

OPTIMIZING PERFORMANCE



The Optimal Performance program offered by Precision Neurometrics focuses on developing and maintaining optimal brain functioning. The relevance of optimizing brain function is vast. We tend to think of athletes' peak performance as associated with optimal brain functioning and indeed there are many examples of the efficacy of this program in the athletic context. Gold Medal Olympic archers, World Cup winners in Soccer, many of the Canadian Gold Medal winners at the Vancouver Olympic Winter Games are but a few examples.

However, optimal brain functioning is relevant not only to athletics but to any area of activity or body function. Singers, dancers and other performers benefit from such optimization. Good brain function has also been associated with good immune functioning and impeding age related cognitive declines.

A principal arena of application of optimal performance training is for elite executives. Many organizations support this training for the senior management because of the marked return on investment. Basically, by improving brain efficiency the organization gains substantially in terms of managerial competence and effectiveness. That is, increased brainpower.

"...the Volkswagen Beetle has just overtaken the Ferrari in the last straightaway..." It is most unlikely that one will ever hear this at a motor race track. Optimal performance training makes the brain operate at maximum efficiency. It is not brain replacement. If one's talents lie in dance then dance performance can be substantially improved with brain optimization training. Continuing with the motor racing metaphor, the genius level mechanic and the genius level driver cannot switch roles, participate in optimal performance training and expect to be as efficient as in their original roles. Or as T.S. Elliot commented in his assessment of the relationship between the writers Charles Dickens and Wilkie Collins, "he learned as much as a man of talent can learn from a man of genius." Likewise with optimal performance training, talent and genius can be optimized which was one of the major surprising findings of brain optimizing research. That is, the enhancement in brain optimization is about equivalent at all levels of native ability.

In short, optimal performance training will optimize what the client brings to the program in terms of native talent, experience, education, interests, motivation, and health.

The Executive Program



Build the Foundation

Regardless of the application, the first step is the Quantitative Electroencephalogram (QEEG). The QEEG measures brainwave activity from which the inefficiencies in brain functioning can be determined. These inefficiencies are related to cognitive and emotional conditions that need to be resolved prior to the optimization protocols. Problems with sleep quality, depressed, anxious, or volatile mood states, rigidity in thinking, unresolved emotional stressors (i.e., emotional trauma), substance dependence, cognitive sluggishness, and the like can be determined with experienced QEEG analysis.

Once these inefficiencies or abnormalities are identified, they are corrected where appropriate. The best metaphor for this is that one wants to build a house on a firm foundation. A manager who wishes to optimize performance must resolve the predisposition to depression and be weaned off the antidepressant medication to truly achieve optimal performance levels. A manager with poor sleep and modest excess of alcohol use must resolve these issues to totally benefit from the optimally performance training.

As part of this initial phase of the optimization program, biofeedback and self-regulation training of peripheral systems (e.g., muscle tension, respiration, blood flow) enables clients to recognize and modulate body tension and nervous system arousal.



Optimize Brain Efficiency

As part of the first phase of the program, one usually finds an increase in IQ of about 10 units. This indicates, of course, that by improving brain functioning the increased efficiency is reflected in increased IQ. These increases occur across the entire range of sub indicators of IQ.

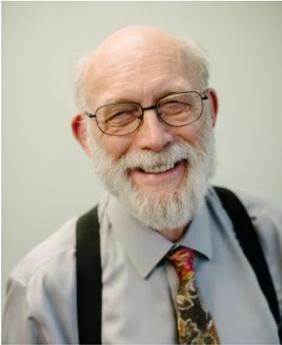
Building on this increased efficiency, the brain wave correlates of superior functioning are driven to optimal levels. To return to the motor car metaphor this is like fine tuning a precision engine. Brainwave balance, rapidity of change and recovery, base standing levels, and brain site to brain site communication are all “tuned” to viable levels. Client input at this phase of training is paramount. Brain wave activity considered “normal” may not be optimal for peak performance objectives. For example, “normal” brainwave amplitudes in the back of the brain may be associated with restful 8 ½ hours of sleep per night whereas the optimized brain facilitates peak performance with 6 hours of sleep per night.

Maintenance

Optimal states are not stable states. This ideal states need maintenance. Body builders, for example, need to exercise daily to maintain their peak physical state. Similarly, the optimized brain requires daily brain exercise and periodic brainwave neurotherapy to sustain the enhanced brain functioning. Obviously, when the brain is functioning efficiently, the increased brain activity associated with the improved functioning will help to sustain the enhanced state. Further, specific daily brain exercises are prescribed to help maintain the gains. And clients typically come in for specific precision brainwave training periodically to maintain the gains. Since the entire optimal performance training program is data driven the frequency of visits to maintained optimal states is determined by systematic brainwave assessments and of course the subjective feeling of the executive. Many come in periodically for maintenance, perhaps once per month, but will have extra training visits if they feel sluggish, are recovering from an illness or have an upcoming important and challenging task.

Program Principals

Dr. Paul G. Swingle



Dr. Swingle was Professor of Psychology at the University of Ottawa prior to moving to Vancouver. A Fellow of the Canadian Psychological Association, the Canadian Institute for Conflict Resolution, and the Biofeedback Certification International Alliance, Dr. Swingle was Lecturer in Psychiatry at Harvard Medical School and during the same time period was Associate Attending Psychologist at McLean Hospital (Boston) where he also was Coordinator of the Clinical Psychophysiology Service. Professor Swingle taught at McGill University where he was cross appointed between the Department of Psychology and the Graduate School of Business. Dr. Swingle is a Registered Psychologist in British Columbia and Board Certified in Biofeedback and Neurotherapy. Among his many publications, Dr. Swingle has written several books on conflict resolution including “The Structure of Conflict” and “The Management of Power.” His most recent book, “Biofeedback for the Brain” (2010) was published by Rutgers University Press.

Hiroko Demichelis, MSc Psychology, RCC



Hiroko came to us directly from Italy. With her she brought extensive experience with elite athletes including working with Milan AC and Chelsea FC. At the Swingle Clinic Hiroko works in the field of optimal performance again with elite athletes, but also executives, artists, and individuals striving to achieve their full potential. Hiroko integrates neurotherapy, biofeedback and standardized low resolution brain electromagnetic tomography (SLORETA) with Mindfulness-Based Approaches and REBT/Cognitive Behavioural Therapy. Hiroko Demichelis is a Board-Certified Neurotherapist.