

# **DISCLAIMER**

The information contained within this document does not constitute medical advice or diagnosis and is intended for education and information purposes only. It was current at the time of publication and every effort is made to keep the document up to date.

The information contained herein includes both psychological and non psychological interventions. The delivery of psychological services requires a medical referral whilst non psychological services do not.

Each person is an individual and has a unique psychological profile, biochemistry, developmental and social history. As such, advice will not be given over the internet and recommendations and interventions within this website cannot be taken as a substitute for a thorough medical or allied health professional assessment or diagnosis.

# References for QEEG and EEG Biofeedback

## Article QUICK LINKS :

[References /](#)

[EEG Biofeedback for Epilepsy /](#)

[EEG Biofeedback for Attention Deficit Hyperactivity Disorder /](#)

[EEG Biofeedback for Learning Disabilities](#)

## REFERENCES

1. Abarbanel, A (1995): Gates, states, rhythms and resonances: The scientific basis of neurofeedback training. *Journal of Neurotherapy*, 1, 15-38.
2. Andreassi, J.L (1985): *Psychophysiology: Human behaviour and physiological response*. 3rd edition. Laurence Erlbaum Associates. Hillsdale New Jersey.
3. Cantor, D.S (1999): An overview of quantitative EEG and its applications to neurofeedback.
4. Chabot, R J et al (1999): behavioral and electrophysiologic predictors of treatment response to stimulants in children with attention deficit disorders. *Journal of child Neurology* Vol 14 (6) 343-351.
5. Chabot, R.J, et al (1996): Sensitivity and specificity of QEEG in children with attention deficit or specific developmental learning disorders. *Clinical Electroencephalography*. Jan Vol 27 (1) 26-34.
6. Chabot, RJ & Serfontain (1996): Quantitative electroencephalographic profiles of children with attention deficit disorder. *Biological Psychiatry* Nov 15 (10), 951-963.
7. Clarke, A.R., et al. (1998). EEG Analysis in Attention-Deficit/Hyperactivity Disorder: a comparative study of two subtypes. *Psychiatry Research*. Oct 19(1), 19-29.
8. Crawford, H.J. & Barabasz, M (1996): Quantitative EEG magnitudes in children with and without attention deficit disorder during neurological screening and cognitive tasks. *Child Study Journal*. Vol 26 (1), 71-86.
9. Diro, F.M, MD (1989): *The EEG Handbook* ., Little, Brown & Co. Boston, Massachusetts.
10. Duffy, F (2000) *Neurotherapy: Editorial Comments*. *Clinical Electroencephalography*. January Vol 31 (1) v-viii
11. Evans, J.R & Abarbanel, A (1999): *Introduction to Quantitative EEG and Neurofeedback*. Academic Press, Harcourt Place, London.

12. Gunkelman J & Hammond C (2001): *The Art of Artifacting*. Society for Neuronal Regulation, California, USA, Heinemann. Newton, Massachusetts.
13. Hughes, J (1994): *EEG in Clinical Practice* (2nd edition). Butterworth
14. Hughes, J.R & John, E.R (1999): Conventional and Quantitative Electroencephalography in Psychiatry. *Journal of Neuropsychiatry and Clinical Neurosciences* Vol 11(2): 190-208. May. American Psychiatric Press Inc.
15. Kuperman, S, et al (1996) Quantitative EEG differences in a nonclinical sample of children with ADHD and undifferentiated ADD. *Journal of the American Academy of Child and Adolescent Psychiatry, p- Adolescent Psychiatry*.
16. Loo, S & Camp, B (1997): QEEG differences amongst ADHD children with and without Oppositional Behaviours in Annual meeting of the Association for Applied Psychophysiology and Biofeedback.
17. Lubar, J F (1991): Discourse on the development of EEG diagnostics and biofeedback for attention deficit/hyperactivity disorders. *Biofeedback and Self Regulation*. Vol 16 (3), 201-225.
18. Lubar, J.F., J.N. Swartwood, and D.L. Timmerman, (1995): Quantitative EEG and auditory event-related potentials in the evaluation of Attention Deficit/Hyperactivity Disorder: Effects of methylphenidate and implications for neurofeedback training. *Journal of Psychoeducational Assessment*. ADHD Special, 1995, 143-160.
19. Lubar, J.O. & Lubar, J.F. (1984): Electroencephalographic biofeedback of SMR and beta for treatment of attention deficit disorders in a clinical setting. *Biofeedback and Self Regulation*. Vol 9 (1), 1-23.
20. McEvoy, L.K., Smith, M.E. and Gevins, A. (2000): Test-retest reliability of cognitive EEG. *Clin Neurophysiology*. Mar 1; 111(3): 457-463, 2000. 1, 111(3), 457-463
21. Monastra, V.J .et al. (1999) Assessing attention deficit hyperactivity disorder via quantitative electroencephalography: An initial validation study. *Neuropsychology*, 13(3), 424-433.
22. Silberstein, R.B. (1995). Neuromodulation of neocortical dynamics. In P.L. Nunez (Ed) *Neocortical Dynamics and Human EEG Rhythms*. New York: Oxford University Press, 591-627.
23. Serman, M.B. (1996): Physiological origins and functional correlates of EEG rhythmic activities: implications for self regulation. *Biofeedback & Self Regulation*, 21, 3-33.
24. Thatcher, R.W. (1998): Normative EEG databases and EEG biofeedback. *Journal of Neurotherapy*, 2(4), 8-39.

25. Watson, C.G., Jacobs, L., & Herder, J (1979). Correlates of alpha, beta and theta wave production. *Journal of Clinical Psychology*. 35 (2), 364 - 369.
26. Zametkin, A.J. et al (1993): Brain metabolism in teenagers with ADHD. *Archives of Gen. Psychiatry*, 50, 333-340.

The following listing by disorder was prepared by

D. Corydon Hammond PhD

Professor, Physical Medicine and Rehabilitation  
University of Utah School of Medicine

Past President ISNR

### **EEG BIOFEEDBACK FOR EPILEPSY**

1. Andrews, D.J. and Schonfeld, W.H. (1992). Predictive factors for controlling seizures using a behavioural approach. *Seizure*, 1, 111-116.
2. Ellenson. B. and Klove. H. (1976). Clinical application of biofeedback training in epilepsy. *Scandinavian Journal of Behavior Therapy*, 133-144.
3. Finley, W.W. (1977). Operant conditioning of the EEG in two patients with epilepsy: Methodologic and clinical considerations. *Pavlovian Journal of Biological Science*, 12(2), 93-111.
4. Finley, W.W., Smith, H.A. and Etherton, M.D. (1975). Reduction of seizures and normalization of the EEG in a severe epileptic following sensorimotor biofeedback training: Preliminary study. *Biological Psychiatry*, 2, 189-203.
5. Kaplan, B.J. (1975). Biofeedback in epileptics: Equivocal relationship of reinforced EEG frequency in seizure reduction. *Epilepsia*, 16, 477-485.
6. Kuhlman, W.N. (1978a). EEG feedback training: Enhancement of somatosensory cortical activity. *Electroencephalography and Clinical Neurophysiology*, 45(2), 290-294.
7. Kuhlman, W.N. (1978b). EEG feedback training of epileptic patients: Clinical and electroencephalographic analysis. *Electroencephalography and Clinical Neurophysiology*, 45, (6), 699-710.
8. Kuhlman, W.N. and Allison, T. (1977). EEG feedback training in the treatment of epilepsy: Some questions and some answers. *Pavlovian Journal of Biological Science*, 12(2), 112-122.
9. Kuhlman, W.N. and Klieger, D. M. (1975). Alpha enhancement: Effectiveness of two feedback contingencies relative to a resting baseline. *Psychophysiology*, 12(4), 456-460.

10. Lantz, D. and Serman, M.B. (1988). Neuropsychological assessment of subjects with uncontrolled epilepsy: Effects of EEG biofeedback training. *Epilepsia*, 29, 163-171.
11. Lantz, D and Serman. M.B. (1992). Neuropsychological prediction and outcome measures in relation to EEG feedback training for the treatment of epilepsy. IN: *The neuropsychology of epilepsy. Critical issues in neuropsychology*. Thomas L. Bennett, Ed. Plenum Press, New York, NY, 213-231.
12. Lubar, J.F. (1977). Electroencephalographic biofeedback methodology and the management of epilepsy. *Pavlovian Journal of Biological Science*, 12(3), 147-185.
13. Lubar. J.F.. and Bahler, W.W. (1976). Behavioral management of epileptic seizures following EEG biofeedback training of the sensorimotor rhythm. *Biofeedback and Self-Regulation*, 1, 77-104.
14. Lubar, J.F., Shabsin, H., Natelson, S.E., Holder, G., Whitsett, S.F., Pamplin, W.E., and Krulidowski, D.I. (1981). EEG operant conditioning in intractable epileptics. *Archives of Neurology* 38, 700-704.
15. Mostofsky, D.J. and Balaschak, B.A. (1977). Psychobiological control of seizures. *Psychological Bulletin*, 84, 723-750.
16. Quy, R., Hutt, S.J., and Forresi, S. (1979). Sensorimotor rhythm feedback training and epilepsy: Some methodological and conceptual issues. *Biological Psychology*, 9, 129-149.
17. Seifert, A.R. and Lubar, J.F. (1975). Reduction of epileptic seizures through EEG biofeedback training. *Biological Psychology*, 3, 157-184.
18. Shouse. M.N.. and Lubar. J.F. (1979). Operant conditioning of EEG rhythms and Ritalin in the treatment of hyperkinesis. *Biofeedback and Self-Regulation*, 4, 299.
19. Serman, M.B. (1973). Neurophysiologic and clinical studies of sensorimotor EEG biofeedback training: Some effects on epilepsy. *Seminars in Psychiatry*, 5(4), 507-525.
20. Serman, M.B. (1977). Sensorimotor EEG operant conditioning: Experimental and clinical effects. *Pavlovian Journal of Biological Science*, 12(2), 63-92.
21. Serman, M.B. (1981). EEG biofeedback: physiological behavior modification. *Neurosci Biobehav Rev* 5(3), 405-412.
22. Serman, M. B. (1993). Sensorimotor EEG feedback training in the study and treatment of epilepsy. IN: *The neurobehavioral treatment of epilepsy*.; David 1. Mostofsky, Yngve Lyrning, Eds. Lawrence Erlbaum Associates, Inc., Hillsdale, NJ, 1-17.

23. Sterman, M.B. and Friar, L. (1972). Suppression of seizures in an epileptic following sensorimotor EEG feedback training. *Electroencephalography and Clinical Neurophysiology*, 33 (1), 89-95.
24. Sterman, M.B., Goodman, S.J., Kovalesky, R.A. (1978). Effects of sensorimotor EEG feedback training on seizure susceptibility in the rhesus monkey. *Experimental Neurology*, 62(3), 735-747.
25. Sterman, M.B. and MacDonald, L.R. (1978). Effects of central cortical EEG feedback training on incidence of poorly controlled seizures. *Epilepsia*, 19, 207-222.
26. Sterman, M.B., Macdonald, L.R. and Stone, R.K. (1974). Biofeedback training of the sensorimotor electroencephalogram rhythm in man: Effects on epilepsy. *Epilepsia* 15(3), 395-416.
27. Sterman, M.B. (1996). Physiological origins and functional correlates of EEG rhythmic activities: implications for self-regulation. *Biofeedback & Self Regulation*, 21 (1), 3-33.
28. Tansey, M.A. (1985). The response of a case of petit mal epilepsy to EEG sensorimotor rhythm biofeedback training. *International Journal of Psychophysiology*.
29. Tansey, M.A. (1986). A simple and a complex tic (Gilles de la Tourette's syndrome): Their response to EEG sensorimotor rhythm biofeedback training. *International Journal of Psychophysiology*. 4, 91-97.
30. Tozzo, C.A., Elfner, L.F., and May, Jr., J.C. (1988). EEG biofeedback and relaxation training in the control of epileptic seizures. *International Journal of Psychophysiology* 6(3), 185-194.
31. Walker, J. (1995). Remediation of nocturnal seizures by EEG biofeedback: Presentation at 1995 Society for the study of Neuronal Regulation, Scottsdale, AZ.
32. Whitsett, S.F., Lubar, J.F., Holder, G.S., Pamplin, W.E. and Shabsin, H.S. (1982). A double-blind investigation of the relationship between seizure activity and the sleep EEG following EEG biofeedback training. *Biofeedback and Self-Regulation* 7(2), 193-209.
33. Wyler, A.R., Lockard, J.S. and Ward, A.A. (1976). Conditioned synchronization and seizure occurrence in patients. *Electroencephalography and Clinical Neurophysiology*, 41, 501-512.
34. Wyler, A.R., Robbins, C.A., and Dodrill, C.B. (1979). EEG operant conditioning for control of epilepsy. *Epilepsia*, 20, 279-286

## **EEG BIOFEEDBACK FOR ATTENTION DEFICIT HYPERACTIVITY DISORDER**

1. Alhambra, M.A., Fowler, T.P., and Alhambra, A. A. (1995). EEG Biofeedback: A New Treatment Option for ADD/ADHD. *Journal of Neurotherapy*, 1(1), 39-43.
2. Arnold, L.E. (1995). Some nontraditional (unconventional and/or innovative) psychosocial treatment for children and adolescents: Critique and proposed screening principles. Special Issue: Psychosocial treatment research. *Journal of Abnormal Child Psychology*, 23, 125-140.
3. Janzen, T., Graap, K., Stephanson, S., Marshal, W. et al. (1995). Differences in baseline EEG measures for ADD and normally achieving preadolescent males. *Biofeedback & Self Regulation*, 20(1), 65-82.
4. Kaiser, D. A., & Othmer, S. (1998). Efficacy of SMR-beta neurofeedback on attentional processes. Unpublished paper available at <http://www.eegspectrum.com>
5. Linden, M., Gevirtz, R., Isenhardt, R., & Fisher, T. (1996). Event-related potential of subgroups of children with attention deficit hyperactivity disorder and the implications for EEG biofeedback. *Journal of Neurotherapy*, 1, 40-49.
6. Linden, M., Habib, T., & Radojevic V. (1996). A controlled study of the effects of EEG biofeedback on cognition and behavior of children with attention deficit disorder and learning disabilities. *Biofeedback & Self Regulation*, 21, 35-50.
7. Lubar, J. F. (1995). Neurofeedback for the management of attention-deficit/hyperactivity disorders. In: M. S. Schwartz (Ed.). *Biofeedback: A Practitioner's Guide*. New York: Guilford, pp. 493-522.
8. Lubar, J. F., Swartwood, M. O., Swartwood, J. N., & O'Donnell, P. H. (1995). Evaluation of the effectiveness of EEG neurofeedback training for ADHD in a clinical setting as measured by changes in TOVA scores, behavioral ratings, and WISC-R performance. *Biofeedback and Self- Regulation*, 29(1), 83-99.
9. Lubar, J.O. & Lubar, J.F. (1984). Electroencephalographic biofeedback of SIVIR and beta for treatment of attention deficit disorders in a clinical setting. *Biofeedback & Self Regulation*, 9(1), 1-23.
10. Lubar, J.F. & Shouse, M.N. (1976). EEG and behavioral changes in a hyperkinetic child concurrent with training of the sensorimotor rhythm (SMR): a preliminary report. *Biofeedback & Self Regulation*, 1(3), 293-306.
11. Lubar, J.F. (1989). Electroencephalographic biofeedback and neurological applications. IN: J. V. Basmajian, (Ed.), *Biofeedback: Principles and practice for clinicians* (3rd ed.). Baltimore: Williams & Wilkins, pp. 67-90.
12. Lubar, J.F. (1991). Discourse on the development of EEG diagnostics and biofeedback for attention-deficit/hyperactivity disorders. *Biofeedback & Self Regulation*, 16 (3), 201-225.

13. Lubar, J.F. (1997). Neocortical Dynamics: Implications for understanding the role of neurofeedback and related techniques for the enhancement of attention. *Applied Psychophysiology and Biofeedback* . 22 (2), 111-126.
14. Lubar, J.F & Deering, W.M. (1981). *Behavioural approaches to Neurology*. New York: Academic Press.
15. Lubar, J.O. (1989). Electroencephalographic Biofeedback and Neurologic Applications. In J.V. Basmajian (Ed.) *Biofeedback, Principles and Practice for Clinicians*. Baltimore: Williams and Wilkins.
16. Plude, David B. (1996). New technology: A biological understanding of attention deficit hyperactivity disorder and its treatment. *Journal of Neurotherapy*, 1, 10-14.
17. Rasey, H. W., Lubar, J. F., McIntyre, A., Zoffuto, A.C., & Abbott, P. L. (1996). *Journal of Neurotherapy*, 2, 15-21. EEG biofeedback for the enhancement of attentional processing in normal college students. *Journal of Neurotherapy*, 1, 15-21.
18. Rossiter, T. R., & La Vaque, T. J. (1995). A comparison of EEG biofeedback and psychostimulants, in treating attention deficit/hyperactivity disorders. *Journal of Neurotherapy*, 1, 48-59.
19. Sears, W. and L. Thompson, *The A.D.D. Book : New Understandings, New Approaches to Parenting your child*. 1998, New York: Little, Brown & Company (Canada) Limited.
20. Shouse, M.N. & Lubar, J.F. (1978). Physiological basis of hyperkinesis treated with methylphenidate. *Pediatrics* 62(3), 343-351.
21. Shouse, M.N. & Lubar, J.F. (1979). Operant conditioning of EEG rhythms and Ritalin in the treatment of hyperkinesis. *Biofeedback & Self Regulation*, 4(4), 299-312.
22. Serman, M.B. (1996). Physiological origins and functional correlates of EEG rhythmic activities: implications for self-regulation. *Biofeedback & Self Regulation*, 21 (1), 3-33.
23. Tan, G. (1997). Attention-deficit hyperactivity disorder: pharmacotherapy and beyond. *Postgraduate Medicine* 101(5), 201-204.
24. Tansey, M. A. (1990). Righting the rhythms of reason: EEG biofeedback training as a therapeutic modality in a clinical office setting. *Medical Psychotherapy*, 3, 57-68.
25. Tansey, M.A. (1993). Ten year stability of EEG biofeedback results for a hyperactive boy who failed fourth grade perceptually impaired class. *Biofeedback and Self Regulation*. 18 (1) 33-44.
26. Wolraich, M.L. & Baumgaertel, A. (1997). The practical aspects of diagnosing and managing children with attention deficit hyperactivity disorder. *Clinical Paediatrics*, 36, 497-504

## **EEG BIOFEEDBACK FOR LEARNING DISABILITIES**

1. Carter, J.L. & Russell H.L. (1981). Changes in verbal –performance IQ discrepancy scores after left hemisphere EEG frequency control training: A pilot report. *American Journal of Clinical Biofeedback*.4 (1) 66-67.
2. Cunningham, M.D. & Murphy, P.J. (1981). Clinical effects of bilateral EEG biofeedback on verbal, visual-spatial & creative skills in learning disabled male adolescents. *Journal of Learning Disabilities*. 1(4), 204-208.
3. Linden, M., Habib. T., & Radojevic, V. (1996). A controlled study of the effects of EEG biofeedback on cognition and behaviour of children with attention deficit disorder and learning disabilities. *Biofeedback & Self-Regulation*, 21, 35-49
4. Lubar, B., Calhoun, P. et al. (1985). *Learning Disabilities*, 18(7), 403ff.
5. Lubar, J.F. (1985). EEG biofeedback and learning disabilities. *Theory into Practice*, 24(2), 106-111.
6. Tansey M.A., Tansey. J.A.. & Tachiki, K.H. (1994). Electroencephalographic cartography of conscious states. *International Journal of Neuroscienc*, 77, 89-98.
7. Tansey, M.A. (1984). EEG sensorimotor rhythm biofeedback training: Some effects on the neurologic precursors of learning disabilities. *International Journal of Psychophysiology*, 1(2), 163-177.
8. Tansey, M.A. (1991). Wechsler (WISC-R) changes following treatment of learning disabilities via EEG biofeedback training in a private practice setting. *Australian Journal of Psychology*, 43(3), 147-153.
9. Tansey, M.A. (1993). Ten-year stability of EEG biofeedback results for a hyperactive boy who failed fourth grade perceptually impaired class. *Biofeedback & Self Regulation*, 18 (1), 33-44.
10. Tansey, M.A., & Bruner, R.L. (1983). EMG and EEG biofeedback training in the treatment of a 10-year-old hyperactive boy with a developmental reading disorder. *Biofeedback & Self Regulation*, 8(1), 25-37.
11. Tansey, Michael A. (1990). Righting the rhythms of reason: EEG biofeedback training as a therapeutic modality in a clinical office setting. *Medical Psychotherapy: An International Journal*, 3, 57-68.
12. Tansey. M.A. (1985). Brainwave signatures--an index reflective of the brain's functional neuroanatomy: Further findings on the effect of EEG sensorimotor rhythm biofeedback training on the neurologic precursors of learning disabilities. *International Journal of Psychophysiology*, 3(2), 85 -99