CONCUSSIONOLOGY®

The Science, Philosophy and Art of Diagnosing and Treating Mild Traumatic Brain injury/Concussion.

**PURPOSE:** This first seminar is designed to introduce the practitioner to the diagnosis and management of mTBI/Concussion beginning with the expertise he / she currently has AND progressing to a state of the art practice that is equivalent to or better than the medical approach.

***CONCUSSIONOLOGY® Module 1***

Introduction to the Diagnosis and Treatment of mTBI/Concussion

Overview of 4 part seminar series

The Ideal Model Clinic - Physical Plant to Diagnose and Treat mTBI and Concussions.

The Ideal Model of ALL Techniques and Technology to Diagnose and Treat mTBI and Concussions.

Return To Learn protocol – this tool is a guideline for managing a students return to school following a concussion. Three models are presented.

* CDC recommendations
* BCINJURY recommendations
* State of Illinois recommendations

Return To Play requirements. A specific protocol with 6 stages of physical effort that must be met in order for an athlete to return to play,

The Epidemiology, Classification and Grading of mTBI/Concussion. Research from the CDC and Stanford University will be presented with video documentation illustrating mechanism and complicated biomechanics of brain trauma.

Classification and Grades of Concussion

The Pathophysiology and Consequences of mTBI/Concussion including:

* 2nd Impact Syndrome
* Societal Consequences
* Neurodegeneration
* Apoptosis
* Current Costs of Therapeutic Intervention

The Signs and Symptoms of mTBI/Concussion.

* Physical
* Emotional
* Mental/Intellectual
* Sleep

The Metabolic Effects of Concussion – the introduction of the 8 metabolic sequelae of head trauma in their simplest forms are presented.

Inflammation

* Loss of Blood Flow
* Calcium Overload
* Hemorrhage
* Hormone Storm
* Glutamate Surge
* Inflammatory Cascade
* Fatigue of Brain-Adrenal Axis
* Energy Failure

Specific Examination Protocols for Inflammation

7 protocols to evaluate short term and long term evidence of inflammation will be presented from various disciplines.

* AROMs
* Flexor Withdrawal Reflex
* Therapy Localization
* Nociceptive Challenge
* Pari Aquaductal Gray Protocol
* Dorsal Root Ganglion
* Cholinergic Vagus Protocol

Introduction to neurotransmitter function and their role in mTBI/Concussion.

* Norepinephrine
* GABA
* Acetylcholine
* Serotonin
* Dopamine

Braverman examination protocol for neurotransmitters is presented.

Examination protocols for mTBI/Concussion

A multi-disciplinary approach to examining the injured patient will include exams, tests and protocols in the following categories:

* On Site Exam at athletic Event
* SCAT5, Child SCAT5, Parent SCAT5

Examination procedures in private practice

* Chiropractic / Osteopathic
* Orthopaedics – Cervical Spine
* Neurology – peripheral nervous system
* Physical Exam
* Functional Neurological Assessment - myotomes
* Cranial Examination – cranial nerves, vestibular function, ocular function

Lab Examination

A review of blood, urine and saliva tests appropriate for mTBI/Concussion is presented with support from the scientific literature will be presented.

Treatment Parametres and Introduction To Brain Treatment Strategies is presented with support from the scientific literature.

* Chiropractic / Osteopathic
* Cranial Therapy
* Metabolic Nutrition
* Acupuncture
* Low Level Laser Therapy
* HBOT

Rehabilitation Protocols are presented.

* Rehab Exercises
* Vestibular Therapy
* Optikokenetic Therapy
* Cardiovascular Therapy

Review of mTBI/Concussion in private chiropractic practice.

Epodemiology

Sequelae

Examination Protocols

Treatment Protocols

Return to Play, Return To Learn Protocols