

Transcranial Neurofeedback for Neuroplasticity

Less is More, then, More is the Best

IASIS Micro Current Neurofeedback (MCN)

By Simon Yu, MD

The latest neuroscience proves that you can reboot and reprogram your brain based on a new understanding of neuroplasticity. Neuroplasticity, also referred to as brain plasticity, describes the brain's ability to repair itself by forming new neural wiring after stroke, damage, or traumatic brain injury (TBI). The damage may come from **physical, emotional, chemical, infection, or EMF** causes. Recommend reading: [*The Brain that Changes Itself: Stories of Personal Triumph from the Frontiers of Brain Science*](#) by Norman Doidge, MD (2007), and [*Rewire Your Brain*](#) by John B. Arden, PhD (2010).

Neuroplasticity was once thought by neurologists to manifest only during childhood; the latest studies prove that the brain can alter and change for higher functioning even in older adults. It allows neurons in the brain to compensate for injury and disease and to adjust their activities in response to new environmental situations. The brain is not as "hard wired" as we thought and the old dog can learn new tricks. Healing the brain utilizing Neuroplasticity can be applied to: traumatic brain injuries (TBI), rehabilitation post-stroke recovery, anxiety or depression, addiction, chronic pain, insomnia, memory loss, poor concentration, and autism, ADHD, OCD, and PTSD.

When you have brain injury, how can you rewire your brain based on the principles of neuroplasticity? First, start with the basics. This means healthy eating based on metabolic type, food allergy elimination diet, organic whole foods as much as possible, exercise, no smoking or drug abuse, positive attitude in life, and ability to relax. These are simple and yet, powerful daily reminders for all of us to practice.

Other recommendations include cognitive brain training by learning to play a new musical instrument or learning a new language, memory games, challenging brain activities like crosswords or Sudoku, non-dominant hand exercise, crawling exercise, learning to juggle, intermittent fasting, traveling, dancing, and getting plenty of good quality sleep. Rule out sleep apnea and support sleep with melatonin, etc. Change in thoughts through mindfulness meditation or prayer will create a "healing field" to rewire and reboot your brain. Brain cells that fire together, wire together, per [Hebb's Rule](#).

Is there a better, faster way? Brain mapping and neurofeedback training are of special interest to me. For more on the connection between the acupuncture meridian system and brain EEG activities, see my article, "[Medical Acupuncture on Gallbladder Meridian: Therapeutic Illusion on IBS and Autism](#)." For patients still having lingering, repeating, recurrent cognitive symptoms or chronic pain after rebalancing their meridian systems via detox, parasite and fungal treatment, nutritional support, and correcting dental/medical problems, they may need additional support to shut off the turned-on neural circuit involving the limbic brain. The limbic system is a set of structures in the deep brain that deal with emotions and memory. It also regulates the autonomic nervous system and endocrine function in response to emotions such as fear, anger, anxiety, or pain, and is involved in reinforcing behavior.

How to apply Brain Map qEEG and neurofeedback most effectively with my patients has been an ongoing learning process for me and my neurofeedback team, Dr. Kathryn Hackman, DO and Randall Schilling, technician. I wrote about my experience with neurofeedback therapy with a severely autistic boy in, "[Brain Mapping and Neurofeedback Training: Reboot your Old Brain as a New Improved Brain?](#)" He is now working part time, and will be graduating from high school at 20 years of age.

One of the drawbacks of neurofeedback is that to map out reliably the delta, theta, alpha, beta, high beta and gamma waves, especially in the deep region of the brain, requires advanced software and hospital-grade qEEG equipment. We have the BrainMaster 10/20 qEEG system, a leader in brain mapping in the neurofeedback field, and the response has been relatively slow, requiring 30-60 or more sessions to see changes. Most of my patients have medical problems with heavy metal toxicity, fungal mycotoxin exposure, parasites, or dental problems, and their responses have been slower than predicted. These problems should be addressed concurrently or ideally, *before* starting neurofeedback.

Prevention and Healing's neurofeedback team recently acquired and trained in a new generation of neurofeedback, [IASIS Micro Current Neurofeedback](#) (MCN), developed by Barry Bruder. IASIS MCN Micro Current Neurofeedback is 510K FDA Registered as a Class II Medical Device. It is classified as low intensity pulse transcranial electrical stimulation (LIP-tES), and uses 3 Pico-watts energy at 120 nanoseconds in duration at 150 millivolts in amplitude. Using this very low energy frequency, IASIS activates the glymph system (lymph system of the brain), restores abnormal slow delta waves, promotes the brain's metabolic clearance, and increases the cholinergic neurotransmitter pathway. IASIS MCN therapy uses the principle of Hormesis: less is more. Using low energy, Hormesis promotes a favorable biological response. It balances the sympathetic and parasympathetic system, down regulates the stressed Limbic system of the brain, and promotes "self-regulation" and enduring sustainability.

Most of the MCN research has been done on the West Coast at a VA hospital. Improvement between pre- and post-IASIS MCN therapy has been documented by Magnetoencephalography (MEG) by University of California at San Diego scientist, Professor Mingxiong Huang, Ph.D. There are also some remarkable testimonials from military and police personnel suffering from TBI/PTSD, and from patients with anxiety/depression, insomnia, memory loss, chronic pain, addiction and many behavioral problems.

Some of the most experienced neurofeedback practitioners noticed patients respond faster to standard neurofeedback therapy after applying IASIS micro-current therapy that reboots the parasympathetic nerve system and unsticks the jammed Limbic brain using 3 Pico-watts nano-energy. Less is more with IASIS transcranial neurofeedback. Neurofeedback should be done in the right sequence in conjunction with detox, parasite and fungal eradication, dental work, diet, etc. in that sense that more is not necessarily better. **But if done in the well-coordinated, right sequence, more is the best.** For more information, contact Barbara Shoykhet, RN, nursing supervisor in charge of IASIS at our clinic, Prevention and Healing, at 314-432-7802. ~ July 2020

Dr. Simon Yu, M.D. is a Board Certified Internist. He practices Internal Medicine with an emphasis on Integrative Medicine to use the best each has to offer. For more articles and information about integrative medicine, patient success stories, and Dr. Yu's new book, [Accidental Blow Up in Medicine: Battle Plan for Your Life](#), visit his website at www.preventionandhealing.com or call Prevention and Healing, Inc., 314-432-7802. You can also attend a free monthly presentation and discussion on Integrative Medicine at his office on the second Tuesday each month at 6:30 pm. Call to verify the date. Seating is limited, arrive early.



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