



Support for the Efficacy of MindReflector Attention Training

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1. Growing Support for the use of EEG Biofeedback to help manage ADHD

Recent studies confirm the usefulness of Neurofeedback to help manage the symptoms of ADHD (e.g., DeBeus & Kaiser, 2011; Gevensleben, et al., 2009; Lofthouse, Arnold, Sarah, Hurt, & DeBeus, 2011). Because of increasing empirical support, Neurofeedback and biofeedback now have been recognized by the American Academy of Pediatrics as Level I, “Best Supports,” interventions for ADHD.

2. MindReflector protocols train EEG bandwidths correlated with attention skills

MindReflector training incorporates EEG Biofeedback protocols which approximate the training procedures that have been empirically demonstrated to improve attention skills for children and adults. MindReflector’s **Quiet Focus** protocol trains users to increase portions of SMR and low beta bandwidths whose psychological correlates have been demonstrated to involve states of relaxation and attention, respectively. As reported at the 2012 conference of the International Society for Neurofeedback and Research (iSNR) in Orlando, Florida, Beta testing with this protocol produced frequent use of the adjectives “calm,” “relaxed,” and “focused” to describe the subjectively perceived effects of **Quiet Focus** training. Analysis of eight subjects trained in-office with the **Quiet Focus** protocol demonstrated statistically significant increases in independent measurements of SMR/low beta amplitudes from the beginning to the end of the MindReflector training experience. See Fink (2012) for a more detailed summary of this study, which also may be found on the MindReflector website (www.mindreflector.com).

3. Pre-post training assessments reflect improved attention abilities

The usefulness of MindReflector training to increase attention and focus was confirmed with a 25-year-old woman who was experiencing severe decrements in her ability to concentrate following a traumatic brain injury. Pre- and post-a five-week training period, during which training was carried out four to five times a week with the MindReflector **Quiet Focus** protocol, her attention skills were measured with the IVA+, a standardized continuous performance (CPT) test believed to provide objective measurement of a variety of skills associated with attention and concentration. The improvements in standard scores on a number of key attentional abilities is provided in the chart below:

	Pre-training DOT: 7/10/12	Post training DOT: 9/12/12
Full Scale Response Control Quotient	81	94
Full Scale Attention Quotient	20	56
Auditory Response Control Quotient	65	83
Visual Response Control Quotient	103	106
Auditory Attention Quotient	16	56
Visual Attention Quotient	40	65
Sustained Auditory Attention Quotient	0	48
Sustained Visual Attention Quotient	48	76
(Evidence of mild fine motor hyperactivity)		(No Evidence of fine motor hyperactivity)

4. Self-reports and testimonials

Individual users, during Beta testing and in current field and clinical use, report noticeable positive effects on focus and attention as a result of MindReflector training. Reports have included:

“(My son) has ADHD and I think for him to physically see via the feedback that he really struggles to focus was an eye-opener. For this 17-year-old teenager to realize he can do things with his mind was mind blowing.”

“(Since beginning MindReflector training) my Grade 1 daughter said to me twice last week that she really enjoyed school and she chats about what is going on, etc. She used to always say school was awful and nobody wanted to play with her, etc. She is on the (MindReflector) training to help her focus at school.”

“It stops my mind from racing.”

“It helps me keep focus.

“After training, I am more focused and alert.

“ It refocuses my attention. “

“ I noticed that when my mind starts to wander, the music stops. It makes me aware I am not focusing.”

5. Clinical observations

For approximately one year, MindReflector home training has been successfully incorporated into my psychological practice of Acorn Health Associates, PC. It has been used to augment a clinical practice that treats children and adults with ADHD, as well as clinical problems varying from depression and anxiety to attentional and cognitive effects of TBI and stroke. With MindReflector, I have been able to transfer some of the responsibility of care to the client, with good effects on self-efficacy and clinical change. I have been able to reduce in-office contact and, in several cases, clients are managing their problems all on their own. MindReflector promotes self-efficacy and a sense of positive self-control.

References

American Academy of Pediatrics report: Evidence-based Child and Adolescent Interventions, November 2012.

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Lofthouse, N., Arnold, L. E., Sarah, H. S, Hurt, E., & DeBeus, R. (2011). Biofeedback and neurofeedback treatment for ADHD, *Psychiatric Annals*, 41(1), 42-48.