

Abstract:

Environmental toxins are known to have an effect on the physiology of the central nervous system. In some cases, genetics can predispose the effect of these toxic insults. In the words of Dr. Martha Herbert, Harvard Medical School Department of Neurology, "Genetics are the gun, toxins pull the trigger."

The effects of toxins on the brain mimic brain injury. Some of the effects include: frontal lobe dysregulation, which compromises cortical controls and executive functions, memory and emotional control, temporal lobe disruption affecting memory and/or speech and parietal and occipital lobe disruption affecting vision and physical sensation. In some cases, a difficult birth can predispose the negative effects of toxins.

The combination of genetics, difficult birth, and other brain injuries can result in the diagnosis of ADHD, Autism, Learning Disabilities, Lyme disease and behavior/emotional control problems. It is often the case that the connection between these diagnoses and toxic exposure is not made.

We will present Quantitative EEG images of assessment, research, correction, and the importance of a team approach to effective treatment of these disorders.

Significance:

At a time when those of us who are health care professions, patients, and parents, of those with neuropsychiatric and neurocognitive problems are well aware that the pharmaceutical industry has been unable to keep the promise of corrective care. Suicidal and homicidal behavior secondary to or in spite of psychotropic medication is becoming a serious problem especially here in the United States. Neurocognitive and neuropsychiatric disorders impair quality of life and productivity that burden families and communities.

The following topics will be presented with explanations, relevant research and case studies:

- I. QEEG assessment
- II. Effect of the following disorders on the brain as seen in QEEG imaging
 - a. Autism
 - b. ADHD
 - c. Lyme disease
 - d. Difficulty birth
 - e. Brain injury
 - f. Toxic exposure on the brain
- III. The effect on executive function and cortical controls
- IV. The effect on visual centers
- V. The effect on memory
- VI. The effect on speech and language
- VII. Research on efficacy of Neurofeedback treatment relevant to the disorders of environmental origin including:
 - a. Increased IQ
 - b. ADHD
 - c. Autism
 - d. Brain Injury
- VIII. Case studies with before and after treatment QEEG imaging and outcomes
- IX. The coordination of Neurofeedback treatment with Naturopathic treatments such as diet, nutrition, homeopathy, GI repair, and nutritional support of genetic abnormalities

There will not be a pharmacy discussion in this presentation.

Target audience: Medical practitioner, student, scientist, general audience, policy maker