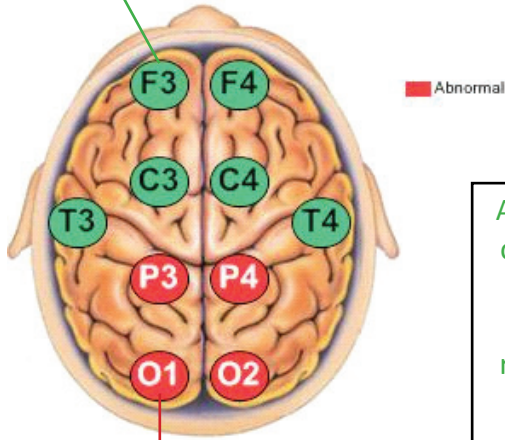


# QEEG Summary Assessment Report

## Client Map

Green = Normal



Red indicates brainwaves moving too fast

A comparison of the survey you fill out (CEC) to the results of the brain map (EEG)

## Cognitive Efficiency



CEC	EEG	Symptom
Moderate	High	Attention
Moderate	High	Verbal Processing
Moderate	High	Decision Making
Moderate	High	Visual Processing
Moderate	High	Motivation
High	Moderate	Reading Comprehension
High	Moderate	Problem Solving
Low	Low	Math Comprehension
High	High	Memory

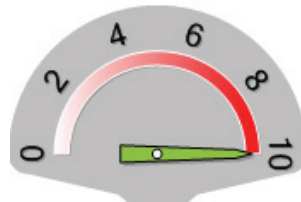
### Probability Legend

Low Moderate High

## Global - Underactivated



## Global - Inhibited



## Global - Overactivated



## Local - Neurogenic

CEC	EEG	Symptom
Moderate	High	Socially Inappropriate
High	High	Hyper-emotional

CEC	EEG	Symptom
Moderate	Moderate	Victim Mentality
High	Moderate	Excessive Self-concern
High	High	Rumination
Moderate	High	Anger
Moderate	High	Self-Deprecation
High	High	Irritability
Moderate	High	Passive Aggressive













CEC	EEG	Symptom
High	High	Worry
Moderate	High	Hyper-vigilant
High	Moderate	Obsessive Thinking
High	Moderate	Dislike of Change/Novelty
High	Moderate	Excessive Rationalization

### Probability Legend




Low Moderate High

# QEEG Summary Assessment Report

## Local - Psychogenic

CEC	EEG	Symptom	CEC	EEG	Symptom	CEC	EEG	Symptom
		Impulsive			Agitation			Restless
		Easily Distracted						
		Excessive Speech						
		Disorganized						

Probability Legend

 Low  Moderate  High

A list of recommended supplements to use in conjunction with neurofeedback training

## Supplements Analysis

### Suggested Supplements

Acetyl-L-carnatine

Calcium

Copper

DMAE

Magnesium

Omega-3s

Pantothenic Acid

Potassium

Theanine

Thiamine

Vitamin B1

Vitamin B12

Vitamin B6

Vitamin C

Vitamin E

Zinc

The next page offers a summary of the problems that can occur when certain brain functions are impacted by the brain running too fast or slow

# QEEG Summary Assessment Report

## Emotional

**Inhibited** - Individuals who show significant asymmetry with alpha higher in the left hemisphere than in the right hemisphere typically display many of the symptoms listed in the dashboard. Although other factors such as elevated alpha magnitude, slowed dominant frequency and increased coherence also contribute to these factors, the overall dominant feature is alpha asymmetry. Most individuals begin to develop progressively more negative moods and/or irritability when they are anxious and fearful for sustained periods of time and as they begin shifting into more inhibited and avoidant behaviors. This fearfulness and irritability translates into passive aggressive behavior, angry outbursts, spontaneous episodes of tearfulness and weeping that revolve around excessive self-concern and rumination regarding a sense of powerlessness to correct situations that generate feelings of being victimized or unjustly used. Self-deprecation in the form of negative self-talk and negative expectations regarding performance in social situations is common. In its worst form features of severe clinical depression emerge including social isolation, suicidal ideation, total loss of motivation and episodes of self-inflicted pain or selfharm.

**Overarousal** - Individuals displaying significant asymmetry with beta higher in the right hemisphere than the left hemisphere typically display symptoms of hyperarousal related to anxiety. The primary factors besides asymmetry that frequently contribute to this dimension of analysis include elevated beta magnitude, fast dominant frequency beta and excessive beta hypercoherence. Features typically associated with this dimension include excessive worry, hyper-vigilance, discomfort with transitions or changes, excessive rationalization and hyper-mentation, restlessness, agitation and diminished emotional self-awareness. Individuals may often feel emotionally numb or disconnected and in extreme forms may experience de-realization, dissociation from their body and panic attacks or tics. These features may often be accompanied by a wide range of physiological symptoms including headaches, insomnia, high blood pressure, and reduced immune function. Overarousal is typically a consequence of chronic demand on the CNS to respond to fear inducing events and social distress. Individuals tend to reduce their level of social interaction and their expression of personal emotion to protect themselves. Over time their physiological exhaustion can lead to episodes of inhibited behavior and social isolation resulting in moodiness, irritability and depression.

**Underarousal** - Underarousal refers to a neurophysiological state of diminished cognitive and emotional function characterized by a dominance of delta or theta globally or in broad regions of the brain. When focal abnormalities in these frequencies occur it may indicate lesions in the grey or white matter due to physical trauma such as TBI or stroke. Recent findings suggest that severe emotional trauma and hypersensitivity to some foods or allergens can enhance diffuse abnormalities in these frequency ranges as well. Frontal slowing in particular can result in impulsive behavior that tends to manifest physically in children and more socially or emotionally in adults. This often results in socially inappropriate behavior and hyperactivity. Other features related to this condition included excessive speech and hyper-emotionality. Individuals with excessive underarousal are frequently disorganized and easily distracted.

## Executive Processing

Executive processing involves aspects of cortical functioning critical for learning and developing skills for accurate and successful social interaction. Abilities related to conscious orienting and focusing, discriminating and evaluating, planning, generating novel adaptive behaviors while inhibiting previously unsuccessful behaviors and task execution are native to this dimension of processing. Regulating and filtering unwanted perceptual and emotional information is also a critical aspect of executive functioning.

## Verbal Processing

Verbal processing describes a category of skills, listed below, that lead to accurate comprehension and communication and that contribute to building strong social relationships leading to a sense of identity and fulfillment. Verbal processing is important for learning social norms and mores that define the meaning of circumstances and lead to effective problem solving behaviors. Deficits in verbal processing lead to the acquisition of faulty information that undermines effective categorization, decision making and problem solving. This limits the individual's ability to access social resources because of continual errors and social inaccuracy. The consequence is discouragement from unfulfilled expectations and frustration due to unnecessary conflict. This especially applies to aspects of academic performance that include paying attention, carrying out multi-step directions, processing information at an appropriate speed for a given task, difficulty with reading, comprehension, vocabulary and following rules leading to successful conduct in class.

## Memory Processing

Memory processing has many dimensions and it is not unusual for individuals to be strong in several dimensions and weak in only one or two. Many of these dimensions are critical for academic performance and the tasks and procedures relating to technical and professional job positions. Difficulties with memory can also lead to misunderstandings and conflicts in personal relations and intimate relationships. It is not unusual for individuals to have a mild deficit and not be aware of the deficit and how it is undermining their effort to conduct their daily life successfully. Learning new skills and remembering schedules is critical to activities of daily living. Common key dimensions which may not be optimally functioning are listed below.

## Visual Processing

Human beings are predominantly visual in their orientation to the world and this aspect of human perception is deeply reflected in how the brain processes information. Important visual information is embedded in every aspect of social life involving the correct identification of meaning related to color, texture, form, motion, and spatial awareness. Difficulties in these subtle areas of processing often go undetected by the individual and others relating to them. They can undermine all aspects of social interaction as well as psychological dimensions of self-efficacy and self-esteem. Performance in academics, sports, and careers in general is often critically affected by this dimension.