University to study their EEG readings. They found that when an archer is mentally preparing to shoot, the brain is chattering away at 13 to 20 hertz, high-frequency activity within the beta range. Then, just before the arrow is launched, slower alpha rhythms (8-12 hertz) wash over the left hemisphere of these top archers, calming the brain and body, quieting the mental chatter, and allowing full yet fluid dedication to, and immersion in, the task. Research shows that the EEG pattern is the same for high-caliber rifle shooting, pistol shooting, karate, golf putting, and basketball free-throw shooting.

Most of us, however, are unwittingly clunking around in a kind of body armor, our muscles habitually tensed because of chronic defensive reactions to emotional or physical trauma. Tense muscles force other muscles to compensate, which greatly hampers fluid performance. Unconsciously held muscle tension requires sympathetic autonomic activation, yielding anxiety, increased heart rate, and drained energy resources, leading to depression. Opening focus works on a couple of levels for performers of all kinds. Long-term attention training – lasting weeks or months – facilitates a deep release of chronic muscle tension, which improves coordination and stamina in the present moment.

From golf to karate to football or soccer, different styles of attention are needed for different parts of the game, and players can learn to move into the style of attention appropriate for a particular aspect of play. A diffuse and immersed focus helps integrate all the variables of the fairway and green, and loosen muscles for a few practice swings. Moving into a more open focus for the back swing immediately

relaxes major muscle groups and facilitates a full and fluid downswing. In narrow focus a golfer's attention is almost exclusively on the ball. In an open focus, by contrast, the center of attention of the player gently rests on the ball but at the same time admits a simultaneous and effortless awareness of things within peripheral attention, and the space in which sensations occur.

In addition to improving endurance and reaction time and contributing to effortless performance, flexible attention also often impacts sensory experience. For a golfer, diffuse and immersed styles of attention are associated with phase-synchronous alpha states, in which people tend to perceive events as simultaneous, timeless, and all-inclusive. While, "Keep your eye on the ball!" is the adage generations of tennis instructors have used, their students have paid the price. As with any object of attention, a narrow focus on the ball in tennis produces tension. An open focus, by contrast, encourages players to center on the ball while being simultaneously and effortlessly aware of everything on the court. Players find that their perception and creativity are unlocked, along with a feeling of effortless play, when they include an awareness of peripheral, or background, details.

Peak performers in any field are often people who are genetically blessed with the ability to move in and out of synchrony. They've received excellent technical training and singers, for example, know how to hit a note by supporting the tone with the diaphragm; however, they're often anxious and therefore not fully present – physically or emotionally – when they perform. Rae Tattenbaum, neurofeedback training coach to peak performers all over the world says, "The goal is to enable them to become completely absorbed in a free and spontaneous performance." At their most open and uninhibited, Tattenbaum says, performers intuitively shift their physical energies and take their talent to new levels. One trainee reported, "I noticed I couldn't be present as a performer. I used to feel like I was outside myself, watching and judging. The training gave me an overall sense of well-being that I didn't have before. I can step back, take a breath, and focus on and merge with my performance much better."

Of nearly 100 students who were given different types of neurofeedback, those who received an alpha/theta protocol improved their performance the most. The alpha/theta group improved their performance between 13.5 and 17 percent. These results show that neurofeedback can have a marked effect on musical and athletic performance. While it has a role in stress reduction by reducing the level of stage fright, the magnitude and range of beneficial effects on artistic aspects of performance have wider implications than alleviating stress.