



Journal of Neurotherapy: Investigations in Neuromodulation, Neurofeedback and Applied Neuroscience

News from Other Journals and Websites

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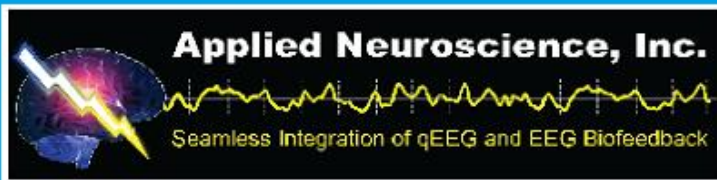
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NEWS FROM OTHER JOURNALS AND WEBSITES

David A. Kaiser, PhD, Editor

This section surveys journal papers and other materials relevant to neurotherapists and clinical neuroscientists who haven't always the time to discover these works on their own.

NEUROTHERAPY

Beauregard, M., & Levesque, J. (2006). Functional magnetic resonance imaging investigation of the effects of neurofeedback training on the neural bases of selective attention and response inhibition in children with attention-deficit/hyperactivity disorder. *Applied Psychophysiology and Biofeedback, 31*, 3-20.

Neurofeedback training normalizes functions of areas of the brain involved in selective attention and response inhibition in ADHD children.

Egner, T., & Serman, M. B. (2006). Neurofeedback treatment of epilepsy: From basic rationale to practical application. *Expert Review of Neurotherapeutics, 6*, 247-257.

Provides rationale and practice for using sensorimotor rhythm conditioning to reduce susceptibility of seizures.

Fox, D. J., Tharp, D. F., & Fox, L. C. (2005). Neurofeedback: An alternative and efficacious treatment for attention deficit hyperactivity disorder. *Applied Psychophysiology and Biofeedback, 30*, 365-373.

Illustrates treatment modalities and compares them to neurofeedback for ADHD.

Kennedy, M. R., & Coelho, C. (2005). Self-regulation after traumatic brain injury: A framework for intervention of memory and problem solving. *Seminars in Speech and Language, 26*, 242-255.

Summary of intervention literature and principles of self-monitoring.

Vernon, D. J. (2005). Can neurofeedback training enhance performance? An evaluation of the evidence with implications for future research. *Applied Psychophysiology and Biofeedback, 30*, 347-364.

Rationale for using neurofeedback to train individuals for peak performance.

ELECTROENCEPHALOGRAPHY

Accortt, E. E., & Allen, J. J. (2006). Frontal EEG asymmetry and premenstrual dysphoric symptomatology. *Journal of Abnormal Psychology, 115*, 179-184.

Low premenstrual dysphoric symptom report was associated with greater left frontal activity at rest than women reporting high degree of symptoms.

Alper, K. R., John, E. R., Brodie, J., Gunther, W., Daruwala, R., & Prichep, L. S. (2006). Correlation of PET and qEEG in normal subjects. *Psychiatry Research, 146*, 271-282.

Thalamic metabolism was negatively correlated with alpha power and medial frontal cortical metabolism was positively correlated with delta EEG power.

Armitage, R., Hoffmann, R., Emslie, G., Rintelmann, J., & Robert, J. (2006). Sleep microarchitecture in childhood and adolescent depression: Temporal coherence. *Clinical EEG and Neuroscience*, *37*, 1-9.

Adolescent depression is associated with reduced EEG coherences of sleep EEG rhythms.

Coutin-Churchman, P., Moreno, R., Anez, Y., & Vergara, F. (2006). Clinical correlates of quantitative EEG alterations in alcoholic patients. *Clinical Neurophysiology*, *117*, 740-751.

Decreased slow frequency power may indicate brain atrophy or damage in chronic alcoholics and beta increases may suggest cortical hyperexcitability.

Diane Santesso, L., Reker, D. L., Schmidt, L. A., & Segalowitz, S. J. (2006). Frontal electroencephalogram activation asymmetry, emotional intelligence, and externalizing behaviors in 10-year-old children. *Child Psychiatry and Human Development*, *36*, 311-328.

Emotional intelligence and frontal EEG asymmetry at rest are independent predictors of child externalizing behaviors.

Goncalves, S. I., de Munck, J. C., Pouwels, P. J., Schoonhoven, R., Kuijter, J. P., Maurits, N. M., et al. (2006). Correlating the alpha rhythm to BOLD using simultaneous EEG/fMRI: Inter-subject variability. *Neuroimage*, *30*, 203-213.

Inter-subject variability of the resting state needs to be addressed in functional neuroimaging.

Hagemann, D., Hewig, J., Seifert, J., Naumann, E., & Bartussek, D. (2005). The latent state-trait structure of resting EEG asymmetry: Replication and extension. *Psychophysiology*, *42*, 740-752.

Nearly half of the variance of anterior asymmetry was from individual differences on a latent trait, which suggests both state and trait aspects of EEG frontal asymmetries.

Higashima, M., Takeda, T., Kikuchi, M., Nagasawa, T., & Koshino, Y. (2006). Functional connectivity between hemispheres and schizophrenic symptoms: A longitudinal study of interhemispheric EEG coherence in patients with acute exacerbations of schizophrenia. *Clinical EEG and Neuroscience*, *37*, 10-15.

Increases in frontal beta coherence were associated with improvements in treating positive symptoms of schizophrenia.

Jiang, Z. Y., & Zheng, L. L. (2006). Inter- and intra-hemispheric EEG coherence in patients with mild cognitive impairment at rest and during working memory task. *Journal of Zhejiang University*, *7*, 357-364.

EEG coherences in all bands were higher in a mild cognitive impairment group compared to controls during effort, but similar during rest.

Murakami, S., & Okada, Y. (2006). Contributions of principal neocortical neurons to magnetoencephalography (MEG) and electroencephalography (EEG) signals. *Journal of Physiology*, Epub.

Pyramidal cell burst discharge may be detectable with scalp EEG when as few as 10,000 neurons are synchronously active.

Orekhova, E. V., Stroganova, T. A., Posikera, I. N., & Elam, M. (2006). EEG theta rhythm in infants and preschool children. *Clinical Neurophysiology*, *117*, 1047-1062.

Theta frequency changed from 3.6-5.6 Hz in infants to 4-8 Hz in children and is related to behavioral performance involving substantial attentional and emotional loads.

Pogarell, O., Juckel, G., Mavrogiorgou, P., Mulert, C., Folkerts, M., Hauke, W., et al. (2006). Symptom-specific EEG power correlations in patients with obsessive-compulsive disorder. *International Journal of Psychophysiology*, Epub.

OCD patients show slower overall frequency, mostly in frontal sites, and EEG power correlated with scales measures of obsessions and compulsions.

Sauseng, P., Klimesch, W., Freunberger, R., Pecherstorfer, T., Hanslmayr, S., & Doppelmayr, M. (2006). Relevance of EEG alpha and theta oscillations during task switching. *Experimental Brain Research*, *170*, 295-301.

Stronger theta coupling was found between prefrontal and posterior regions during switching tasks.

Sauseng, P., Klimesch, W., Stadler, W., Schabus, M., Doppelmayr, M., Hanslmayr, S., et al. (2005). A shift of visual spatial attention is selectively associated with human EEG alpha activity. *European Journal of Neuroscience*, 22, 2917-2926.

Anticipatory attention effect in EEG alpha magnitude at parieto-occipital electrode sites was found during an attention task.

Schutter, D. J., Leitner, C., Kenemans, J. L., & van Honk, J. (2006). Electrophysiological correlates of cortico-subcortical interaction: A cross-frequency spectral EEG analysis. *Clinical Neurophysiology*, 117, 381-387.

Reduced slow wave activity was associated with coupling between slow and fast frequency EEG.

Stern, J., Jeanmonod, D., & Sarnthein, J. (2006). Persistent EEG overactivation in the cortical pain matrix of neurogenic pain patients. *Neuroimage*, 31, 721731.

Evidence of thalamocortical dysrhythmia in chronic neurogenic pain.

Tinguely, G., Finelli, L. A., Landolt, H. P., Borbely, A. A., & Achermann, P. (2006). Functional EEG topography in sleep and waking: State-dependent and state-independent features. *Neuroimage*, Epub.

Sleep deprivation enhances EEG power in delta and theta, regardless of task.

Yang, C., & Winkelman, J. W. (2006). Clinical significance of sleep EEG abnormalities in chronic schizophrenia. *Schizophrenia Research*, 82, 251-260.

Chronic undifferentiated schizophrenics suffer from disturbances in sleep continuity and slow wave sleep.

CLINICAL NEUROSCIENCE

Anderson, V., Catroppa, C., Morse, S., Haritou, F., & Rosenfeld, J. (2005). Functional plasticity or vulnerability after early brain injury? *Pediatrics*, 116, 1374-1382.

Younger children do not recovery from severe early brain injury as well as older children, which goes against previous ideas.

Baron-Cohen, S., Knickmeyer, R. C., & Belmonte, M. K. (2005). Sex differences in the brain: Implications for explaining autism. *Science*, 310, 819-823.

Implications for explaining autism. Extreme male brain theory with specific aspects of autistic neuroanatomy.

Ben Shalom, D., Mostofsky, S. H., Hazlett, R. L., Goldberg, M. C., Landa, R. J., Faraon, Y., et al. (2006). Normal physiological emotions but differences in expression of conscious feelings in children with high-functioning autism. *Journal of Autism and Developmental Disorders*, 36, 395-400.

Socio-emotional impairments in autism may be related to perceptual or expression deficits of conscious feelings.

Butefisch, C. M., Kleiser, R., & Seitz, R. J. (2006). Post-lesional cerebral reorganisation: Evidence from functional neuroimaging and transcranial magnetic stimulation. *Journal of Physiology Paris*, 99, 437-454.

Functional neuroimaging and transcranial magnetic stimulation were used to assess post-lesional brain plasticity.

Dapretto, M., Davies, M. S., Pfeifer, J. H., Scott, A. A., Sigman, M., Bookheimer, S. Y., et al. (2006). Understanding emotions in others: Mirror neuron dysfunction in children with autism spectrum disorders. *Nature Neuroscience*, 9, 28-30.

Children with autism showed no mirror neuron activity in inferior frontal gyrus (pars opercularis) while imitating and observing emotional expressions despite normal task performance.

De Raedt, R. (2006). Does neuroscience hold promise for the further development of behavior therapy? The case of emotional change after exposure in anxiety and depression. *Scandinavian Journal of Psychology*, 47, 225-236.

Integration of biological and psychological models are extremely important for treating many disorders.

Forbes, E. E., Shaw, D. S., Fox, N. A., Cohn, J. F., Silk, J. S., & Kovacs, M. (2006). Maternal depression, child frontal asymmetry, and child affective behavior as factors in child behavior problems. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *47*, 79-87.

Childhood-onset depression children exhibited left frontal asymmetry associated with both anxious/depressed and aggressive child problems.

Hadjikhani, N., Joseph, R. M., Snyder, J., & Tager-Flusberg, H. (2005). Anatomical differences in the mirror neuron system and social cognition network in Autism. *Cerebral Cortex*, Epub.

Cortical thinning of the mirror neuron system and other areas involved in emotion recognition and social cognition is observed in autism.

Krain, A. L., & Castellanos, F. X. (2006). Brain development and ADHD. *Clinical Psychology Review*, Epub.

Reviews structural MRI imaging of ADHD. Differences in prefrontal cortex, basal ganglia, corpus callosum, and cerebellum have been reported.

Li, C. S., Kemp, K., Milivojevic, V., & Sinha, R. (2005). Neuroimaging study of sex differences in the neuropathology of cocaine abuse. *Gender Medicine*, *2*, 174-182.

Gender differences were found in drug cue and stress trials, with men showing different activation patterns during drug cues and women during stress.

Rocca, M. A., & Filippi, M. (2006). Functional MRI to study brain plasticity in clinical neurology. *Neurological Sciences*, *27*, S24-26.

Exhaustion of adaptive properties of cerebral cortex may be responsible for 'fixed' neurological deficits.

Silbert, L. C., Nelson, C., Holman, S., Eaton, R., Oken, B. S., Lou, J. S., et al. (2006). Cortical excitability and age-related volumetric MRI changes. *Clinical Neurophysiology*, *117*, 1029-1036.

Age-associated MRI changes correspond with age-related increases in cortical excitability.

Strehl, U., Trevorrow, T., Veit, R., Hinterberger, T., Kotchoubey, B., Erb, M., et al. (2006). Deactivation of brain areas during self-regulation of slow cortical potentials in seizure patients. *Applied Psychophysiology and Biofeedback*, Epub.

Decreased seizure frequency from this form of neurofeedback training may be due to inhibition in cortical areas proximal to active electrodes, frontal cortex, and thalamus.

Tucha, O., Prell, S., Mecklinger, L., Bormann-Kischkel, C., Kubber, S., Linder, M., et al. (2006). Effects of methylphenidate on multiple components of attention in children with attention deficit hyperactivity disorder. *Psychopharmacology (Berl)*, *185*, 315-326.

Children with ADHD on methylphenidate treatment continue to exhibit specific serious deficits in components of attention.

Venneman, S., Leuchter, A., Bartzokis, G., Beckson, M., Simon, S. L., Schaefer, M., et al. (2006). Variation in neurophysiological function and evidence of quantitative electroencephalogram discordance: Predicting cocaine-dependent treatment attrition. *Journal of Neuropsychiatry and Clinical Neurosciences*, *18*, 208-216.

Concordant (high perfusion correlate) patients had much higher successful treatment completion rate than discordant patients.

Wang, J., Rao, H., Wetmore, G. S., Furlan, P. M., Korczykowski, M., Dinges, D. F., et al. (2005). Perfusion functional MRI reveals cerebral blood flow pattern under psychological stress. *Proceedings of the National Academy of Sciences USA*, *102*, 17804-17809.

Psychological stress induces negative emotion and vigilance. The ventral right prefrontal cortex is central to the stress response.

Waschbusch, D. A., & King, S. (2006). Should sex-specific norms be used to assess attention-deficit/hyperactivity disorder or oppositional defiant disorder? *Journal of Consulting and Clinical Psychology*, *74*, 179-185.

Authors argue for use of sex-specific norms for ADHD and ODD to detect marginal girls who would otherwise not be diagnosed, but are impaired.

Wilke, M., Lidzba, K., Staudt, M., Buchenau, K., Grodd, W., & Krageloh-Mann, I. (2006). An fMRI task battery for assessing hemispheric language dominance in children. *Neuroimage*, Epub.

Techniques to assess hemispheric dominance for language in children, to identify pathological language organization.

Wilson, J. J., & Levin, F. R. (2005). Attention-deficit/hyperactivity disorder and early-onset substance use disorders. *Journal of Child and Adolescent Psychopharmacology*, 15, 751-763.

Treating ADHD during childhood may prevent the development of substance use disorder.

Zhu, C. Z., Zang, Y. F., Liang, M., Tian, L. X., He, Y., Li, X. B., et al. (2005). Discriminative analysis of brain function at resting-state for attention-deficit/hyperactivity disorder. *Medical Image Computing and Computer-Assisted Intervention*, 8, 468-475.

Abnormalities in prefrontal cortex and anterior cingulate cortex, along with other areas, discriminated the ADHD brain from others.

ONLINE RESOURCES

Wikipedia, the free encyclopedia that anyone can edit, with 1 million-plus articles in English.
http://en.wikipedia.org/wiki/Main_Page

PsycCareers—Searchable job listings relevant to psychology
<http://www.psyccareers.com/>

Higher Ed Jobs—Academic and non-academic job listings in various fields
<http://www.higheredjobs.com/>

Annenberg Media has placed numerous educational series online in their entirety
<http://www.learner.org/resources/series138.htm>
—Discovering Psychology—Classic intro psych series

<http://www.learner.org/resources/series60.html>
—World of Abnormal Psychology

<http://www.learner.org/resources/series65.html>
—Against All Odds; Inside Statistics

<http://www.learner.org/resources/series150.html>
—The Mind: Teaching modules

Google Video archives

<http://video.google.com/videoplay?docid=6586235597476141009&q=feynman&pl=true>

(Example of Richard Feynman's "The pleasure of finding things out")

ERRATUM

In the *Journal of Neurotherapy*, Volume 10, Issue 1, an error occurred in the article entitled “LORETA: An Attempt at a Simple Answer to a Complex Controversy” by Daniel A. Hoffman, MD. The subtitle “Patient B–Left Epilepsy” should have been placed on page 64 between Figures 6 and 7.

The Haworth Press sincerely regrets this error and any inconvenience it may have caused.