

OPTIMAL PERFORMANCE AND HEALTH

Vieta E. Wilson, Ph.D., has taught at York University, in Toronto, for over 30 years. She has worked since 1971 in sports (Olympic performers from archery to yachting), education (elementary to university), medicine and business. Dr. Wilson has taught sport psychology, counseling and biofeedback assisted self-regulation courses at the graduate and undergraduate level. Her current research is psychophysiological profiling and EEG brain mapping of elite performers. She is a co-author of *Learned Self Regulation, Owners Manual for the Brain and Body* and the author of the BFE "Optimizing Performance & Health Suite" for BioGraph Infiti. Dr. Vieta 'Sue' Wilson is renowned for her work in sports psychology and presented at the 2005 Association for the Advancement of Applied Sport Psychology (AAASP) which has emerged as the largest applied sport, exercise, and health psychology organization in the world.



Vieta E. Wilson, Ph.D.

Dr. Sue Wilson introduces some of the key techniques being used to optimize performance and health using the world's leading "Infiti" biofeedback system. Olympic Athletes, Top Executives and world class performers in the arts need to be able to manage their energy and resources. Whether their area of excellence is business, sports or the performing arts, elite performers share an important characteristic. They are able to enter a state where they are totally focused on what they do. They have learned to bring themselves to a place that combines mental clarity and sustained energy with a sense of inner calm and active engagement. Virtually everyone experiences these "moments of flow" at some point in their lives. Elite performers learn how to access them when they need to, whether they are performing before a live audience, closing an important deal, helping a troubled patient or merely playing a game of golf with a friend.

The Biofeedback Foundation of Europe is a non-profit organization located in the Netherlands. The BFE was founded to promote a greater awareness of biofeedback among European health professionals, and, through training workshops, educate clinicians in the use of biofeedback techniques and technology. In the evolving field of elite performance and health for elite athletes biofeedback and neurofeedback are playing an increasingly more important role. Athletic trainers, coaches, sports professionals in various specialties have come to use biofeedback either independently or as an adjunctive technique with positive results.

For more information on BFE online courses, workshops and conferences worldwide see our website www.bfe.org.

Why is optimal performance and health such an important factor in sports?

When Italy played against France in the last World Cup final, some of its best players were relying on a secret weapon. The secret weapon is called the Mind Room and it was developed in Montreal. For months now, at least four players on the Italian national team have been training in the Mind Room to prepare themselves mentally for clutch moments at the World Cup. De Michelis will train them to focus as well as relax mentally. He does this by first getting them into the meditative state, then showing them a video of their performance for a couple of seconds. Visualizing their perfect performance in a relaxed state, is a powerful training tool. The Infiti system that he and Dr. Wilson use is a wonderful tool to train better mentally. Integrated training gives athletes the capacity to recover through relaxation, to concentrate better, to lessen interfering self-talk and to visualize in order to improve their skills in both practice and competition.

What makes the Optimizing Performance and Health Suite so useful to professionals that want to work with Elite Athletes and Peak Performers?

The Suite has been designed to help newcomers to the field to apply what has been demonstrated by both research and experience. It combines the latest in the BioGraph Infiti technology including an



automated psychophysiological assessment and a section devoted to individual and group reporting. One of the things I am most pleased about with the suite is that the suite includes forms and powerpoint presentations that clients and clinicians can use to get started right away in this exciting field. Included are guides to assessment and training; intake and consent forms, clinician's check list, and client feedback & summary forms. Paper and pencil assessments include a sport psychological



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skills assessment, and a lifestyle & personality assessment (anxiety, depression, anger, reactivity). Scoring and interpretation sheets are also included, self-regulation text book, articles and references are also included.

Do you think it is important to assess athletes before you train them?

Yes, I think this is very important. The Performance and Health Assessment (PHA) is the perfect tool to help determine each athlete's strengths and weaknesses before training. Typically

we begin with biofeedback of the system in which the athlete needs the most work, as long as it is relevant for the sport. For example, if muscle tension in the shoulders is high, the athlete practices muscle biofeedback in the office, at home with a portable SEMG and sometimes, in the sport setting with telemetry. Normally the athlete's ability to control muscles often is demonstrated in the first session and then merely needs constant reinforcement in the sport setting to maintain the appropriate level of relaxation. Athletes incorporate the skills into their performance preparation plan (P3) in the office, at practice, and during competition. Other systems like blood flow and effortless breathing often need biofeedback and longer time periods of practice before changes are noticed. In our experience it is valuable to include biofeedback first as the

changes in these systems are easiest to understand and changes can be demonstrated very quickly. Neurofeedback is started first if attention or disruptive self-talk are components that needs to be fine-tuned. Other modalities are still monitored even if EEG is the system of interest.

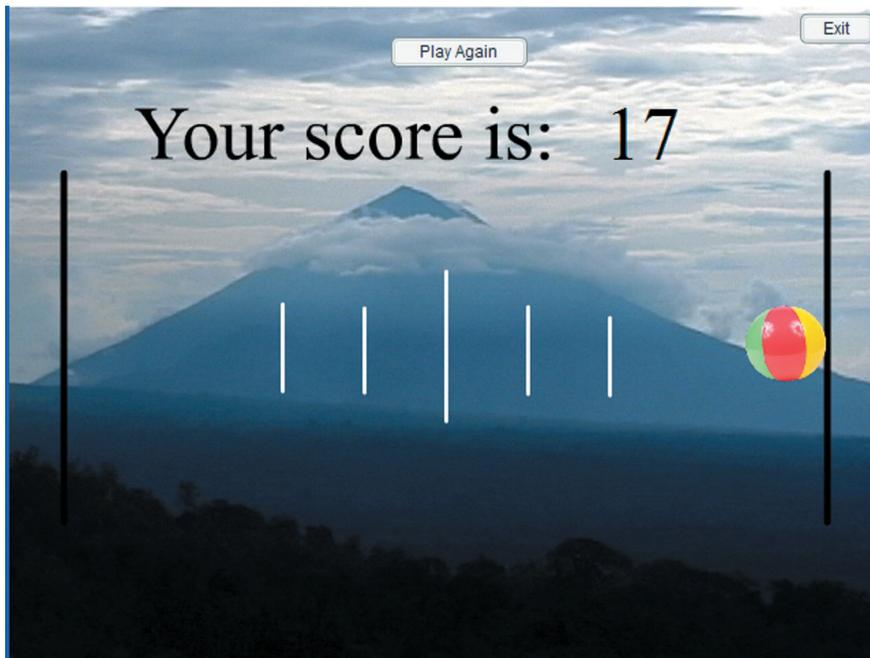
Can you tell me a little about your BFE Suite "Optimizing Performance & Health?"

The suite teaches the techniques necessary for achieving optimum personal performance, both for individuals and for those who counsel or coach individuals. Among the topics covered in the Suite are: the characteristics of the performance-ready state; personal impediments to performance; the clinical role versus the coaching role; achieving physiological balance through relaxa-

tion techniques, biofeedback, meditation and open focus; the use of neurofeedback; cognitive approaches; the "inner journey"; mental imagery and the role of

ties to practice the sport's situation specific attentional skills. Once the skills have been learned in a relatively stress-free environment, the coach needs to

becoming automatic, the athlete attends to other information, even irrelevant information, without interfering with performance.



the coach. Adding biofeedback is of particular value to coaches and personal trainers, as well as to neurofeedback practitioners and therapists who wish to see their clients move to the "next level" of functioning.

What is the ideal attention state for Elite performers?

While the ideal 'attention' for elite performance may be being 'brain quiet' or not thinking, it seldom occurs and thus, a back up plan for what to attend to and how is needed. Coaches/athletes need to know not only where and what they need to attend to within different sport situations, but also drills/games need to be devised to allow the athlete the opportuni-

ties to practice the sport's situation specific attentional skills. Once the skills have been learned in a relatively stress-free environment, the coach needs to

One often hears that athletes are expected to pay full attention for the entire sports duration, which may be hours, do you agree with this?

No, this is not how attention works. Research by Dr. Barry Sterman who used electroencephalography (EEG) to monitor pilot's brain waves in training simulations, showed that one's attention moves quickly from one display to another with very brief, millisecond breaks. In other words, the skilled person knows when to take a break and can quickly refocus. With the skill

How do you teach Olympic athletes how to attend?

Equally important to where to attend is the 'how to' attend. Neurofeedback is used to teach athletes intention, focusing, imagery enhancement as well as when to let-go or not attend.

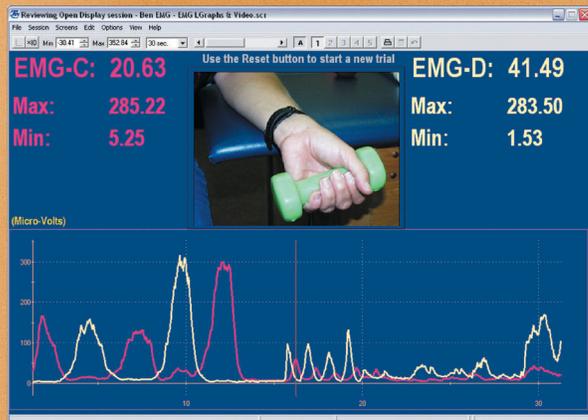
Can you tell me a little about Open Awareness?

Yes, open awareness is similar to what is called 'non-directive' in meditation. One's brain is quiet but ready to perform. The objective is to allow information from the senses to come in but to not react nor judge. This non-directive state is believed to be similar to producing relaxing brain waves, alpha, or SMR in the brain and may be the basis of Vicker's quiet eye, all of which are associated with better performance. The BFE Suite on Optimizing Performance and Health includes exercises in open awareness.

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Bruno DeMichelis PhD
Milan Lab AC Milan Soccer Team

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