

BRAINVIEW

Advanced Diagnostic Testing

For Patients



Questions Or Get a Quote | SalesService@A2A-LOGISTICS.COM

www.a2a-logistics.com | 910-356-5500 | 1.800.493.3736

BrainView Cognitive Assessment

Assessing cognitive functioning is a new frontier in health care. Cognition is the way that the brain acquires knowledge and understanding of the world around us through the process of thought, experience and the senses. These functions are so essential to daily life that, assessing cognition should be a key priority for your primary care provider.

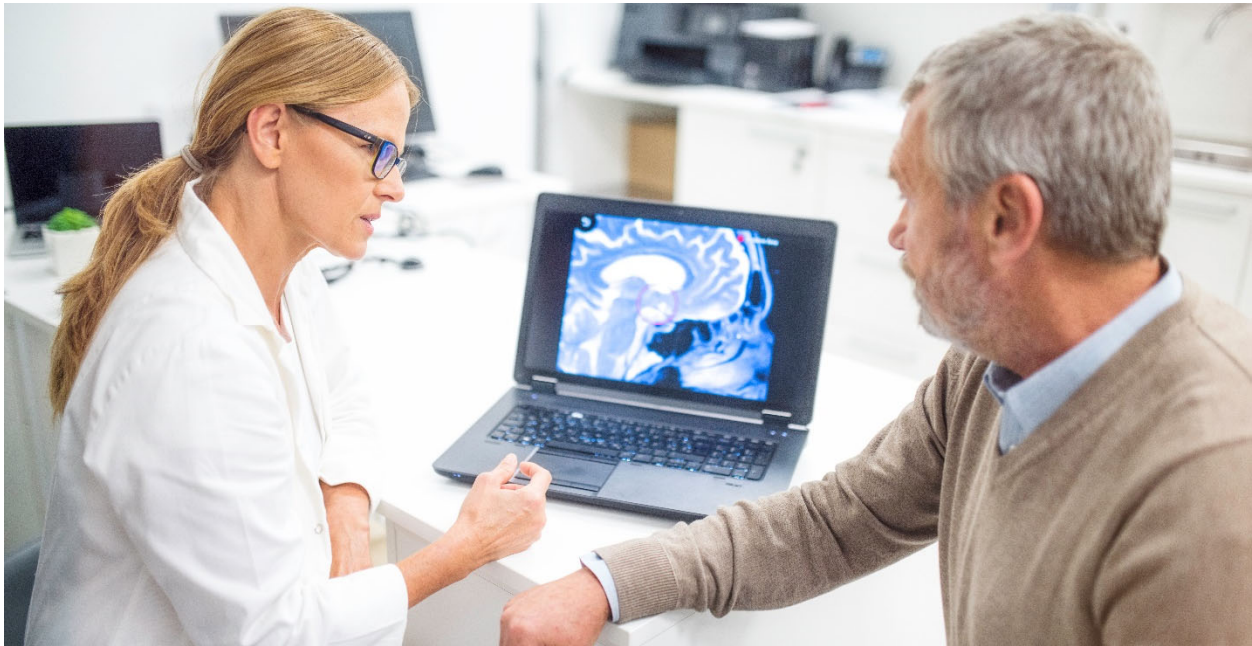
BrainView allows cognition to be assessed in just 20-minutes, using non-invasive measures that can be easily performed in an office setting. Now patients of all ages can have access to this important cognitive assessment without the need for a physician's referral.

The Gold Standard of Cognitive Testing

BrainView Cognitive Assessment provide a unique system specifically designed to allow for possible early detection of mental and cognitive issues. Some disorders that can be detected early include: Anxiety, ADD, ADHD, Alzheimer's, Dementia, Depression, and Traumatic Brain Injury.

Our leading-edge brain scan technology is performed by healthcare providers and technicians who are expertly trained to conduct our tests in a safe, confidential and professional environment.





BrainView Neuro Cognitive Assessment

BrainView is a cutting-edge hardware and software system that allows the detection of neurological conditions.

BrainView is a state-of-the-art system that provides the following:

- electroencephalography (EEG), evaluating the activity of the brain
- electrocardiogram (ECG), evaluating the activity of the heart
- evoked potential, evaluating the visual and auditory processing speed
- subjective neuropsychological survey.

There are several reasons why cognitive impairment occurs. It can also occur at any age. BrainView helps clinicians with objective data on a patient's core brain functions like: memory, attention, information processing, and executive function.

BrainView can identify symptoms of cognitive dysfunction such as fatigue, memory loss or brain fog, Anxiety, Depression, PTSD, TBI, Migraines, Sleep Disorders, OCD/ADD, in some cases several years before they erupt.

BrainView device is a USA FDA 510(K) cleared Class II medical device. The device acquires, displays, and stores a recording of the electrical activity in a patient's brain through (EEG) and event-related potentials (ERP) obtained by placing two or more electrodes on the head to aid in diagnosis.



Why BrainView

BrainView system is designed to help healthcare providers effectively measure and manage memory loss cognitive impairment, Anxiety, Depression, PTSD, TBI and other stress related neurological conditions.

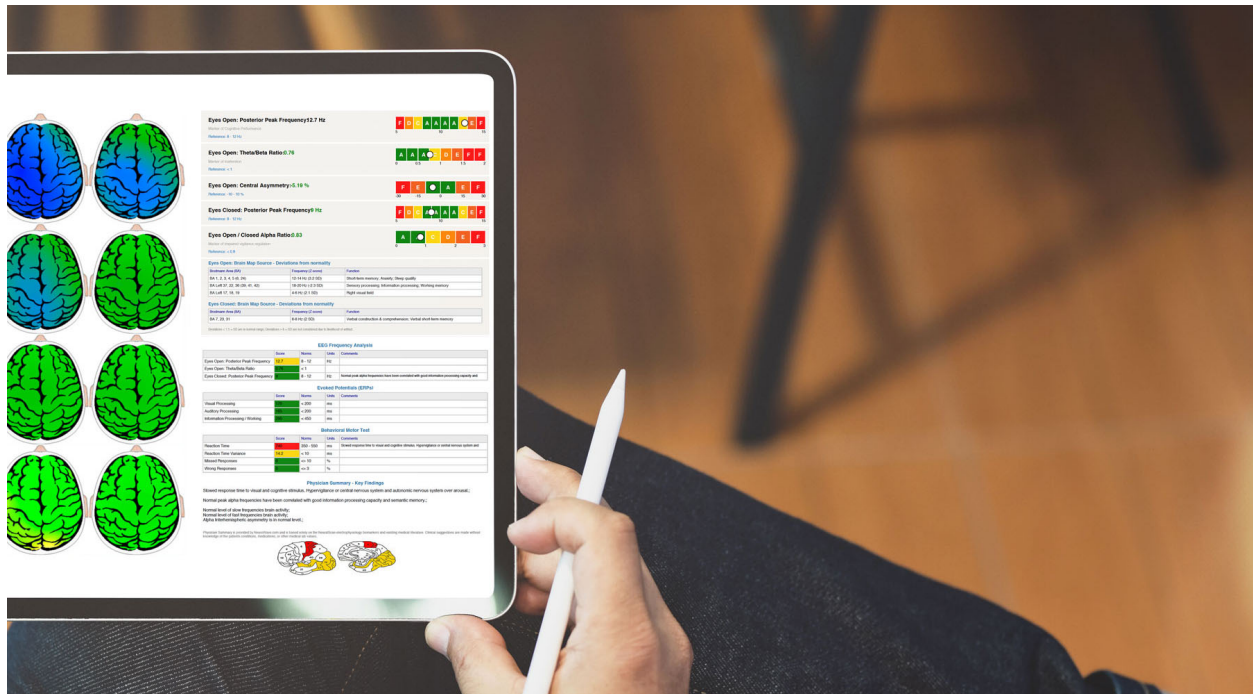
Using our non-invasive measures, healthcare providers attain more information that help guide well-informed decisions about cognitive symptoms and potential neurological condition. BrainView assists in early detection, and improvement management of neurological conditions.

What is BrainView testing?

The BrainView is the most comprehensive and advanced assessment offered today to evaluate for possible neurological conditions. This is achieved by gathering information about your how your brain and heart function, as well information to understand how your body processes different signals and information.

Results are given in a report, which shows your brainwaves at rest and when brain is performing a task. We compare this to a large normative age-related database. This test will help healthcare provider develop a more informed and personalized treatment plan.





Challenges in Assessing Cognitive Impairment

Cognitive impairment can occur at any age for a variety of reasons, including stress, dementia, head injuries, sleep disorders, and pain. It is very frustrating as a patient when the underlying cause is unknown. Until recently, it has been challenging for healthcare providers to objectively assess patients for cognitive impairment due to the lack of specificity. This results in undiagnosed or delayed diagnosis, and decreased quality of life.

There is a critical need for healthcare providers to evaluate neurocognitive function due to the aging population, the prevalence of stress and pain, and increased awareness of the impact of head injuries on cognition. Cognitive symptoms can also occur outside of normal age-associated memory loss. Surprising to many, issues with cognition can also occur at any age.

When a trauma occurs and a patient injures their head, the healthcare provider must be sure to accurately assess and document brain function in order to best evaluate the patient as well as to avoid legal repercussions. Without proper diagnosis, a head injury can have a severe negative impact on patient outcomes, including quality of life.

Cognitively impaired can present with symptoms such as confusion, forgetfulness, "brain fog," and functional impairment. The BrainView system assists the healthcare provider to quickly and objectively assess cognitive impairment in the office setting; offering guidance in achieving the proper diagnosis more efficiently.



About BrainView

The BrainView system helps provide comprehensive brain health information. This non-invasive, pain-free medical device assists in effectively understanding and quantifying memory loss, cognitive impairment, and other stress-related neurological conditions.

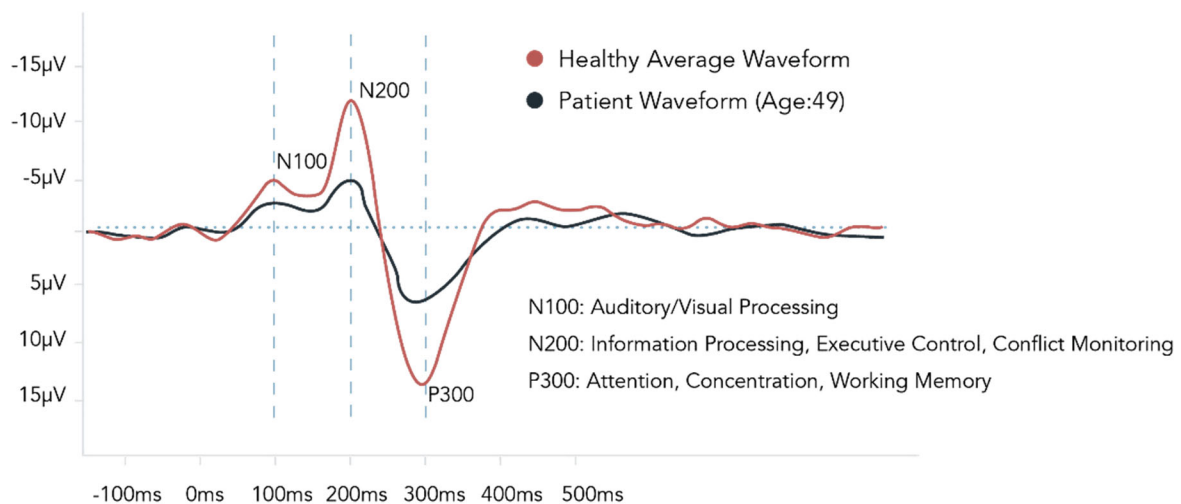
By understanding the road that the brain has traveled, many previously unanswered questions are addressed. This enables the next steps in patient management to become clearer.

BrainView helps your healthcare provider determine when you can return safely back to your daily activities, such as work or sports. This provides a peace of mind, knowing you or your loved one is healthy enough to resume the daily activities they enjoy.

Routine check-ups and necessary follow-ups can assist your healthcare providers with identifying problems early on, while they may be more easily treatable, specifically in individuals who are at a higher risk for cognitive impairment later in life.

BrainView Benefits

- Helps improve clinical outcomes through early assessment
- Detects declines in memory up to 15 years before symptoms
- May detect head injuries that a CT or MRI may not
- Quick and easy assessment in Glastonbury, CT
- Assess the underlying cause in patients suffering from chronic pain
- Assists with treatment interventions
- Helps to better understand ADD and ADHD in children, leading to better outcomes and treatment solutions.



Importance of Early Detection

Early detection of cognitive impairment is key. As people age, cognitive impairment can have a significant impact on individuals, families, and their overall quality of life. It is now thought that a decline in cognitive abilities is a process that occurs over a 20 to 30 year time frame, eventually leading to poor cognitive outcomes. Cognitive testing as early as the age of 35 years old can be beneficial.

Due to lack of appropriate tools for measuring cognition, diagnosis is a common occurrence. Current paper-based assessments used in primary care practices make it difficult to determine the dementia subtype, resulting in less successful treatment outcomes. Approximately 86% of deceased patients suffering from dementia were misdiagnosed with Alzheimer's disease.

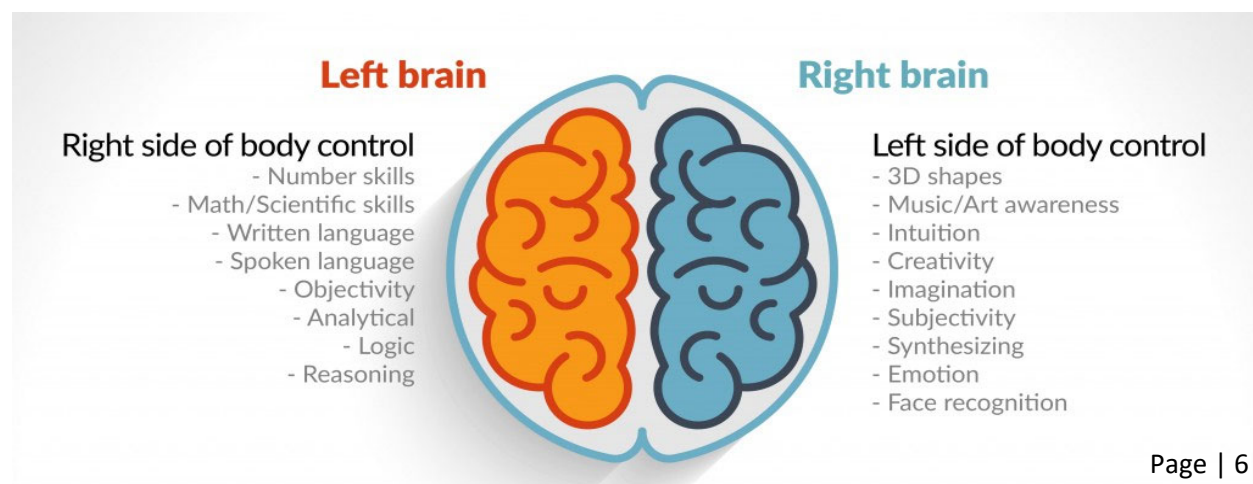
BrainView is now changing the way cognitive impairment is detected. The BrainView system can help assess patients up to 15 years prior to the onset of symptoms. Early detection of cognitive disorders offers earlier identification and treatment of the underlying cause. For example, some causes include such as thyroid problems, nutritional deficiencies, and stress.

How does the technology work?

Your brain produces electrical signals and gives off electrical signals called "brainwaves". You produce a certain kind of brainwave depending on what activity or function you are doing. For example, if you're sleeping, your brain produces Delta & Theta brainwaves. When you're thinking and concentrating, your brain produces Beta brainwaves. The EEG technology allows for amplification of those brain waves, recording the brainwaves, then reading and analyzing the data in an easy-to-understand comprehensive report.

Why is this helpful to my provider?

BrainView provides useful information to your provider about your cognitive function. Specifically, how well your brain is processing information and how your body is physically responding to stress. Brainwave patterns can assist in identifying specific disorder such as depression, anxiety, ADHD, OCD, bipolar disorder, and post-traumatic stress disorder.



How we do it

The Cognitive Assessment follows BrainView's evidence-based electroencephalography (EEG) protocol.

This quick and non-invasive assessment takes only 20-30 minutes to complete. The testing is performed by placing EEG electrodes on the scalp. Conductivity gel is used to attach the electrodes to the scalp. The EEG electrodes along with the conductivity gel record the brain's electrical activity.

The assessment guides patients through a series of neuropsychological tests on a computer while hundreds of thousands of data-points of brain waves are recording by the EEG. Included in the EEG recorded data points are event-related potentials (ERP). ERP's indicate the health of core cognitive functions like memory, information processing, attention & concentration.



Report

BrainView's medical software report is generated using information gained data from EEG and ERP and comparing to BrainView's database of healthy cognitive functions. Together with clinical findings, this information is used to determine diagnosis and medical decision making by healthcare provider.

BrainView complements clinical protocols and assists in tracking brain health over time, provide valuable data in the diagnostic process, and help inform customized treatment strategies.

During treatment, repeat BrainView assessments track changes in a patient's cognitive scores to monitor their progress and validate the efficacy of treatment, helping healthcare providers to maximize patient outcomes and expedite recovery timelines.

There are many steps we use to creating a BrainView report:

- Acquisition of the recording;
- De-artifacting the record;
- Viewing the artifacted record to determine if any transient behaviors persist;
- Reviewing FFTs, spectral displays and other digitally filtered images;
- Comparing the subject to a normative database;
- Isolating pathologies;
- Writing the report.

Why we are different

- Scores multiple core cognitive functions
- Limitless brain health applications
- Supports any clinical group
- Available to patients 8-90 years of age
- 30+ years of peer reviewed studies and research
- Proprietary, evidence-based EEG protocol
- Proprietary medical software
- Non-invasive testing



BrainView Mapping Explained

How Neuroimaging Affects Therapy and Treatment

Brain mapping is a tool used to help evaluate Individuals with various neurological disorders, including addiction disorders and cognitive disorders. Brain mapping can help your medical providers better understand how your brain works, as well as create a personalized treatment plan that is specific to your situations.

What is BrainView Mapping?

Brain mapping includes a variety of tools and technologies used to study used to images of and map electrical activity within the brain. Using Brain mapping, an individuals' brains brain function or structure is evaluated. This is done be examining the physical layout and composition of the brain, or measuring the electrical activity that takes place.

Types of Brain Scans

There are a variety of brain scans available for brain mapping. Magnetic resonance imaging scan (MRI scan) is the most common type of brain scan used for brain mapping. Other commonly used scans include computer tomography scan (CT scan) and positive emission tomography (PET). These scans are non-invasive, meaning they do not require any introduction of any instruments into the body, or any cutting of the skin. These non-invasive studies provide useful information about your brain that your healthcare provider can use to help determine your diagnosis and personalized treatment plan.

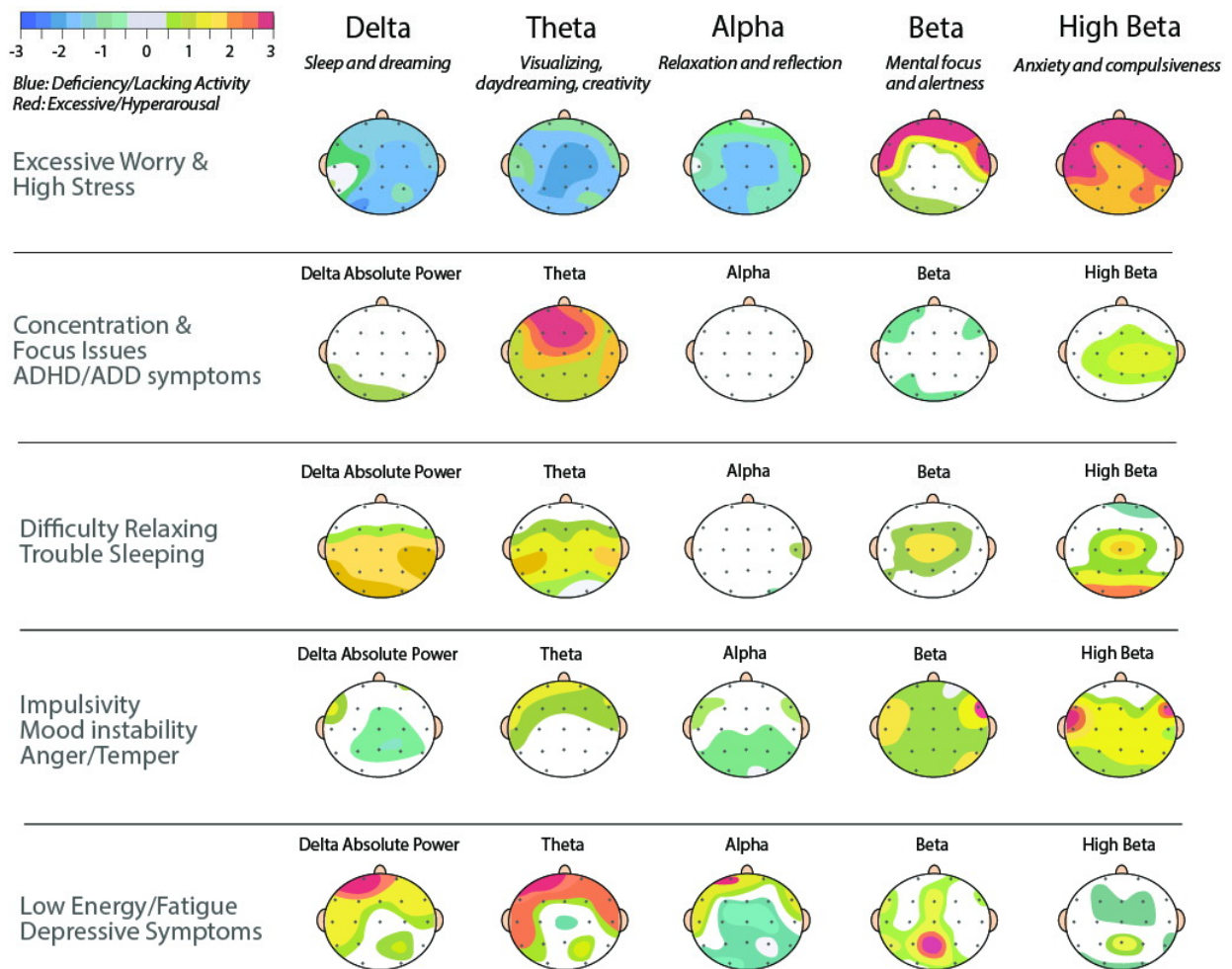
BrainView is based on electroencephalography or EEG scans. EEGs use metal sensors and a cap on the head to measure electrical activity in the brain. qEEG treatments take the measurements gained from a typical EEG scan and process those electrical patterns by using analysis software and formulas.



What are brain maps?

BrainView 3D Brain Maps is an accumulation of EEG data. They are created by taking all EEG data collected and getting an average for each type of brainwave. Maps created show where there is a deficit of power and excess power in different regions of the brain. BrainView LORETA source localization imaging is also provided to help with potential targeted treatments. Specific patterns of power deficits and excess are correlated with different diagnosis and symptoms.

Each Row of "Brain maps" represents the distribution of brainwaves for the given condition.



These brain maps provide insight to regions of the brain that are over-activated (red/orange), as well as areas that are under-activated (blue/green).



What in the Brain Can Be Mapped?

Brain mapping can help map a variety of factors:

- **Memory:** Electrical scans such as an EEG scan can map memories. An individual's brains can be studied to detect where specific memories are stored, how the brain recalls different memories, and what effect those memories have on other neurological processes.
- **Learning:** Psychologists and physicians can use brain mapping to determine how an individual learns and where information is stored in the brain. It can also be used to detect whether learning problems are present, due to neurological conditions such as addictions, cognitive inflexibility, and so on.
- **Aging:** The structure and function of the brain can be evaluated using brain mapping to detect the effects of aging. In addition, brain mapping can detect how drugs may induce premature aging on brain tissue.
Brain mapping can be used to detect the effects of aging in the mind, either structurally or functionally, as well as to detect how drugs or other substances may induce premature aging and brain tissue. This helps visualize the actual effect that drugs are having on the brain.

Brain mapping is a key technique that your healthcare team can use to help best diagnose and manage your care. This helps assist in achieving the best possible quality of life.

BrainView's Importance in Finding Disorders

BrainView is crucial for uncovering the underlying cause and adequate treatment for a variety of disorders, including:

Physical disorders: Through structural brain imaging techniques, brain mapping can help your healthcare provider detect the presence of tumors or other brain injuries before it is too late.

Emotional disorders: Some brain mapping techniques, such as EEG can determine the underlying cause of symptoms. In addition, by looking at patterns of electrical activity, thought patterns behind emotional conditions or addictions can be identified.

Cognitive disorders: Brain mapping can help psychologists, physicians, and other healthcare providers find the root causes of cognitive disorders like depression, anxiety, memory loss, and more.



What Disorders Can Neuroimaging Map?

Neuroscientists and other medical professionals can diagnose a wide variety of disorders through the use of neuroimaging. These include disorders like schizophrenia or clinical depression. It is important to understand that brain scans are only used to provide information to patients and healthcare providers. To be most useful, the information from the brain scans must be applied correctly in order to develop an individualized treatment plan that leads to successful results.

Five Types of Brain Waves

Brain mapping can also involve evaluation using the five major types of brain waves. These brain waves are analyzed looking for patterns to further understand the way that the brain is functioning. This helps further understand how the diagnosis is affecting your specific brain function. From slowest to fastest, the five major types of brain waves are:

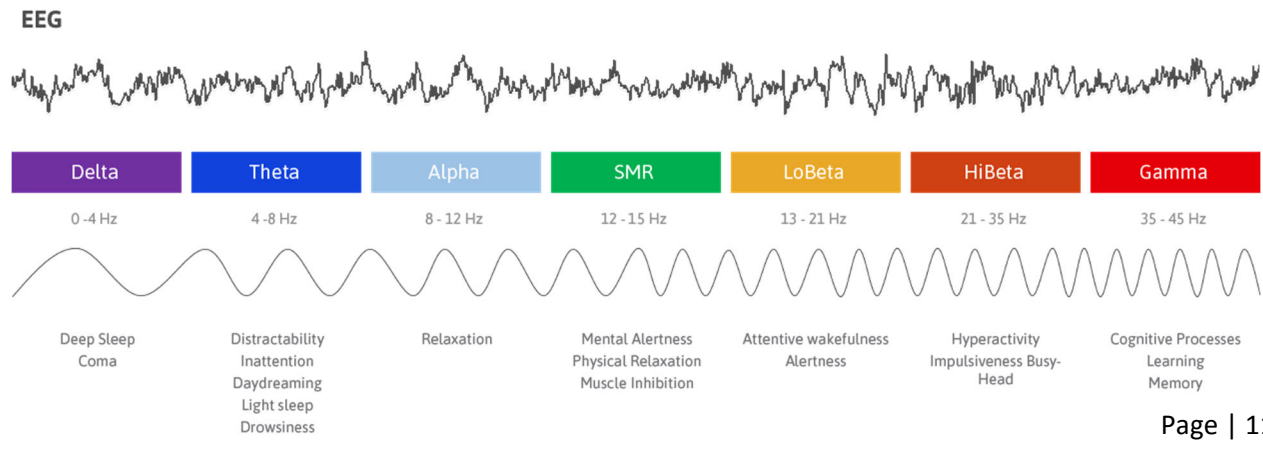
Delta waves: a type of brain wave with the highest amplitude and the slowest. These waves are mainly seen in deep sleep.

Theta waves: a type of brain wave that occurs while you are awake or while in a light phase of sleep. For example, when you are about to fall asleep. When these waves occur while awake, it is typically during a time where intense relaxation occurs. It is thought that theta waves play an important role in processing information and making memories.

Alpha waves: a type of brain wave that is produced when you are awake, but still very relaxed and not concentrating on anything. For example, when you first wake up.

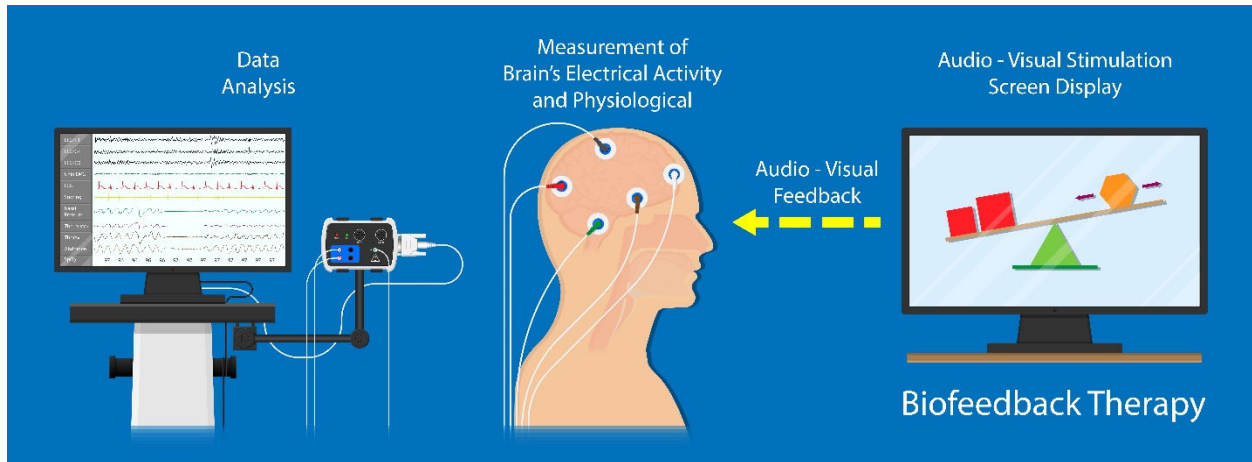
Beta waves: a type of brain wave which are produced when the brain is wide awake, alert and focus. Beta waves also occur when you are excited or aroused.

Gamma waves: a type of wave that has the lowest amplitude but the fastest of the brain wave. These are created when an individual tries to solve a problem or has to concentrate intensely on a specific task. For example, when learning.



Benefits of BrainView during Treatment

BrainView offers several benefits to both patients and healthcare providers; especially when it comes to treating cognitive disorders or treating addiction. Brain mapping offers physicians a deeper level of understanding about the brain, allowing for more effective patient management.



One example is that brain mapping can be used along with neurofeedback therapy. Neurofeedback, also called EEG Biofeedback, is a non-invasive method of brain function training. During this revolutionary therapy, patients are provided with the results of a Quantitative Electroencephalogram (qEEG). During a qEEG, brain electrical activity is measured. Patients can then work with their psychologists or clinical health providers to train their brains out of bad habits or unhealthy thought patterns.



What will a BrainView assessment show?

BrainView assessment will identify aspects of brain health, including, cognitive function, cognitive impairment, biomarkers associated with memory loss and cognitive impairment, autonomic nervous system function, and physiologic function associated with memory loss, sleep disorders, anxiety, and attention deficit.

What does BrainView help identify?

Warning signs in advance of disease onset of memory loss or dementia.

- TBI
- Depression
- Sleep Apnea
- Anxiety
- Chronic Pain
- ADD/ADHD

NEURO FUNCTIONAL RESPONSE TEST

Demo Demo
 Gender: Male Weight: 190 lbs Height: 5 ft 9 in Exam Date: Feb 16 2019 10:07
 Age: 75 (DOB: Feb 23 1945) BMI: 28.1

EEG Frequency Analysis		Self-Assessment Questionnaire	
Score	Norms		
Eyes Open: Posterior Peak Frequency	9.5 Hz 8 - 12	Attention - Attention Deficits - Easily Distractable: 4 of 5	
Eyes Open: Theta/Beta Ratio	0.32 < 1	Decreased Tactile or Skin Sensitivity: 5 of 5	
Eyes Closed: Posterior Peak Frequency	10 Hz 8 - 12	Concentration Problems: 2 of 5	
		Anxiety - Anxiety: 5 of 5	
		Chronic Pain: 5 of 5	
		Depression (Sad & Blue): 3 of 5	
		Short Term Memory Problems: 5 of 5	
		Auditory Sequencing Problems: 3 of 5	
		Blurred Vision: 3 of 5	
		Delusional: 4 of 5	
		Impulsive Behaviors: 2 of 5	
		Balance Problems: 5 of 5	
		Hyperactive and/or Agitation: 3 of 5	
		Migraine Headaches: 2 of 5	
		Failure to Initiate Actions: 4 of 5	
		Dyscalculia - Problems Calculating: 5 of 5	

Evoked Potentials (ERPs)	
Score	Norms
Visual Processing	155 ms N100 < 200
Attention / Vigilance	430 ms P300 < 400
Information Processing / Working Memory	445 ms P300b < 450

Behavioral Motor Test	
Score	Norms
Reaction Time	516 ms 350 - 550
Reaction Time Variance	2.6 ms < 10
Missed Responses	0 % <= 10
Wrong Responses	0 % <= 3

Physician Summary - Key Findings

Normal response time to visual and cognitive stimulus.

Normal P300 latency under go-nogo condition and neuronal capacity associated with attention and information processing.

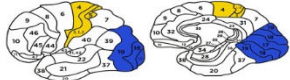
Normal peak alpha frequencies have been correlated with good information processing capacity and semantic memory.

Normal level of slow frequencies brain activity.

Increased power of fast frequencies brain activity. Possible signs of: Mood Disorders Such as Depression and Bipolar illness; Excessive Beta amplitudes are associated with hyper - arousal and can be also associated with anxiety disorder and insomnia.

Alpha Interhemispheric asymmetry is in normal level.

Physician Summary is provided by NeuroView.com and is based solely on the NeuroScan electrophysiology biomarkers and existing medical literature. Clinical suggestions are made without knowledge of the patient's conditions, medications, or other medical lab values.

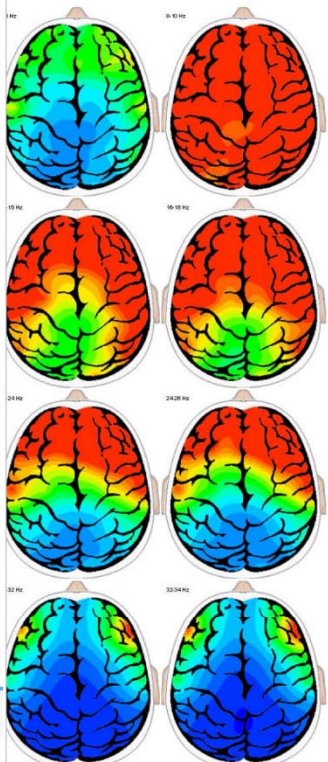


Comments: good

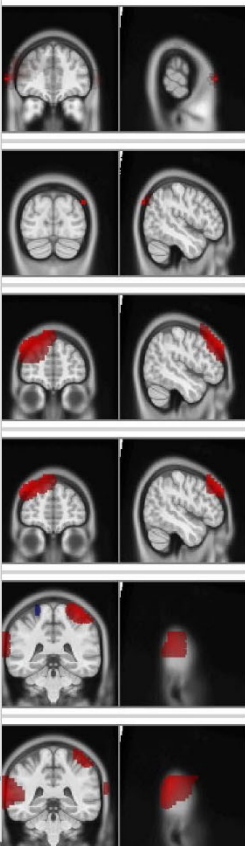
All results and analysis should be considered in the context of person/candidate's case history, symptoms, diagnosis, current medications, treatment plans and therapies. Final diagnosis is the sole responsibility of the licensed medical practitioner after persons examination, lab tests and/or other clinical findings as necessary. Page 1 of 5 Printed: Apr 29 2020 06:13

ABSOLUTE POWER

Exam Date: Feb 16 2019 10:07



Exam Date: Feb 16 2019 10:07



Exam Date: Feb 16 2019 10:07

Deviations $\pm 1.5 - 2SD$ are in normal range. Deviations $> 2 - 3SD$ are not considered due to likelihood of artifact.

Comments: good

All results and analysis should be considered in the context of person/candidate's case history, symptoms, diagnosis, current medications, treatment plans and therapies. Final diagnosis is the sole responsibility of the licensed medical practitioner after persons examination, lab tests and/or other clinical findings as necessary. Page 2 of 2 Printed: Apr 25 2020 06:13

