



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

## News from Other Journals and Websites

Martijn Arns Senior Editor MSc  
Published online: 26 Feb 2010.

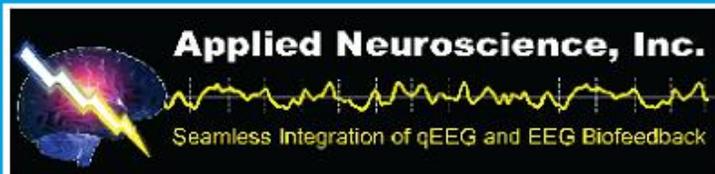
**To cite this article:** Martijn Arns Senior Editor MSc (2010) News from Other Journals and Websites, Journal of Neurotherapy: Investigations in Neuromodulation, Neurofeedback and Applied Neuroscience, 14:1, 61-64, DOI: [10.1080/10874200903543898](https://doi.org/10.1080/10874200903543898)

**To link to this article:** <http://dx.doi.org/10.1080/10874200903543898>

PLEASE SCROLL DOWN FOR ARTICLE

© International Society for Neurofeedback and Research (ISNR), all rights reserved. This article (the “Article”) may be accessed online from ISNR at no charge. The Article may be viewed online, stored in electronic or physical form, or archived for research, teaching, and private study purposes. The Article may be archived in public libraries or university libraries at the direction of said public library or university library. Any other reproduction of the Article for redistribution, sale, resale, loan, sublicensing, systematic supply, or other distribution, including both physical and electronic reproduction for such purposes, is expressly forbidden. Preparing or reproducing derivative works of this article is expressly forbidden. ISNR makes no representation or warranty as to the accuracy or completeness of any content in the Article. From 1995 to 2013 the *Journal of Neurotherapy* was the official publication of ISNR ([www.isnr.org](http://www.isnr.org)); on April 27, 2016 ISNR acquired the journal from Taylor & Francis Group, LLC. In 2014, ISNR established its official open-access journal *NeuroRegulation* (ISSN: 2373-0587; [www.neuroregulation.org](http://www.neuroregulation.org)).

THIS OPEN-ACCESS CONTENT MADE POSSIBLE BY THESE GENEROUS SPONSORS



---

## NEWS FROM OTHER JOURNALS AND WEBSITES

---

Martijn Arns, MSc, Senior Editor

In the following section, interesting new recently published articles are summarized. The articles are mainly from the broad area of Applied Neurosciences with a focus on neurofeedback, brain computer interface, quantitative EEG, and repetitive transcranial magnetic stimulation. These are the articles, which could be found from August 2009 to December 1, 2009.

Begić, D., Mahnik-Milos, M., & Grubisin, J. (2009). EEG characteristics in depression, “negative” and “positive” schizophrenia. *Psychiatria Danubina*, 21(4), 579–584.

QEEG differences between “positive” and “negative” symptoms of schizophrenia and depression are reported in a group of 55 patients.

Breteler, M. H., Arns, M., Peters, S., Giepmans, I., & Verhoeven, L. (2010). Improvements in spelling after QEEG-based neurofeedback in dyslexia: A randomized controlled treatment study. *Applied Psychophysiology and Biofeedback*, 35, 5–11.

QEEG-based neurofeedback led to improvements in spelling but not in improvements in reading skills in dyslexia as compared to a waiting-list control group.

Coben, R., Linden, M., & Myers, T. E. (2010). Neurofeedback for autistic spectrum disorder: A review of the literature. *Applied Psychophysiology and Biofeedback*, 35, 83–105.

A review on the use of neurofeedback in autistic spectrum disorders

Coben, R., & Myers, T. E. (2010). The relative efficacy of connectivity guided and

symptom based EEG biofeedback for autistic disorders. *Applied Psychophysiology and Biofeedback*, 35, 13–23.

QEEG connectivity guided neurofeedback showed better results in the treatment of autism as compared to a symptom-based approach.

Cortoos, A., De Valck, E., Arns, M., Breteler, M. H., & Cluydts, R. (2009). An exploratory study on the effects of tele-neurofeedback and tele-biofeedback on objective and subjective sleep in patients with primary insomnia. *Applied Psychophysiology and Biofeedback*. Advance online publication. doi:10.1007/s10484-009-9116-z

A randomized controlled trial comparing tele-neurofeedback and tele-biofeedback (EMG biofeedback) demonstrating that total sleep time only increased after neurofeedback.

Dempster, T., & Vernon, D. (2009). Identifying indices of learning for alpha neurofeedback training. *Applied Psychophysiology and Biofeedback*, 34, 309–318.

Comparing three different measures (amplitude, percent time, and integrated alpha) as a valid measure for showing learning effects.

Domschke, K., Stevens, S., Pfleiderer, B., & Gerlach, A. L. (2010). Interoceptive sensitivity in anxiety and anxiety disorders: An overview and integration of neurobiological findings. *Clinical Psychology Review*, 30, 1–11.

Review and discussion of clinical and therapeutic implications of heartbeat perception on anxiety and anxiety disorders.

- Ewen, J. B., Kossoff, E. H., Crone, N. E., Lin, D. D., Lakshmanan, B. M., Ferenc, L. M., et al. (2009). Use of quantitative EEG in infants with port-wine birthmark to assess for sturge-weber brain involvement. *Clinical Neurophysiology: Official Journal of the International Federation of Clinical Neurophysiology*, 120(8), 1433–1440.
- Potential of the use of quantitative EEG to differentiate infants with symptomatic and asymptomatic birthmarks.
- Fitzgerald, P. B., McQueen, S., Herring, S., Hoy, K., Segrave, R., Kulkarni, J., et al. (2009). A study of the effectiveness of high-frequency left prefrontal cortex transcranial magnetic stimulation in major depression in patients who have not responded to right-sided stimulation. *Psychiatry Research*, 169(1), 12–15.
- Patients who failed to respond to right-sided 1 Hz repetitive transcranial magnetic stimulation did have a small but significant likelihood of responding to 5 or 10 Hz left frontal repetitive transcranial magnetic stimulation.
- Gawel, M., Zalewska, E., Szmidt-Sałkowska, E., & Kowalski, J. (2009). The value of quantitative EEG in differential diagnosis of Alzheimer's disease and subcortical vascular dementia. *Journal of the Neurological Sciences*, 283(1–2), 127–133.
- Visual EEG and QEEG to differentiate between Alzheimer's disease and subcortical vascular dementia.
- Gevensleben, H., Holl, B., Albrecht, B., Schlamp, D., Kratz, O., Studer, P., et al. (2009). Distinct EEG effects related to neurofeedback training in children with ADHD: A randomized controlled trial. *International Journal of Psychophysiology: Official Journal of the International Organization of Psychophysiology*, 74(2), 149–157.
- Decreased theta EEG after neurofeedback training: Pre- and post-QEEG results from a large multi-centre randomized controlled trial comparing both theta/beta neurofeedback and SCP-neurofeedback.
- Gschwandtner, U., Zimmermann, R., Pflueger, M. O., Riecher-Rössler, A., & Fuhr, P. (2009). Negative symptoms in neuroleptic-naïve patients with first-episode psychosis correlate with QEEG parameters. *Schizophrenia Research*, 115(2–3), 231–236.
- A correlation between negative symptoms with power in slow EEG frequency bands in neuroleptic-naïve first-episode patients.
- Guger, C., Daban, S., Sellers, E., Holzner, C., Krausz, G., Carabalona, R., et al. (2009). How many people are able to control a P300-based brain-computer interface (BCI)? *Neuroscience Letters*, 462(1), 94–98.
- Investigating the clinical applicability of a P300-based brain-computer interface (BCI). Eighty-nine percent were able to spell with 80 to 100% accuracy. P300-based BCI tends to be superior to motor imagery BCI.
- Haller, S., Birbaumer, N., & Veit, R. (2009). Real-Time fMRI feedback training may improve chronic tinnitus. *European Radiology*. Advance online publication. doi: 10.1007/s00330-009-1595-z
- Two out of six tinnitus patients benefited from real-time fMRI neurofeedback subjectively; auditory activation significantly decreased after fMRI neurofeedback.
- Hammond, D. C. (2010). The need for individualization in neurofeedback: Heterogeneity in QEEG patterns associated with diagnoses and symptoms. *Applied Psychophysiology and Biofeedback*, 35, 31–36.
- Discussion of the use of QEEG and the need for individualization in neurofeedback.
- Herbsman, T., Avery, D., Ramsey, D., Holtzheimer, P., Wadjik, C., Hardaway, F., et al. (2009). More lateral and anterior prefrontal coil location is associated with better repetitive transcranial magnetic stimulation antidepressant response. *Biological Psychiatry*, 66(5), 509–515.

More anterior and lateral repetitive transcranial magnetic stimulation was associated with better response in depression.

Johnson, J. S., Hamidi, M., & Postle, B. R. (2010). Using EEG to explore how rTMS produces its effects on behavior. *Brain Topography*, 22, 281–293.

Combined TMS-EEG study investigating the relation to behavior.

Johnston, S. J., Boehm, S. G., Healy, D., Goebel, R., & Linden, D. E. (2010). Neurofeedback: A promising tool for the self-regulation of emotion networks. *Neuroimage*, 49(1), 1066–1072.

Feasibility of fMRI neurofeedback to regulate emotion networks (insula, amygdala) showing a high degree of control.

Kang, J. I., Kim, C. H., Namkoong, K., Lee, C. I., & Kim, S. J. (2009). A randomized controlled study of sequentially applied repetitive transcranial magnetic stimulation in obsessive-compulsive disorder. *The Journal of Clinical Psychiatry*, 70, 1645–1651.

Repetitive transcranial magnetic stimulation of Right-DLPFC and supplementary motor area had no therapeutic effects on obsessive-compulsive disorder symptoms.

Keizer, A. W., Verment, R. S., & Hommel, B. (2009). Enhancing cognitive control through neurofeedback: A role of gamma-band activity in managing episodic retrieval. *Neuroimage*. Advance online publication. doi:10.1016/j.neuroimage.2009.11.023

Comparing neurofeedback to increase local gamma band activity (important for controlling and organizing memory traces of relational information in both short-term binding and long-term memory) and local beta band activity (facilitation of familiarity processes).

Keizer, A. W., Verschoor, M., Verment, R. S., & Hommel, B. (2009). The effect of gamma enhancing neurofeedback on the control of feature-bindings and intelligence measures. *International Journal of*

*Psychophysiology: Official Journal of the International Organization of Psychophysiology*. Advance online publication. doi:10.1016/j.ijpsycho.2009.10.011

Feasibility of gamma-band neurofeedback associated with a decrease in binding costs and increase in intelligence.

Kozel, F. A., Tian, F., Dhamne, S., Croarkin, P. E., McClintock, S. M., Elliott, A., et al. (2009). Using simultaneous repetitive transcranial magnetic stimulation/functional near infrared spectroscopy (rTMS/fNIRS) to measure brain activation and connectivity. *Neuroimage*, 47(4), 1177–1184.

Use of combined rTMS/fNIRS to study regional cortical brain activation and connectivity.

Leuchter, A. F., Cook, I. A., Gilmer, W. S., Marangell, L. B., Burgoyne, K. S., Howland, R. H., et al. (2009). Effectiveness of a quantitative electroencephalographic biomarker for predicting differential response or remission with escitalopram and bupropion in major depressive disorder. *Psychiatry Research*, 169(2), 132–138.

QEEG biomarkers did not provide a useful prediction of response to combination treatment (escitalopram and bupropion).

Leuchter, A. F., Cook, I. A., Marangell, L. B., Gilmer, W. S., Burgoyne, K. S., Howland, R. H., et al. (2009). Comparative effectiveness of biomarkers and clinical indicators for predicting outcomes of SSRI treatment in major depressive disorder: Results of the BRITE-MD study. *Psychiatry Research*, 169(2), 124–131.

The largest trial to date on the use of QEEG in predicting antidepressant treatment outcome: the BRITE-MD trial in 375 depressives. The ATR (cordance based measure) predicted both response and remission with 74% accuracy, whereas serum drug levels as well as 5HTTLPR and 5HT2a genetic polymorphisms did not predict treatment outcome. Only disadvantage: This measure was based on difference scores of baseline

- QEEG compared to QEEG *after 1 week* on-drug.
- Mantovani, A., Simpson, H. B., Fallon, B. A., Rossi, S., & Lisanby, S. H. (2009). Randomized sham-controlled trial of repetitive transcranial magnetic stimulation in treatment-resistant obsessive-compulsive disorder. *The International Journal of Neuropsychopharmacology/ Official Scientific Journal of the Collegium Internationale Neuropsychopharmacologicum (CINP)*, pp. 1–11.
- RCT demonstrating the potential of repetitive transcranial magnetic stimulation in the treatment of obsessive-compulsive disorder also restoring abnormal hemispheric laterality.
- Praharaj, S. K., Ram, D., & Arora, M. (2009). Efficacy of high frequency (rapid) suprathreshold repetitive transcranial magnetic stimulation of right prefrontal cortex in bipolar mania: A randomized sham controlled study. *Journal of Affective Disorders*, 117(3), 146–150.
- Clinical effects of high-frequency right prefrontal repetitive transcranial magnetic stimulation in bipolar affective disorder as an add-on therapy to standard pharmacotherapy.
- Rossi, S., Hallett, M., Rossini, P. M., Pascual-Leone, A., & The Safety of TMS Consensus Group. (2009). Safety, ethical considerations, and application guidelines for the use of transcranial magnetic stimulation in clinical practice and research. *Clinical Neurophysiology: Official Journal of the International Federation of Clinical Neurophysiology*, 120, 2008–2039.
- The standard work on safety issues regarding repetitive transcranial magnetic stimulation from the Safety of TMS Consensus Group.
- Rotenberg, A., Bae, E. H., Muller, P. A., Riviello, J. J., Bourgeois, B. F., Blum, A. S., et al. (2009). In-Session seizures during low-frequency repetitive transcranial magnetic stimulation in patients with epilepsy. *Epilepsy & Behavior: E&B*, 16(2), 353–355.
- No relation between 1 Hz repetitive transcranial magnetic stimulation and seizures in a sample of patients with intractable epilepsy.
- Schneider, F., Backes, V., & Mathiak, K. (2009). Brain imaging: On the way toward a therapeutic discipline. *European Archives of Psychiatry and Clinical Neuroscience*, 259(Suppl. 2), S143–147.
- Discussion of brain imaging as a therapeutic option including neurofeedback.
- Sokhadze, E., Baruth, J., Tasman, A., Mansoor, M., Ramaswamy, R., Sears, L., et al. (2009). Low-frequency repetitive transcranial magnetic stimulation (rTMS) affects event-related potential measures of novelty processing in autism. *Applied Psychophysiology and Biofeedback*. Advance online publication. doi:10.1007/s10484-009-9121-2
- Effects of low-frequency repetitive transcranial magnetic stimulation on event-related potentials in autism.
- Thompson, L., Thompson, M., & Reid, A. (2010). Neurofeedback outcomes in clients with Asperger's syndrome. *Applied Psychophysiology and Biofeedback*, 35, 63–81.
- Results of a large naturalistic study of neurofeedback on Asperger's syndrome ( $N = 150$ ) and Autistic Spectrum Disorder ( $N = 9$ ).