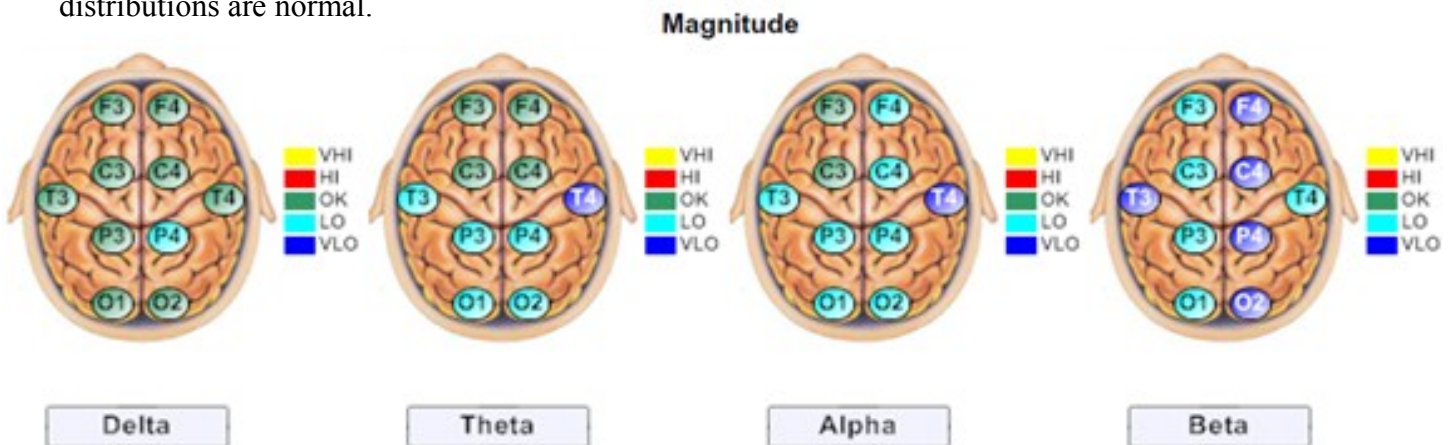


Neuro-Map Interpretation

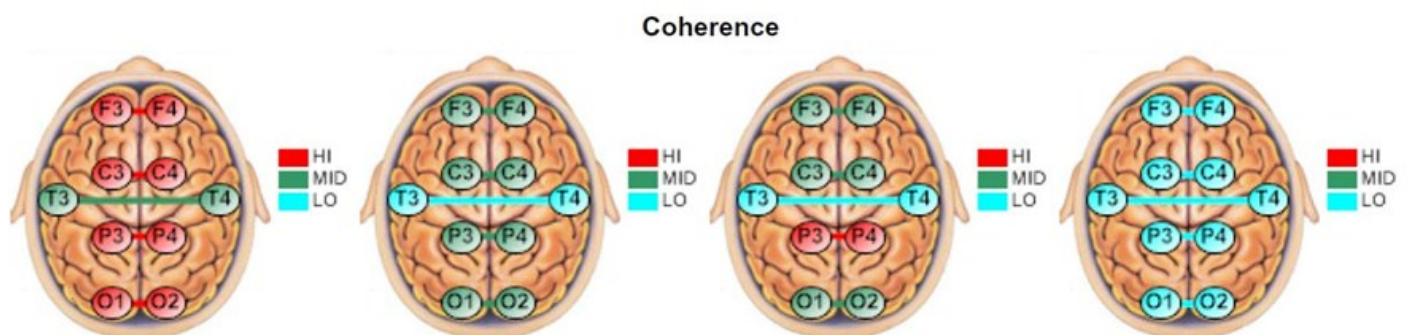
The NeuroMap report is derived from sequential sites (10 of them). They are homologous sites and the data is collected 2 sites at a time from front to back. The information is relatively artifact free because of artifact filters. It is then uploaded to the website. The website takes the averages and the information of all the different dimensions and transforms it into a map report. The map report has several basic sections. The first section looks at the technical dimensions of analysis of the EEG. The second half of the report looks at multivariate analysis and the cognitive and emotional information that can be derived from multivariate analysis. The 3rd. component of the report is protocol recommendations. The final portion of the report is supplement recommendations.

In the dimensions of analysis section (the first section) there are the dimensions of magnitude, coherence, dominant frequency, and asymmetry.

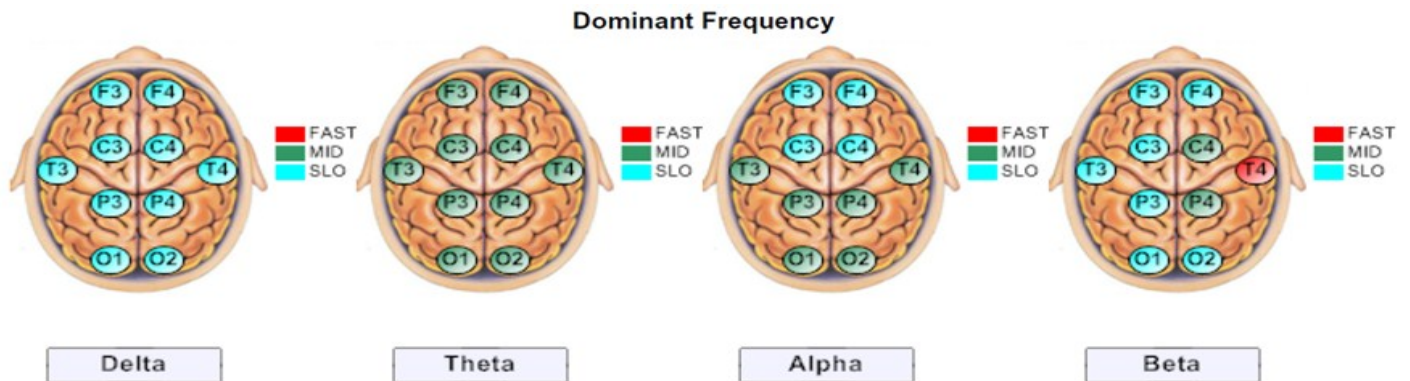
Magnitude section looks at the relation between frequencies in terms of magnitude. It looks at Delta, Theta, Alpha, and Beta. Those frequency relationships, in terms of magnitude provide information regarding the distribution of EEG. It tells us what distributions are abnormal and what distributions are normal.



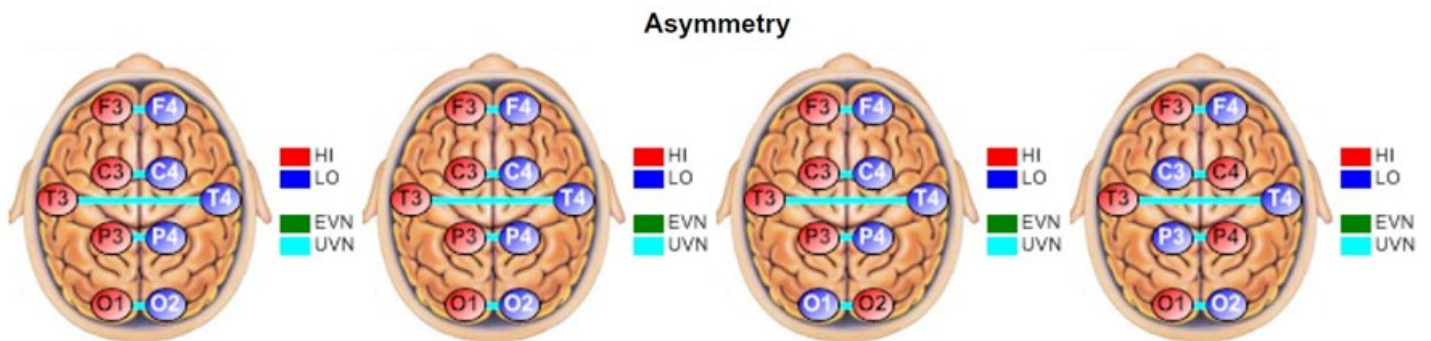
The coherence section looks at different areas of the brain in terms of homologous pairs from anterior to posterior. They look at how well those areas of the brain are communicating with each other across the corpus callosum. This provides us insight into how well networks in the brain are effectively communicating. Coherence is a measure of phase. It looks at how consistent the phase relationships are between any 2 given sites.



The next dimension of analysis is Dominant Frequency. Dominant Frequency looks at the average dominant frequency where the most power resides in what frequency band, (Delta, Theta, Alpha and Beta) respectively. Increases or a decrease in overall frequency in each of those component bands provides us with information about arousal level and function in the brain.



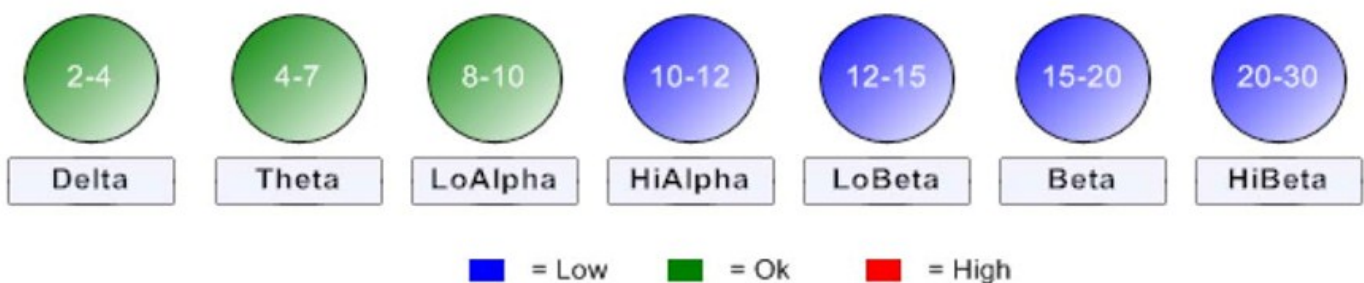
The fourth dimension of analysis is Symmetry. Symmetry looks at the relationship of magnitude in the left hemisphere versus the right hemisphere in terms of homologous pairs from front to back. Frequency dominance in either hemisphere in different component bands gives us information about arousal-



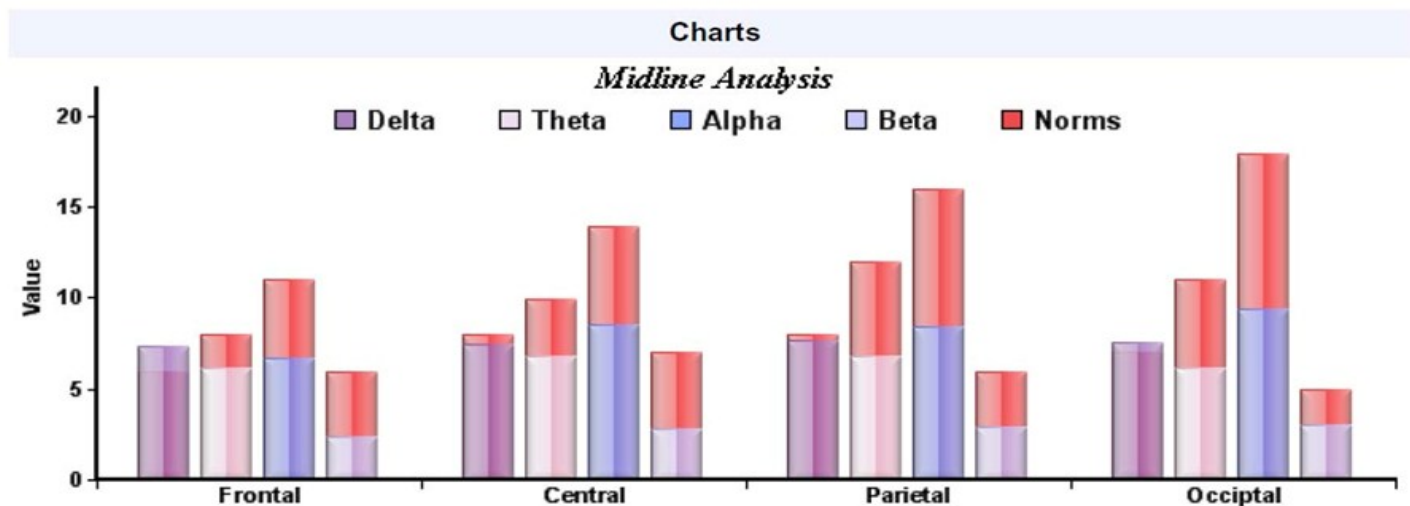
The technical analysis section also has two other dimensions of analysis. One is Component Bands and the other is Midline Analysis. The Subcomponent Bands Analysis provides a look at EEG in terms of clinically relevant frequency bands rather than one hertz bins. So subcomponent bands analysis aggregates one hertz bins into small component bands that give us information about the client's level of arousal and function across the entire spectrum

SubComponent Analysis

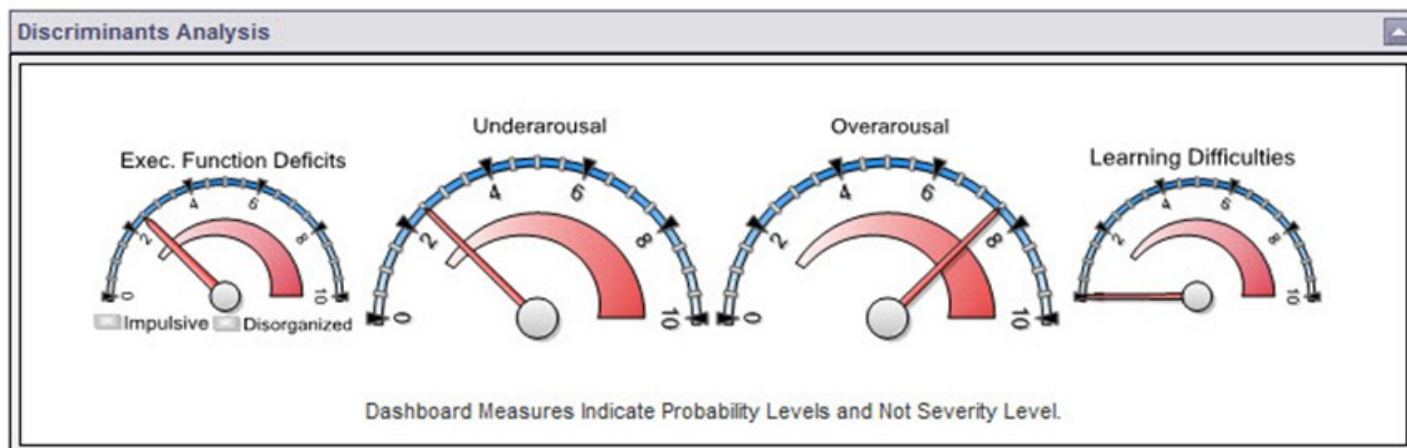
Lo/Hi Alpha valid only if 'Gamma' filter was set for 8-10hz and 'User' filter was set for 10-12hz when doing map



The Midline analysis shows the normative distribution along the midline of the brain and then compares it with the client's distribution along the midline of the brain. This provides us a secondary analysis that helps interpret magnitude analysis. It provides us with insights into magnitude that adjust for overall magnitude...if magnitude is too high or too low; it provides us insight into the relationship between component bands in those extreme cases. This concludes the Technical Section.



The Reports section provides 4 meters that give us the probability factors relating to the Discriminants named above each meter. One meter provides the probability of the presence of attention deficit as defined in classic terms of frontal slowing. The next meter provides us with measures of under arousal that are typically characterized as depression. The third meter provides probability levels of arousal measures that are typically characterized as anxiety. The fourth meter provides us with the probability levels regarding cognitive and learning difficulties. They are only probability measures they do not indicate severity.



There are two other dashboards. The first dashboard provides information regarding emotional dimensions of analysis, so it extrapolates from the EEG tech information; Magnitude, Coherence, Asymmetry and Dominant frequency. It extrapolates the emotional condition of the client in what various dimensions they might be experiencing with emotional distress. The dimensions are derived from the MRI research and so the dimension names correlate with neuro-psychology and neuro-psychiatry in the dimensions of analysis of the dis-

ciplines.

Emotional Analysis	
🟡 Physiological Anxiety	🟢 Hyperactive Attention
🟢 Obsessional Thinking	🟢 Dislike of Novelty
🟡 Hyper vigilance	🟡 Over control of Emotion
🟡 Worry	🟡 Emotional Rumination
🟡 Hyper-arousal	🔴 Irritability
🟡 Anger	🟢 Socially Cavalier
🟢 Emotionally Impulsive	🟢 Socially Inappropriate
🟢 Self-Deprecation	🟢 Passive Aggressiveness
🟢 Excessive Rationalization	🟢 Excessive Self-Concern
🟢 Victim Mentality	🟢 Lack of Emotional Self-Awareness

🟢 No Potential Match
 🟡 Potential Match
 🔴 Strong Potential Match

The second area of analyses is cognitive primarily. This analyses breaks cognitive function into 4 domains of frontal function, memory function, the frontal function is frontal executive, the frontal executive, memory, verbal processing and visual processing. Then there are two small sub domains of analysis which is mathematical ability and reading comprehension. That's derived from correlation with the WISK and WAIS from educational testing. The factors named in that dimension are also derived from the functional MRI research that's mentioned in the research in those fields. We try to aggregate them into categories that correlate and are friendly to the clinical situation. So at a glance you can see potentials for dis-function in executive function, memory function, verbal processing, and visual processing. These are the domains of analysis. This at a glance set of reports is a detailed evaluation that can often predict performance on the WISK. This section can provide correlations from the client's personal reports of distress. If the client fills out the cognitive and emotional survey in the website, that information will be cross correlated with a map output.

Cognitive Analysis			
Executive Processing		Memory Processing	
🔴 Attention		🟢 Declarative	
🟢 Categorization		🟢 Episodic	
🔴 Decision Making		🔴 Procedural	
🔴 Motivation		🟢 Short Term	
🟡 Problem Solving		🟡 Short Term (Digit Span)	
		🟢 Working	
Verbal Processing		Visual Processing	
🟡 Auditory Tone Processing		🔴 Auditory Verbal Sequencing	
🔴 Dialogue Organization		🔴 Event Sequencing	
🟡 Short Term Verbal		🔴 Facial Decoding & Recognition	
🟡 Tone Sequencing		🔴 Figure Memory	
🟡 Verbal Sequencing		🔴 Short Term Visual Memory	
		🔴 Spatial Sequence	
Math Comprehension		Reading Comprehension	
🟢 Math Comprehension		🟡 Reading Comprehension	

🟢 No Potential Match
 🟡 Potential Match
 🔴 Strong Potential Match
 🟡 Presenting Symptom Match

The next section of the report looks at protocols. It provides two separate protocols. These protocols are derived from a complicated set of algorithms. They look at every variable to determine the best course of action to treat your patient. None of those protocols will be available to Clear Mind unless they make special requests. The protocol report section for Clear Mind will provide Clear Mind protocols as a function of the technical information in the map, so people will be able to look at the protocols for each map and determine what will be the best Clear Mind protocol.

Suggested Two Channel Protocols					
Protocol Number	Left Protocol	Right Protocol	Entrainment Frequency	Color	Sites
5	8-12d 15-20u	8-12d 13-15u	14L-18R	Yellow	C3/C4
19	9-11d 15-20u	21-30d 9-11u	14L-17R	Blue	T3/T4

The next section gives supplement recommendations derived from research relating to the various disorders and what supplements are usually necessary to assist in recovering from those different disorders. Supplement provides a list that should be reviewed by a specialist in nutrition and should be cross validated with supplement testing or kinesiology.

Suggested Supplements
Vitamin B1
Vitamin B6
Vitamin B12
Theanine
Pantothenic Acid
Thiamine
Potassium
Calcium
Magnesium
DMAE
Omega-3's
Zinc

The last section is the metabolic category ranking. This analysis is designed look at typical client physiological symptoms and provide a probability report indicating key areas, such as liver or adrenals, likely to be involved. The symptoms are rated by the client on the basis of severity and frequency and ranked accordingly and then aggregated by statistical weighting into groups corresponding to best fit categories relating to metabolic functions. These categories can provide guidance in selecting a supplement or supplement formula to provide physiological support for the neurofeedback process. Supplements can also be selected from the supplement report based on the EEG distribution in combination with other testing procedures such as kinesi-ology or amino acid analysis. It is recommended that any score higher then 20 should be evaluated with more testing.

<u>Score</u>	<u>Metabolic Category</u>	<u>Symptoms Reported</u>
29	Pituitary	Headaches Insomnia
25	Blood Sugar	Headaches Nausea Dizziness Irritable with missed meals Eating relieves fatigue Caffeine Dependent
19	Gall Bladder	Vomiting Food intolerances Heartburn Indigestion Greasy food distress Dry or flaky skin
17	Adrenals	Headaches Insomnia Dizziness Non-restorative sleep
14	Gastrointestinal	Nausea Vomiting Food intolerances Heartburn Indigestion
10	Thyroid (hyper)	Insomnia Dizziness
6	Somatic	Headaches Back pain
6	Kidney	Headaches
5	Liver	Nausea Vomiting Muscle Aches & pains
5	Thyroid (hypo)	Cold all the time