FROM THE EDITOR

Editor’s Introduction: Winter Issue 2012

Donald Moss, PhD, BCB, BCN

The cover of this Winter 2012 issue of Biofeedback shows a woman in a biofeedback session, displaying a pulse oximeter on her left hand. An article in this issue, by Christopher Gilbert, PhD, introduces the use of the pulse oximeter in clinical biofeedback practice. Our thanks to the photographer, Eric Willmarth, PhD, and the model, Tonya Jackson, for this photograph.

Professional Issues
Fred Shaffer, Judy Crawford, and Donald Moss provide an article reviewing the expanded role of the Biofeedback Certification International Alliance (BCIA) in global biofeedback and neurofeedback certification. The BCIA mission is as follows: “BCIA certifies individuals who meet education and training standards in biofeedback and neurofeedback, and progressively recertifies those who advance their knowledge through continuing education.” The BCIA provides a number of supports for professional education, including a “blueprint of knowledge” describing essential knowledge in each certification area, guidelines for a mentoring process assuring that certified practitioners will possess a basic repertoire of skills, and an expanding number of webinars on topics in biofeedback and neurofeedback.

Feature Articles
Christopher Gilbert provides an article on the use of the pulse oximeter in breath training. A pulse oximeter measures the level of oxygen in the bloodstream, using a noninvasive and inexpensive sensor applied to the finger or earlobe. The oximeter uses photoplethysmography, which is an infrared sensor to measure oxygen saturation in the bloodstream, as well as current heart rate. Gilbert overviews the physiology of breathing and oxygen saturation, and describes how the oximeter can be used as an educational tool and as a safety measure.

Richard Harvey, Erin Thorne, and Jourdan McPhetridge provide a report on a recent study of “dysponesis awareness training.” Dysponesis is a term first developed by George Whatmore and Daniel Kohli (1968) to describe unnecessary muscular effort that does not contribute functionally to a task. Whatmore and Kohli originally applied this concept to clinical patients suffering pathological pain. The Harvey et al. article utilizes healthy undergraduates and examines how biofeedback can be utilized to enhance awareness and control of misplaced muscle effort, and reduce inefficient muscle use.

Leah Lagos, Thomas Bottiglieri, Bronya Vaschillo, and Evgeny Vaschillo provide an introduction to a new application area for heart rate variability (HRV) biofeedback—the treatment of post concussion syndrome. They review the physiological dysfunction that typically follows a concussion, especially altered autonomic function and impairments in cerebral autoregulation. They examine the known therapeutic effects of HRV training and provide a physiological rationale for clinical trials applying HRV to post concussion syndrome patients. Lagos and her colleagues will follow up in a future issue of Biofeedback with a case study of a patient with post concussion syndrome with a positive therapeutic response to HRV training.

Erik Peper, Dianne Schumay, and Donald Moss provide a discussion of the importance of a patient’s illness beliefs or illness attributions in shaping that patient’s willingness to pursue self-regulation oriented treatment programs. Patients who are strongly external in their locus of control and who believe that their illness is curable only by such external interventions as surgery or medication are less likely to undertake treatments based on skill acquisition, lifestyle change, and self-regulation. The authors discuss strategies for the use of both biofeedback and somatic education to increase internal locus of control and to introduce corresponding changes in illness beliefs. A case history illustrates a biofeedback intervention to positively change illness beliefs, and a somatic awareness exercise is used to illustrate a somatic education approach.

Reference
Authors are invited to submit manuscripts on any topic in applied psychophysiology and biofeedback. Articles are welcome presently for a special issue on The Promise of Cardio-Plasticity: Psychophysiological Approaches to Cardiovascular Rehabilitation for Spring 2013, an issue on Advances in Pediatric Applications of Biofeedback and Self-Regulation in Summer 2013, and an issue on Advances in the Science and Practice of Heart Rate Variability Biofeedback for Fall 2013.