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*The Brownback, Mason & Associates  
Neurofeedback System (BMANS)*

Stress Therapy Solutions  
Cleveland, OH  
May 14-17, 2009

Presenters:

**Thomas S. Brownback, M.Ed.**

Licensed Psychologist

BCIA Certified, Senior Fellow in Biofeedback

BCIA Certified, Fellow in EEG Biofeedback

QEEGCB Certified, Diplomate in QEEG

PPCB Certified, Diplomate in Peak Performance

**Linda Brownback, M.A.**

Licensed Psychologist

# The Brownback, Mason & Associates Neurofeedback System (BMANS)

## Presenters: Thomas S. Brownback and Linda Brownback

*Color coding designations to differentiate workshop learning activities:*

<b>BLACK print</b>	<b>didactic format</b>
<b>RED print</b>	<b>hands on format</b>
<b>BLUE print</b>	<b>concept integration format</b>
<b>GREEN print</b>	<b>application format</b>

*Thursday, May 14, 2009*

8:30 a.m. Overview of Workshop Goals with Attendee Input to Customize Content

9:00 a.m.

### **Secret to Our 95% plus Success Rate: The Brownback, Mason and Associates Neurofeedback System (BMANS)--A Success Rate That You Also Can Achieve**

- ∞ Functions, Pathways and EEG Frequencies at Each of the International 10-20 System Placements
- ∞ Neuropathologies (Dysfunctional: Microvoltages, Peak Frequencies, Asymmetries and Coherences) Associated with International 10-20 System Placements
- ∞ Neurodiagnostic Evaluation Procedure within an International 10-20 System Framework
- ∞ Indepth Analysis of the QEEG using Multiple Database and Non-Database Procedures for Various Neuropathologies
- ∞ Training Procedures Utilizing Fully Individualized 10-20 System Placement and Bandwidth Selection, Constantly Updated Spectral Analysis and Instant Display Screen Specificity
- ∞ Mastering Independent Neurofeedback Training...
- ∞ A Cognitive, Affective and Behavioral Checklist for Tracking Neurotherapy Progress
- ∞ The Bio-Psycho-Socio-Theological Cognitive Behavioral Framework--The Basics

10:00 a.m. Break

10:15 a.m.

#### **I. Functions, Pathways and EEG Frequencies at Each of the International 10-20 System Placements**

- A. EEG Frequencies (case histories = CH)
  1. Slow Waves and Fast Waves
  2. Slow Waves, Moderate Fast Waves and Hyper Fast Waves
  3. The BMA Eight Band Schema (application - CH)
  4. The Most Stable Neurodiagnostics in the Field of Neurofeedback (application - CH)

11:30 a.m. Break

11:45 a.m.

- B. Perspectives of the Brain
- C. Neuroanatomical Structures of the Brain
  1. Cerebral Cortex
  2. Limbic System
  3. Brain Stem
  4. Basal Ganglia
  5. Thalamus
  6. Fasciculi

*Thursday, May 14, 2009*

*1:00 p.m.* Lunch

*2:00 p.m.*

D. Neurophysiological Functions of the Brain

- 1. Thalamus (Pathways Through the Brain = PTB)  
(concept integration – PTB)
- 2. Fasciculi (concept integration – PTB)
- 3. Cerebral Cortex (concept integration – PTB)
  - a. Left Hemisphere (concept integration – PTB)
  - b. Right Hemisphere (concept integration – PTB)
  - c. Posterior (concept integration – PTB)
  - d. Anterior (concept integration – PTB)
  - e. Sensory Motor Strip (concept integration – PTB)

*3:00 p.m.* Break

*3:15 p.m.*

- F. Lobes of the cerebral cortex (raw sensory input, association areas for perception and comprehension)
- i Occipital Lobe (concept integration – PTB)
  - ii Temporal Lobe (concept integration – PTB)
  - iii Parietal Lobe (concept integration – PTB)
  - iv Frontal Lobe (concept integration – PTB)

*4:15 p.m.* Break

*4:30 p.m.*

- 4. Limbic System
  - a. Cingulate Gyrus-Midline, Deeper Structure (concept integration – PTB)
  - b. Hippocampus-Posterior Temporal, Deeper Structure (concept integration – PTB)
  - c. Amygdala-Anterior Temporal, Deeper Structure (concept integration – PTB)
  - d. Septal Nucleus-Deeper Structure (concept integration – PTB)
- 5. Brain Stem
- 6. Basal Ganglia
  - a. Caudate Nucleus (concept integration – PTB)
  - b. Putaman (concept integration – PTB)
  - c. Globus Pallidus (concept integration – PTB)

*5:30 p.m.* Dinner

*Friday, May 15, 2009*

8:30 a.m.

**II. Neuropathologies (Dysfunctional: Microvoltages, Peak Frequencies, Asymmetries and Coherences Associated with International 10-20 System Placements).**

- A. Attention Deficit Disorder Distractibility/Inattention (concept integration – PTB)
- B. Impulse Control Disorder (concept integration – PTB)
- C. Hyperactivity/Hypoactivity Disorder (concept integration – PTB)
- D. Depressive Disorders (concept integration – PTB)
- E. Obsessive Compulsive Disorder (concept integration – PTB)
- F. Oppositional Defiant Disorder (concept integration – PTB)
- G. Generalized Anxiety Disorder (concept integration – PTB)

10:00 a.m. Break

10:15 a.m.

- H. Addictions, involving but not limited to: (concept integration – PTB)
  - 1. Drugs (concept integration – PTB)
    - a. Depressants
    - b. Stimulants
  - 2. Eating Disorders (concept integration – PTB)
- I. Learning disorders (concept integration – PTB)
  - 1. Verbal (concept integration – PTB)
    - a. Receptive (concept integration – PTB)
    - b. Expressive (concept integration – PTB)
  - 2. Non-Verbal (concept integration – PTB)
  - 3. Math (concept integration – PTB)

11:30 a.m. Break

11:45 a.m.

- J. Sleep disorders
  - 1. Insomnia (concept integration – PTB)
  - 2. Hypersomnia (concept integration – PTB)
- K. Comprehending Social Cues disorders (concept integration – PTB)
- L. Tic disorders (concept integration – PTB)
  - 1. Motor (concept integration – PTB)
  - 2. Vocal (concept integration – PTB)
- M. Dissociative Identity Disorder

1:00 p.m. Lunch

2:00 p.m.

**III. The BMANS Neurodiagnostic Evaluation Procedure within a 10-20 System Framework**

- A. Overview of Procedure
- B. The Categories of Neuropathology
- C. The BMANS Neurodiagnostic Intake Questionnaires (Case Histories = CH)
  - 1. Client History
  - 2. Client Neurodiagnostic Questionnaire
  - 3. Client Support Person Neurodiagnostic Questionnaire

*Friday, May 15, 2009*

3:00 p.m. Break

3:15 p.m.

- D. The Intake Questionnaire Evaluation Summary Formats
  - 1. Neuropathology Adjusted Percentages by Brain Region Format (application - CH)
  - 2. Neuropathology Adjusted Percentages within a 10-20 System Format (application - CH)
- E. The Psychological and Educational Tests Evaluation Summary Formats
  - 1. Neuropathology Percentiles by Brain Region Format (application - CH)
  - 2. Neuropathology Percentiles within a 10-20 System Format (application - CH)
- F. CNC-1020 (application - CH)

4:15 p.m. Break

4:30 p.m.

**Hands On--Demonstration of the CNC 10-20**

*As a bonus, all attendees will receive a free use of the CNC 10-20 and the CTC 10-20.*

5:30 p.m. Dinner

7:00 – 8:30 p.m.

**IV. In-depth Analysis of the Quantitative Electroencephalograph using Multiple Database and Non-database Procedures for Various Neuropathologies**

- A. QEEG Concepts
  - 1. Contamination Of The Linked Ears Reference
  - 2. Linked Ear Reference Versus Laplacian Reference
  - 3. Absolute Power Versus Relative Power
  - 4. Recording Conditions
    - a. Eyes Closed
    - b. Eyes Open
    - c. Cognitive Challenge
- B. Loreta
- C. Databases
- D. Determine The Probability Of Involvement And Location Of Each Neuropathology Utilizing the CNC-1020 and Psychoeducational Testing
- E. Utilizing the CNC-1020 and Psychoeducational Testing In Conjunction With A Reference Data Base To Determine The Frequency Range For Each Neuropathology Involved
- F. Case History: In-depth Analysis: CNC-1020, Psychoeducational Testing, QEEG, and Database and Non-database Formats  
Matt - Depression

*Saturday, May 16, 2009*

8:30 a.m.

- G. Case History: In-depth Analysis: CNC-1020, Psychoeducational Testing, QEEG, And Database And Non-database Formats  
Trish - OCD
- H. Case History: Different Frequency Distributions for the Same Neuropathology  
Tom - ADD
- I. Case History: Map-Remap Comparison  
Matt

10:00 a.m. Break

10:15 a.m.

- J. **Hands On:** Choosing the Placements and the Band Widths for Each Neuropathology

11:15 a.m. Break

11:30 a.m.

- V. **Neurofeedback Training Procedures Utilizing Fully Customized 10-20 System Placement and Bandwidth Selections, Constantly Updated Spectral Analysis and Instant Display Screen Specificity**
  - A. How To Build Neurotherapy Training Files
    - 1. Constructing Frequency Bands For Spectral Analysis Interpretation
    - 2. Constructing Automatic Artifact Rejection Parameters
      - A. Eye Blink and Other Movements (application)
      - B. EMG (application)
    - 3. Constructing Audio Feedback and Percentage of Time Counter Thresholds Which Provide an Even Greater Sensitivity for Interpreting Training Success
    - 4. Constructing Customized Targeted Training Bands as Well as Training Band Percentages and Ratio Configurations
    - 5. Constructing Z-score Settings Files Utilizing the Above BMANS Features

1:00 p.m. Lunch

2:00 p.m.

- VI. **Mastering Independent Neurofeedback Training**
  - A. Teaching Clients How to Hook Themselves Up for Specific 10-20 System Placements and Exceptional Impedances
    - Hands On:**
      - Client Hook Up for Excellent Impedances:
        - 1. Preparing Ears
        - 2. BMANS Customized ECI Cap Preparation
        - 3. Using Quick Inserts
  - B. Clients Beginning Their Own Training Process (**hands On**)
    - 1. Obtaining Their Client Folder
    - 2. Determining Training Goals
  - C. Clients Ending Their Own Training Process (**hands On**)
    - 1. Interpreting Session Results
    - 2. Comparing Progress Across Sessions

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3:00 p.m. Break

3:15 p.m.

How to Conduct a Neurofeedback Training Session

- A. How to Adjust Thresholds for Audio Feedback and Percentage of Time Counters
  - 1. For Artifact Rejection
  - 2. For Targeted Training Band(s)
  - 3. For Z-score Training

4:15 p.m. Break

4:30 p.m.

- B. How to Track and Interpret Microvoltage and Z-score Changes for Single Session
  - 1. For Targeted Training Band(s) Microvoltage
  - 2. For Frequency Bands Spectral Analysis
  - 3. For Targeted Training Band(s) Percentage and Ratio
  - 4. For Artifact: Movement and EMG
  - 5. For Z-scores

5:30 p.m. Dinner

7:00 8:30 p.m.

- C. How to Track and Interpret Microvoltage and Z-score Changes Across Sessions
  - 1. For Targeted Training Band(s) Microvoltage
  - 2. For Frequency Bands Spectral Analysis
  - 3. For Targeted Training Band(s) Percentage and Ratio
  - 4. For Artifact: Movement and EMG
  - 5. For Z-scores

For demonstration purposes, BrainMaster equipment will be used.

*Sunday, May 17, 2009*

8:30 a.m.

**VII. A Cognitive, Affective And Behavioral Checklist For Tracking Neurotherapy Progress**  
**Hands On--Demonstration of the CTC 10-20**

9:30 a.m.

**VIII. The Bio-psycho-socio-theological Cognitive Behavioral Framework—The Basics**

- A. Biological
- B. Psychological

10:00 a.m. Break (*This extended break allows you time to check out of the hotel, if you are leaving today.*)

10:30 a.m.

- C. Social
- D. Theological/Spiritual (*This is adjusted to reflect the client's belief system.*)

11:00 a.m.

Motivation Techniques For Children And Adults

11:30 a.m. Break

11:45 a.m.

Putting It All Together: From Prospective Client Initial Contact To Successful Completion Of Neurotherapeutic Process

(*This section will include a discussion of insurance reimbursement issues; you will receive a copy of our handout that clients use with their insurance companies to receive the highest level of reimbursement.*)

1:00 p.m. Lunch

2:00 p.m.

Application of the BMANS Neurodiagnostic Process to QEEG's Brought By Workshop Attendees

(If you would like to bring a case study for review, you are encouraged to bring as many of the following neurodiagnostic components as possible):

1. Case Summary Of Presenting Problems And Client Background
2. All Psychoeducational And Continuous Performance Testing Results
3. Sample of the Raw Data
4. Brainmap
5. Neuroguide or Other Databases
  - a. Linked ears
    - i. Eyes Closed
    - ii. Eyes Open
  - b. Laplacian
    - i. Eyes Closed
    - ii. Eyes Open
6. Loreta

3:15 p.m.

It has been wonderful to be with you. We will pray for your safe trip home.

*This workshop provides up to 32 ½ hours of instruction and hands-on training.*