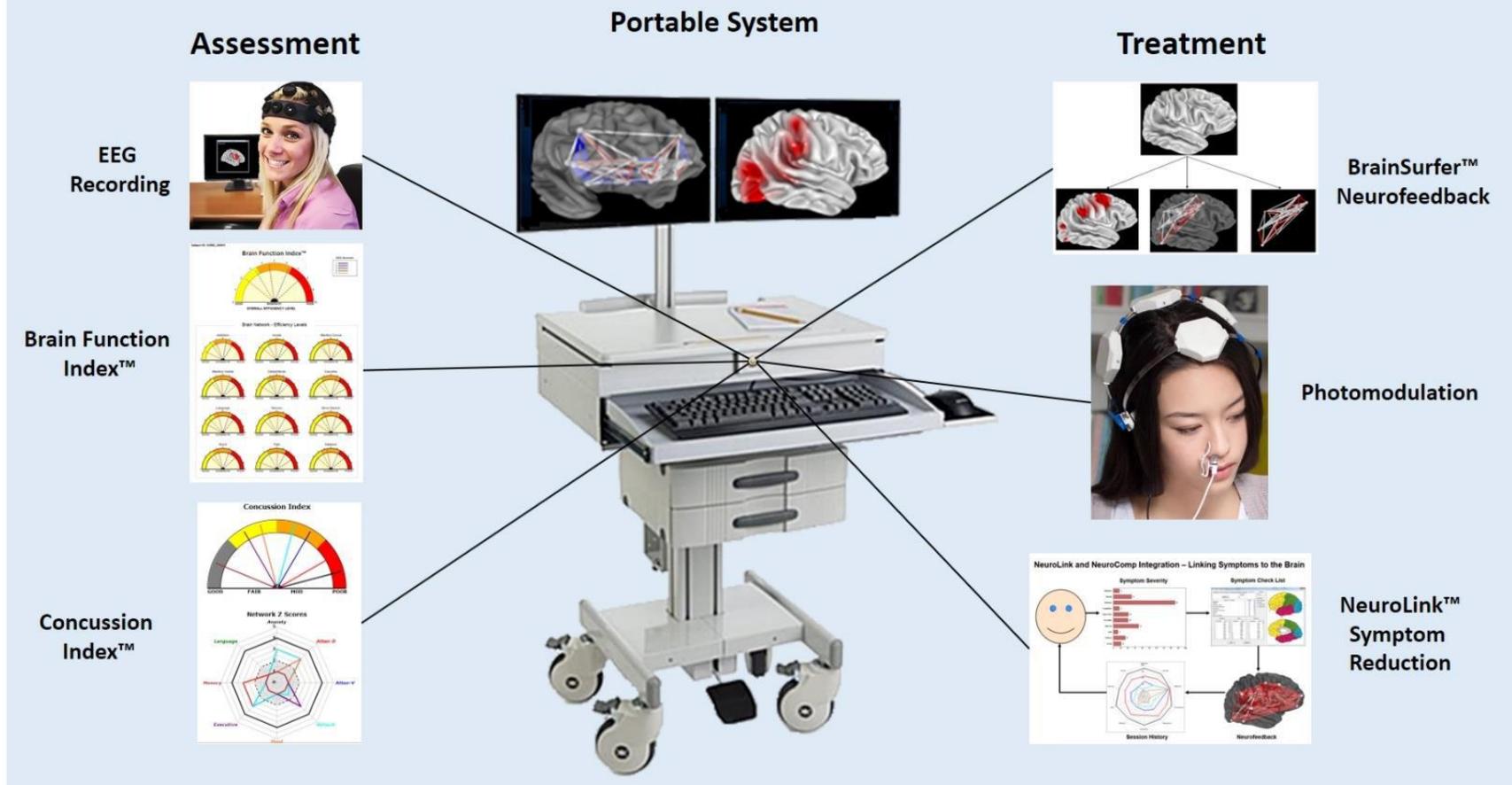


CONCUSSION Centers USA

Healthy Brain Assessments

O u r T e c h n o l o g y

The BrainRehabilitator™



The BrainRehabilitator™ is a complete tool that ASSESSES dysregulated brain areas and networks and provides tools to TRAIN THEM TOWARDS STABILITY.

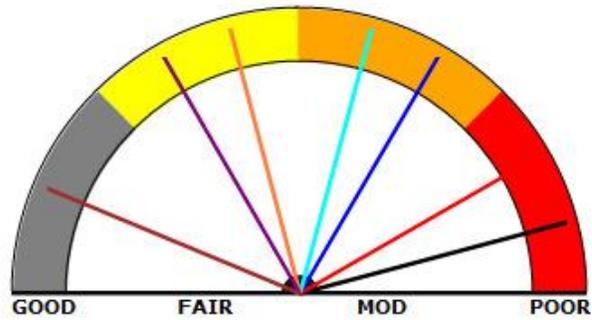
Brain Photobiomodulation - Vie Light



Near-infrared light at a frequency of 810 nm stimulates mitochondrial respiration in neurons by donating photons that are absorbed by cytochrome oxidase, a bioenergetics process called photoneuromodulation. This type of luminous energy can enter brain mitochondria transcranially to stimulate production of the vital energy molecule ATP and thus increased cellular oxygen consumption. In addition, the process creates ROS molecules that have been shown to improve gene transcription and cellular repair and healing.

BrainRehab Network Index

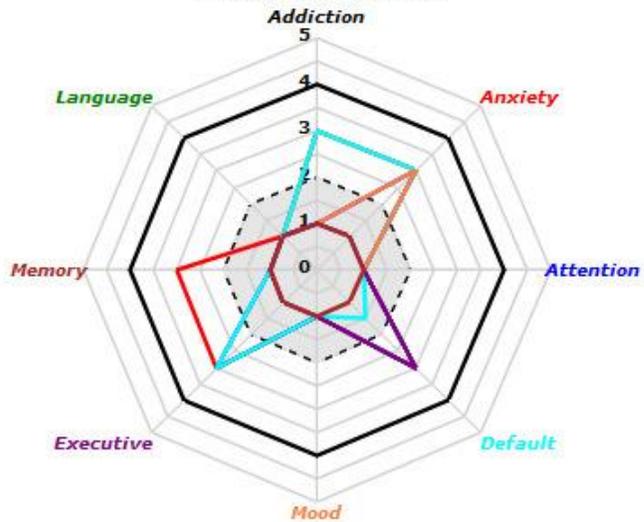
NeuroRehab Index



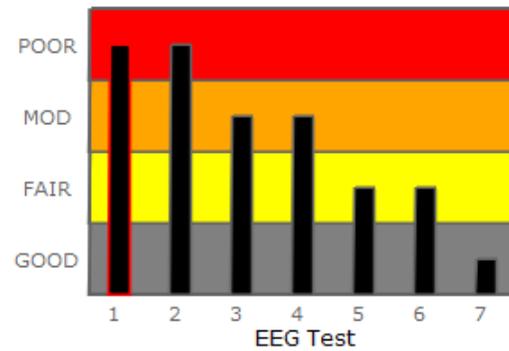
EEG Tests



Network Z Scores

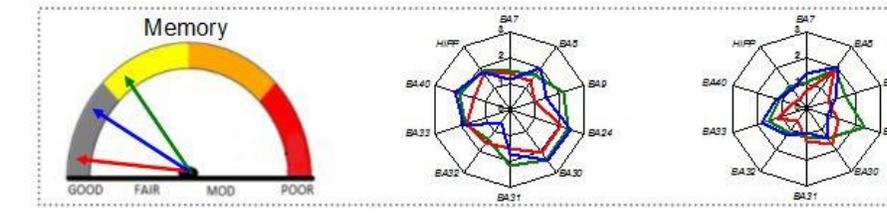
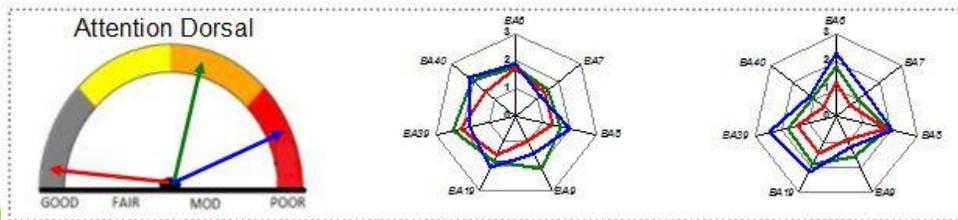
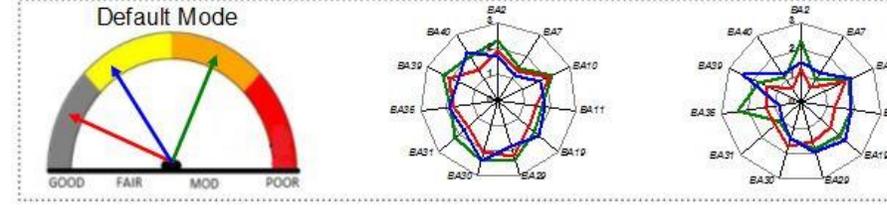
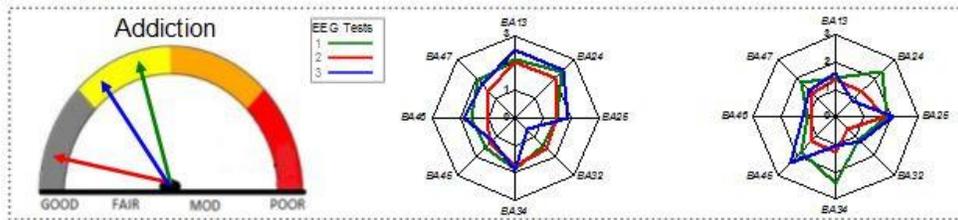
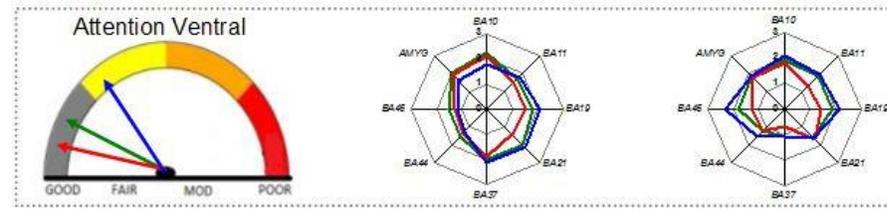
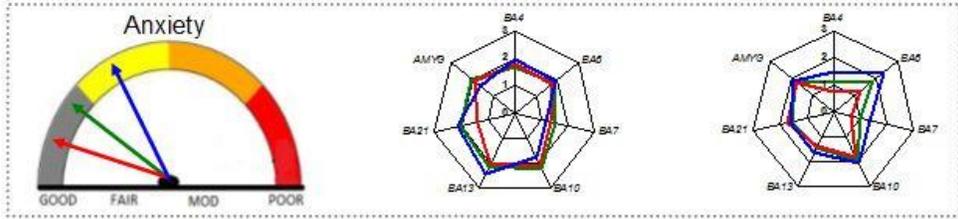


NeuroRehab Index History



BrainRehab Networks

Left Hemisphere Right Hemisphere



Assessment Components / Treatment Components

Wet or Dry EEG Recording System NeuroComp™ offers a high-grade EEG amplifier with conventional “wet” headcaps or a state-of-the-art dry electrode recording headset, the NeuroGuide™

Dry. **LORETA Neurofeedback** A modality that trains a subject to self-regulate dysregulated networks using an operant conditioning paradigm.

Automatic Clinical Report Writer (ACR™) The system is designed to provide high quality automatic editing and generate an automatic report in a format acceptable to 3rd party payers.

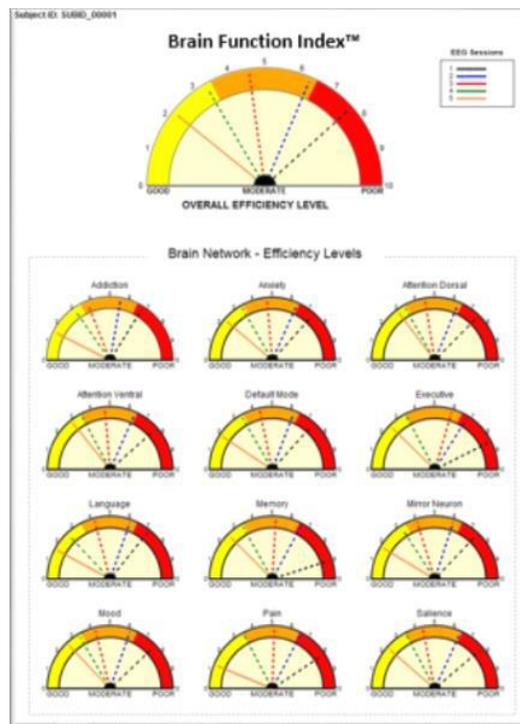
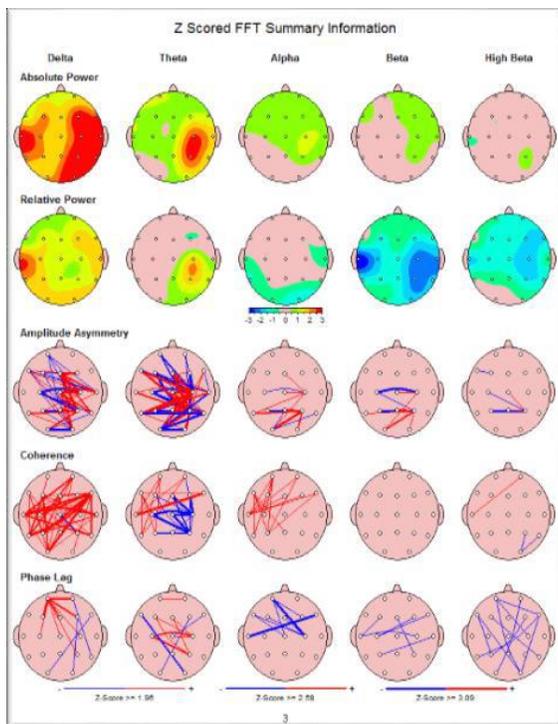
Photomodulation Used to increase the energy available to neurons that fosters cellular repair and healing as well as potentiates the neurofeedback

Brain Function Index™ The Brain Function Index™ is easy-to-interpret showing the overall functional status of the brain and the deviation from normal (amount of dysregulation) of major brain networks.

NeuroLink™ NeuroLink facilitates the assessment of symptom severity and helps NF protocol design using a self-rating questionnaire that the patient fills out, which links symptoms to brain networks and helps design the appropriate NF training protocol,

Concussion Index™ The Concussion Index provides information on the severity of a concussion and its effects on major brain networks. It is a tool that provides information on the course of the concussion and/or treatment as well as “fit-to-play” decisions

Assessment



Bay View Neurofeedback, Inc.
 7900 Gulf Blvd., Suite #500, Clearwater, FL 33776 USA
 Phone: (727) 424-2220 Fax: (727) 424-2222 Email: qoeg@bayviewnfb.com

Quantitative EEG Analyses

PATIENT INFORMATION
 Name: Jane Jones
 Exam#: 2014-043-EC1
 Age: 17.2 years
 Gender: Female
 Handedness: Right

RECORDING
 Date: April 30, 2014
 Ref. By: Dr. John Smith
 Test Site: Bay View Clinic
 Analysis Length: 2:00 Minutes
 Ave. SH Reliability: 0.99
 Ave. TRT Reliability: 0.97

MEDICATION:
 Cytanazepam .5mg 3 each morning, Cyprexolx .30mg each night.

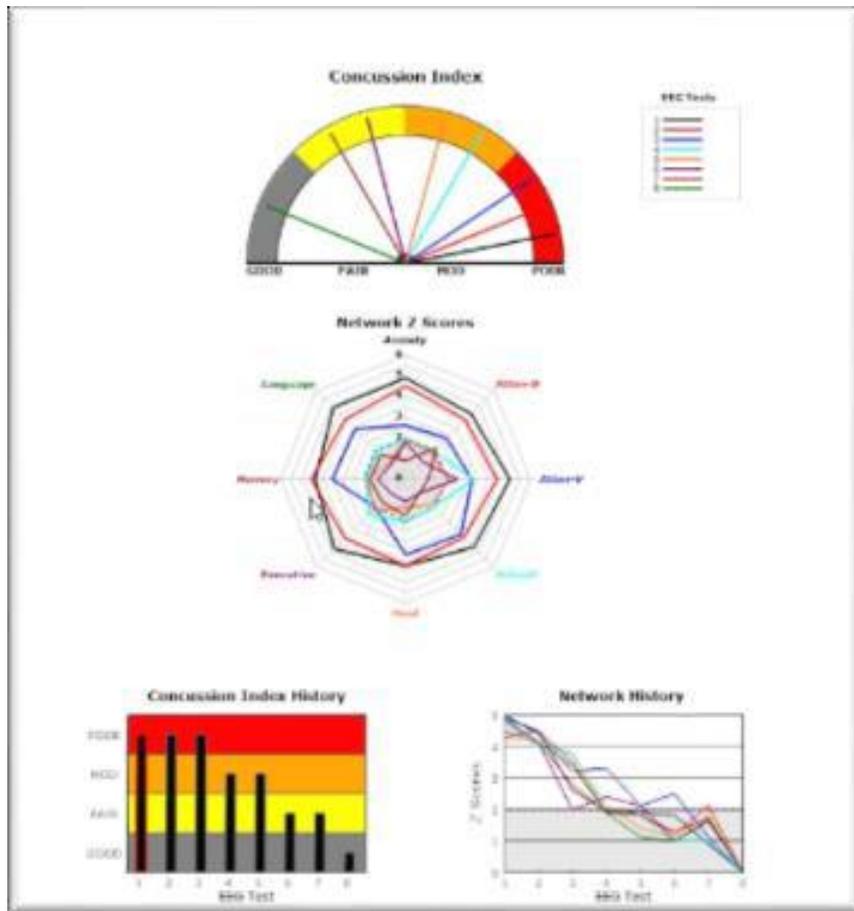
HISTORY:
 She has depression and anxiety. She fell out of a tree at age 4 and lost consciousness. She passed out and fell at age 9. She is constantly worried about everything and anything.

LINKED EARS:
 The Linked Ears power spectral analyses were deviant from normal with excessive power in bilateral frontal regions especially in the left frontal region over a wide frequency range, excessive power was present in bilateral temporal regions especially in the right temporal region from 5 - 7 Hz, excessive power was present in bilateral parietal regions especially in midline parietal region from 5 - 7 Hz and 19 Hz and excessive power was also present in bilateral occipital regions especially in the left occipital region from 6 - 7 Hz.

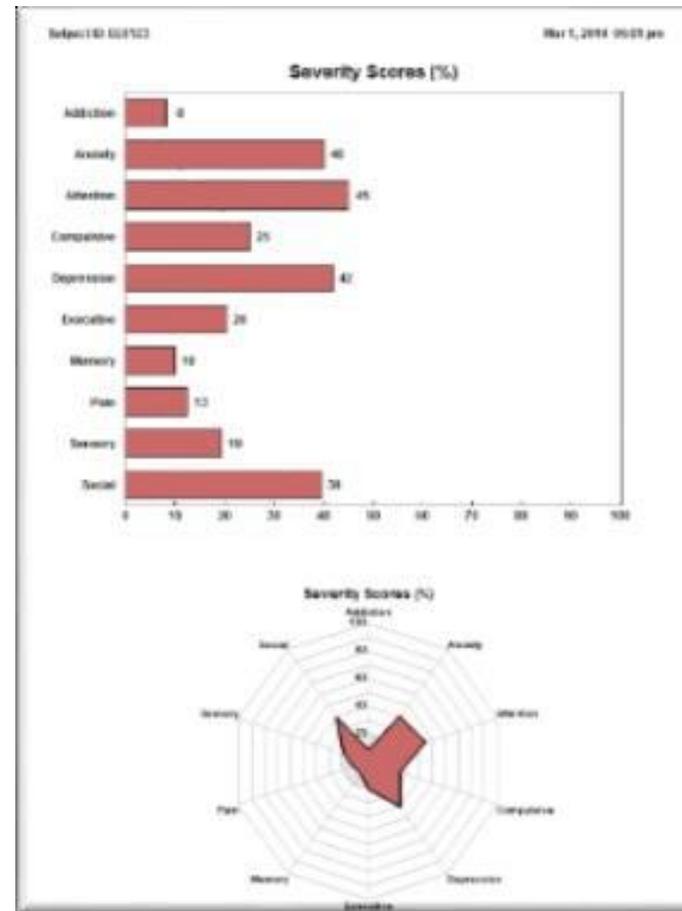
SURFACE LAPLACIAN:
 The Laplacian power spectral analyses were deviant from normal with excessive power in midline parietal regions at 6 Hz.

T r e a t m e n t

Concussion Index



NeuroLink™



We not only find the problem we treat it!

Youth Sports

**Concussion
Assessment &
Mitigation
Program**

**Now There Is A Complete Program
Designed To Assist Coaches And
Athletic Trainers In Handling
Concussions In Young Athletes**

There are more than 300,000 sports-related concussions reported in the United States each year! Although this number is extremely high, the actual incidence of this type of injury is estimated to be dramatically higher. Many concussions simply go undiagnosed! Concussions should never be missed or marginalized! Consecutive or repetitive concussion injury has serious consequences. Recent research has correlated concussion with CTE; chronic traumatic encephalopathy.

Don't Take Any Chances

Studies show that repeated concussions can result in chronic traumatic encephalopathy (CTE). This can lead to neuro-degenerative changes resulting in chronic and debilitating conditions later in life. Don't take any chances.

The risks are too great!

**\$89.00
Year**

Enroll in the CCUSA, Inc Youth Sports Concussion Assessment and Mitigation Program today.

1. Pre-Season Baseline Assessment

QEEG brain maps and cognitive testing are done to create a brainwave pattern baseline before the sport season starts.

2. Periodic Status Assessments

Follow up testing is done throughout the season with the results being compared to the baseline to look for concussion signatures.

3. Therapy if /when Required

If concussion patterns are found, therapy is given to restore brainwave patterns to the original baseline levels.

Its all about success!

Applied Neuroscience, Inc.

Applied Neuroscience, Inc. (ANI) is an industry leader in the electroencephalography of brain injury.

ANI has a EEG database of over 20,000 healthy normal and patients with a variety of neurological and psychiatric disorders. ANI currently has over 3,000 customers world wide.

ANI also has a EEG database of over 2,500 head injured patients many of which include CT scans, MRIs and neuropsychological tests. This large TBI database has been acquired over the last 25 years from the University of Maryland Shock Trauma center and with Department of Defense funding that collected EEG, MRI and neuropsychological tests from over 1,500 veterans and active duty soldiers.

Robert Thatcher, Ph.D. (founder and CEO) has published numerous scientific publications on EEG and TBI. In 2004, ANI's EEG TBI discriminant received FDA 510k registration. These same databases and advanced technologies are operating in the easy to use NeuroComp system.

ANI has developed TBI discriminant functions and a TBI Severity Index and a Concussion Index using 19 channels of EEG that includes Neuroimaging technology. This large database and scientific technology is currently operating in numerous VA medical centers and also at the US Army Fort Campbell rehabilitation center for soldiers with TBI. In short, ANI has a well established technology for the assessment of concussion and TBI as well as treatment by the use of state of the art EEG neurofeedback.

ANI also supports certification in various organizations as well as training of clinicians in the use of EEG assessment and Neurofeedback.

What is a Concussion?

A concussion is a serious injury to the brain resulting from the rapid acceleration or deceleration of brain tissue within the skull. Rapid movement causes brain tissue to change shape, which can stretch and damage brain cells. This damage also causes chemical and metabolic changes within the brain cells, making it more difficult for cells to function and communicate.

More common than we realize

The CDC estimates as many as **3.8 million concussions occur in the U.S.** annually through sports and recreational activities, but only 5-10% are recognized and eventually diagnosed by coaches, parents, and athletic trainers. Surveys of high school athletes after the season find that 20% had concussion symptoms after a head impact at least once over the course of the last season, and over 50% of the contact sport athletes report at least one event in their career

Recovering From A Concussion

Means re-balancing a delicate combination of chemicals within brain cells. This process takes a lot of energy, so it is important to conserve energy during recovery. When **properly managed**, the majority of concussion symptoms will resolve within a couple of weeks, however over-exertion of brain cells during recovery can cause symptoms to persist for months or even years. **A significant percentage (estimates vary between 10% and 30%) of concussion patients suffer from extended recovery, known as post concussion syndrome**

OLD SCHOOL TESTING verse Today's technology

- 1- Student seems dazed but answers questions and knows date and time and replies to questions he is sent to play again.
- 2- Student is unsure where he/she is, is disoriented but knows the date and time of day and answers questions. Coaches judgement call.
- 3- Student has loss of consciousness, obviously not playing.

If the young athlete reaches a score of concern the coach has the obligation to document and refer the athlete to brain evaluation.

Here is where CCUSA, Inc comes in- together we are capable of providing an integrated and scientifically and FDA registered service to evaluate and treat the young athlete toward better health and to minimize future problems! Every student should have a Healthy Brain Scan on file. When trauma occurs a new scan is done (20 minutes) and a concussion index is definitive in a matter of minutes. **No more guesswork!**

Catastrophic re-injury: Second Impact Syndrome

During recovery, the brain is more vulnerable to re-injury. In rare cases, a second concussion sustained during recovery can cause the brain to undergo massive swelling.

This extremely rare condition is known as Second Impact Syndrome (SIS). Approximately half of SIS patients die from their injuries, and the survivors often suffer from life-long catastrophic disability

The diagnosis that changed the game

The diagnosis of CTE in a football player caught the attention of Concussion Legacy Foundation co-founders [Chris Nowinski](#) and [Dr. Robert Cantu](#).

They began an outreach program for brain donation among athletes, ultimately creating the Concussion Legacy Foundation. Soon after founding, the Concussion Legacy Foundation partnered with Boston University and the Veterans Administration to form the VA-BU-CLF Brain Bank, led by Dr. Ann McKee.

The Brain Bank has coordinated the study of over 260 brains and confirmed CTE in over 150 athletes and military veterans.

This research program, in partnership with clinical and translational research programs at the BU CTE Center, has revolutionized how we understand the disease

Chronic Traumatic Encephalopathy (CTE)

Chronic Traumatic Encephalopathy (CTE) is a progressive degenerative disease of the brain found in athletes, military veterans, and others with a history of repetitive brain trauma. Brain trauma can cause a build-up of an abnormal type of a protein called tau, which slowly kills brain cells. Once started, these changes in the brain appear to continue to progress even after exposure to brain trauma has ended. Possible symptoms include memory loss, confusion, impaired judgment, paranoia, impulse control problems, aggression, depression, and eventually progressive dementia.

Symptoms can begin to appear months, years, or even decades after trauma has ended. Currently, CTE can only be diagnosed after death by brain tissue analysis.

The discovery of CTE in the brains of athletes like Mike Webster, Dave Duerson and Junior Seau has launched the disease firmly into the public consciousness. To date, 87 of 91 former NFL players whose brains were studied at the VA-BU-CLF Brain bank have been diagnosed with CTE.

Research

Research has shown over half of all head impacts and concussions in football occur during practice; in **middle school** soccer players there are **100,000 concussions caused by heading every three years**. In 2012, the Concussion Legacy Foundation led a movement to reduce hitting in football practices at the youth through professional levels.

Through our Safer Soccer campaign, we are now focused on delaying heading in soccer until high school. There is still a lot to do to make sports safer for all athletes and will continue to be on the forefront of research and education.

Impact of Playing American Youth or Professional Sports on Long-Term Brain Function



*The authors recruited 100 active and former National Football League players, representing 27 teams and all positions. Players underwent a clinical history, brain SPECT imaging, qEEG, and multiple neuropsychological measures, including MicroCog. Relative to a healthy-comparison group, players showed global decreased perfusion, especially in the prefrontal, temporal, parietal, and occipital lobes, and cerebellar regions. **Quantitative EEG findings were consistent, showing elevated slow waves in the frontal and temporal regions.** Significant decreases from normal values were found in most neuropsychological tests. This is the first large-scale brainimaging study to demonstrate significant differences consistent with a chronic brain trauma pattern in professional football players.*

(The Journal of Neuropsychiatry

Field House or School Program

Mission: To provide all students 6 years of age + a baseline “Brain Health Assessment” through our partnership program with <http://www.brainsinternational.com>

GOAL: 200,000 new baseline maps yearly from 100 targeted locations including schools and Fieldhouses. This would equal 20,000 treatment plans accepted .

HOW: Our trained QEEG Tech’s will be on site with all equipment needed to offer Brain Health Assessments. Set one is to offer every parent the opportunity to have a QEEG for their child **\$89.00**

Those Assessments are real-time sent to neurologist and within 1 hour a parent has a 20 page report emailed. It will show any brain wave issues and a concussion index.

If a child has a concussion index of mild or above parents will have a phone consultation with our Medical Director to go over treatment options.

Once treatment is agreed upon and payment arrangements are in place our QEEG Tech will work with parents to set-up appointments.

Typical treatment for concussion is 10 training appointments all inclusive for **\$1800.00**. Parents will have option for cash, credit card or our financing .

**School or
Fieldhouse with
Health Assessments
of 2000 per year will earn**

**\$140,000
net income!**

School Income Projections

\$50 per
student

500
Students
\$25,000 YR

1000
Students
\$50,000 YR

Field House Or Schools

2000
Students
\$100,000 YR

5000
Students
\$250,000 YR

David L. White
Chief Executive Officer



Founder

CONCUSSION Centers USA

- ▶ David brings many years of successful leadership and team building to Concussion Centers USA, Inc. He has held positions as CEO, President, Director of Operations, General Manager, Business Coach, Area Director and Regional Sales Manager.
- ▶ Spending many years in automotive, dental and third party logistics industries, his passion is the safety of youth sports.
- ▶ His belief is patients and customers should be treated like a "GUEST" in his home.
- ▶ David's other passion is coaching kids. He has several years of coaching children age 5-12 in basketball, football, soccer, and baseball. David is passionate about helping children achieve their best through sports and team building.
- ▶ As the CEO David oversees the quality of patient care, technology sourcing, team building, and overall success of everyone on the team.
- ▶ David believes an organization is only as good as the people it employs and the culture they create.

David Rose

Chief Operation Officer

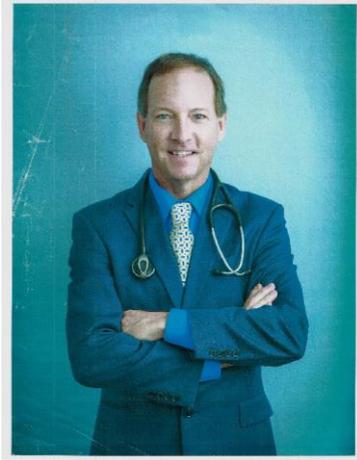


CONCUSSION Centers USA

- David Rose, Indianapolis native, Mr Rose has extensive background in Sales, Marketing, Management and Entrepreneurial Businesses and Ventures.
- Mr. Rose has owned, operated and managed Automobile Dealerships in Indiana, and a Luxury Rental Car Facility in Siesta Key, Florida. His background includes being VP of Entertainment, and New Business Development for The American Basketball Association, and traveled the country creating new alliances to promote and market the ABA Brand, while creating collaborative relationships to further dual initiatives.
- Mr Rose has worked and volunteered philanthropically, by lending his talents to support various charities and award scholarships to enhance the lives of underprivileged children.
- Mr. Rose is an essential part of our creative and business development, and his vision and ability to establish multiple layers of income streams and dual marketing platforms, is only matched by his consummate professionalism, both in his business acumen and appearance!
- Mr Rose will be instrumental in our introduction to Private and Public Schools, Colleges, Sports Leagues and IHSAA, and introduction to key individuals associated with both political and administrative authority to assist us in moving forward, through the red tape that sometimes is associated within this climate.

Dr. Steve Pfeiffer

Chief Medical Officer



CONCUSSION Centers USA

- Dr. Pfeiffer is a graduate of IU and Indiana School of Medicine.
- Dr. Pfeiffer has 25 years experience as a physician practicing functional medicine platforms utilizing both traditional and innovative holistic treatment protocols.
- Dr. Pfeiffer has a extensive background and understanding of QEEG and the benefits of Neurofeedback.
- Dr. Pfeiffer will organize and coordinate the Concussion Center Medical Staff, raise awareness of these powerful diagnostic technologies combined with emerging targeted treatment modalities."
-

Robert Thatcher President/CEO at Applied Neuroscience, Inc.

I. EDUCATION

University of Oregon, B.S. (Chemistry)

University of Waterloo (Waterloo, Canada), Ph.D. (Psychology, Specialty Biopsychology)

II. POSTDOCTORAL TRAINING

Albert Einstein College of Medicine, Post-doctoral Training (Neurobiology & Functional Neuroanatomy)

New York Medical College, Post-doctoral Training (Neurophysiology & Clinical Neuroscience)



Clinical Experience:

- 10,000 test reports using psychometrics and/or neuroimaging and/or electrophysiology.
- Clinical neuroscientist at the New York Medical College quantitative EEG clinic.
- Developed the first QEEG certification examination at NYU School of Medicine.
- Founded and directed the Neurometric Clinical Service at Shock Trauma, University of Maryland during which approximately 1,500 head trauma patients were evaluated.
- Patient experience includes children with learning disabilities and ADD, adults with tumors, strokes and mild and severe brain injury.
- Computerized EEG evaluator and report writer for Traumatic Brain Injured (TBI) patients as part of the Department of Defense and Veterans Head Injury Program (DVHIP).
- Responsible for training of neurology residents in clinical computerized EEG and clinical evoked potential analyses of various types of neurological disorders.

Benefits of Students with Healthy Brains!

Better Sports - Better Academics - Better Students

Head injuries exist in 25% of your students. It's our job to keep you in compliance and inform parents of treatment needs so that kids don't develop long-term brain issues.

Not only will we have excellent trained staff we will educate your team so everyone will know what to expect and what happens when head trauma occurs on your property.

Students with concussions will have the ability to enter treatment and be released only when they are safe to play sports again. No guess work.

Parents will be notified by CCUSA doctors with abnormal brain waves and treatment will be discussed. This will help in areas of ADHD as well.

To learn more on how your school or fieldhouse can participate in

“HEALTH BRAIN ASSESSMENTS”

REACH us AT

CONCUSSION Centers USA

davidr@concussionusa.com