Utilizing Neuro-Orthopedic Rehabilitation and Functional Neurology to Treat Concussions and Post-Auto Whiplash

Erik Reis, DC, DACNB, CBIS

About the Seminar:
We will dive into understanding the physiology, anatomy, and neurometabolic outcomes that occur with these conditions, which will be paired together with clinical examination exercises and demonstrations to give the attendees a better understanding of how to diagnose and treat these debilitating conditions. As a brain injury specialist, Dr. Erik Reis, DC, DACNB, CBIS knows the long-term impact of TBI, concussions & whiplash, especially how their influences extend systemically long past traumatic event. Dr. Reis will guide attendees on how to tap into the brain's connection through proven therapies & interventions to yield maximum patient & practice results.

About Dr. Erik Reis:
Erik Reis, DC, DACNB is a Doctor of Chiropractic Medicine and Board-Certified Chiropractic Neurologist at The Neural Connection. He received his Doctorate in Chiropractic from Northwestern Health Sciences University, graduating with magna cum laude honors. Dr. Reis currently holds a diplomate in functional neurology from the American Chiropractic Neurology Board and has completed thousands of hours of additional post-graduate coursework utilizing clinical applications and therapeutic interventions in the neurological and nutritional rehabilitation of traumatic brain injuries, concussions, and vestibular disorders through the Carrick Institute of Clinical Neuroscience.

Learning Objectives:
1. Discuss the etiology, pathophysiology, and symptoms of concussion and post-auto whiplash.
2. Understand the structural, neurological, and metabolic cascade of trauma as it relates to the brain and body.
3. Share relevant research discussing neuro-orthopedic and functional neurological rehabilitation.
4. Adopt best practices and evidence-based assessments for diagnosing and treating concussions and post-auto whiplash.

7:30-8:00 AM - Registration/Coffee/Breakfast

(Basic Sciences)

8:00-8:30 AM - Introduction to Brain-Based Therapies/Neuro-Orthopedic Rehabilitation for Concussions & Post-Auto Whiplash
- Discuss the etiology, pathophysiology, and symptoms of concussion and post-auto whiplash.
- Talk about Functional Neurology and Neuro-Orthopedic Rehabilitation models.
- Share how this information integrates with all aspects of clinical practice within the chiropractic and manual therapy professions.

(Basic Sciences)

8:30 - 9:30 AM - Neuron Theory/Neuroplasticity
- Discuss neuron theory and cellular communication in the PNS/CNS.
- Understand neuroplasticity and relevant updated research.
- Share ideas about how to change the brain and body by using sensory inputs to modify central circuits.
- Give an overview of top-down vs. bottom-up integration of neural systems in the brain.

(Principles of Practice/Philosophy)

9:30 AM - 10:30 AM - Cerebellum & Chiropractic Medicine/Breakout Sessions w/Bedside Testing

- Discuss the anatomy and physiology of the cerebellum.
- Understand how changes in cerebellar function affect the brain and body following a concussion.
- Share various theories and thought processes behind cerebellar rehabilitation.
- Hands-On Training: Bedside testing of the cerebellum (15 minutes).

10:30 - 10:45 AM - Break

(Principles of Practice/Philosophy)

10:45 AM - 12:15 PM - Autonomics/Gut-Brain Axis/Neuro-Inflammatory Cascade w/Bedside Testing

- Discuss the interplay between the sympathetic and parasympathetic systems.
- Understand how changes in autonomic function affect the brain and body following a concussion.
- Share relevant research about the gut/brain connection.
- Give an overview of the neuro-inflammatory cascade of trauma.
- Hands-On Training: Bedside testing of autonomics (15 - 30 minutes).

12:15 - 12:30 PM - Questions

12:30 - 1:30 PM - Lunch

(Principles of Practice/Philosophy)

1:30 - 2:30 PM - Vestibular System/Breakout Sessions w/Bedside Testing

- Discuss the anatomy and physiology of the vestibular system.
- Understand how changes in the vestibular system affect the brain and body following a concussion.
- Share the theories and thought processes behind vestibular rehabilitation.
- Hands-On Training: Bedside testing of the vestibular system (15 minutes).

(Principles of Practice/Philosophy)

2:30 - 3:30 PM - Visual Systems/Breakout Sessions w/Bedside Testing

- Discuss the anatomy and physiology of the visual system.
- Understand how changes in the visual system affect the brain and body following a concussion.
- Share the theories and thought processes behind visual and visuo-vestibular rehabilitation.
- Hands-On Training: Bedside testing of the visual system (15 minutes).

3:30 - 3:45 PM - Break

(Philosophy of Chiropractic)

3:45 – 4:30 PM - Cervical Spine/Proprioception w/Bedside Testing

- Discuss the anatomy and physiology of the cervical spine and associated structures of the neck.
- Give an overview of the interplay between the musculature of the spine and visuo-vestibular inputs.

(Philosophy of Chiropractic)

4:30 – 5:15 PM - Bedside Neuro-Orthopedic Examination

- Perform a demonstration of a neuro-orthopedic examination to show the integration of all of these systems discussed.

(Other)

5:15 – 5:30 PM - Questions/Closing