**The Review
- A Comprehensive Analysis of Today's Healthcare Topics -**

Date: January 26th-27th, 2024

Hours: 14

Location: Westminster, CO (Live Stream or In Person)

Instructors: Dan Murphy, DC, DABCO & Trevor Berry, DC, DACNB

Learning Objectives

* Assess America’s Health by identifying the primary healthcare issues in America today
* Breakdown the Essential Eight factors/habits that improve health, reduce the risk of health problems that would otherwise require provider interventions
* Summarize Mechanical Integrity - the importance of mechanical integrity with an emphasis on inflammation, fibrosis, and mechanical neurology
* Breakdown photobiology & low-level laser and how it applies to office visit
* Outline the importance of blood flow as the key component of human physiology, with an emphasis on mitochondrial ATP production
* Summarize the importance of the mitochondria in health and disease and discuss the relationship between the mitochondria, free radicals and ATP
* Summarize & Evaluate the importance of ATP in human physiology
* Learn key physiological functions of ATP
* Support the relationship between mitochondria, free radicals, ATP, cytochrome c oxidase enzyme, and laser photon therapy through basic sciences
* Integrate biphasic nature of laser photon therapy, wavelengths, amperage, penetration, secondary and primary physiological influences
* Differentiate scientifically based laser applications of diverse nanometers for introductory and advanced patient applications
* Discover protocol for brain function: trauma, degenerative, vascular
* Demonstrate protocol for chronic low back pain
* Apply protocol for acute whiplash
* Integrate protocol for scar tissue and the fibrosis of repair
* Understand Basic Neurophysiology - the mechanism of healthy neuronal function and the foundation for neuroplasticity
* Summarize & Explain Neuropathophysiology.
* Categorize the mechanisms of neuronal disruption and cell death
* Describe how lasers effect the common causes of neuronal injury
* Measure the economic impact of neurological conditions in America.
* Empathize Neuro degeneration and pain conditions and how we can influence the economic burden.
* Reproduce technique to influence the central nervous system and human body function
* Critique technology implementation for today's practice
* Integrate balance testing through using objective biomarkers for outcome assessments
* Utilize lab markers and nutrition to facilitate healthy neurological and immune support
* Justify condition specific technique and applications for the most common neurological and chiropractic conditions
* Outline FDA Market Cleared laser research and clinical applications
* Support medical necessity through FDA cleared research
* Demonstrate hands-on applications through workshops and their influence on the central nervous system
* Summarize review of research, physiology, clinical applications and techniques

FRIDAY 12:00-8:30pm

**11:30 – 12:00 p.m. Registration**

**12:00 – 1:00 p.m. Review Aging Theories (Basic Sciences) (Dr. Dan Murphy)**

• The Free Radical Theory of Aging

• The Nitric Oxide Theory of Aging

**1:00 – 2:00 p.m. The 2021 Nobel Prize (Philosophy of Chiropractic) (Dr. Dan Murphy)**

• Integrating the chiropractic care, innate nutrition, supplements, and laser physiology around the 2021 Nobel Prize

**2:00-2:15 p.m. Break**

**2:15 – 3:15 p.m. Advanced Brain Protocols (Examination Procedures & Diagnosis) (Dr. Trevor Berry)**

* Introduction to barrier systems (Leaky gut/Leaky brain), lab markers and clinical

implications for CNS pathogens

**3:15 – 4:15 p.m. Basic Neurological Bedside Examination (Examination Procedures & Diagnosis) (Dr. Trevor Berry)
with LLLT as a Diagnostic and Therapeutic Tool**

* Basic and advanced brain protocols
* Vagal nerve stimulation protocols and barrier system repair
* Lab markers and nutrition for barrier systems
* Hands on demo CNS algorithm

**4:15 – 5:15 p.m. Lunch**

**5:15 – 6:15 p.m. Neurochemistry and Related Disorders (Physical Therapy/Physiological Therapeutics) (Dr. Trevor Berry)
and How LLLT can be used**

* Neurological conditions and treatment applications

**6:15-7:15 p.m. Introduction to the Neurology of Pain (Adjustive Technique) (Dr. Trevor Berry)**

* Centralization of pain and PNS to CNS upstream pain LLLT algorithm
* Midline stabilization, fall prevention and balance integration
* Hands on demo for neurology of pain

**7:15 – 7:30 p.m. Break**

**7:30 – 8:30pm The Electromagnetic Spectrum (Basic Sciences) (Dr. Dan Murphy)**

**•** Learn the basics of both visible and invisible “light”

• Integrate wavelength, frequency, energy, depth of penetration, ionization, voltage-gated calcium ion channels, and perioxynitrate

SATURDAY 8:00-4:30pm

**7:30 – 8:00 a.m. Registration**

**8:00 – 9:00 a.m. Laser Physiology (Basic Sciences) (Dr. Dan Murphy)**

**•** Discuss the biphasic nature of laser photon therapy, wavelength (colors), pulsing, speed of light, fluence, secondary and primary physiological influences

• Discuss the biphasic nature of laser photon therapy, including bell-shaped curve, hormesis, and the Arndt-Shultz Law of biology

**Cell Biology**

• Distinguish between Glycolysis, Krebs Cycle, and Electron Transport Chain metabolism

* Learn the details of the mitochondrial electron transport chain

**9:00 – 10:00 a.m. Low Back Pain and Gut Protocols (Examination Procedures & Diagnosis) (Dr. Dan Murphy)**

• A poly-therapeutic integrative approach for chronic low back pain

• Protocol for influencing immunology and the brain through the intestinal tract; integrating the vagus nerve and the nucleus tractus solitarius

**10:00 – 10:15 a.m. Break**

**10:00 – 11:15 a.m. Whiplash Injury and Thoracic Outlet Syndrome Protocols (Adjustive Technique) (Dr. Dan Murphy)**

• A protocol for acute and chronic whiplash injury

• A protocol for Thoracic Outlet Syndrome

**11:15 – 12:15 p.m. Brain Protocol (Examination Procedures & Diagnosis) (Dr. Dan Murphy)**

• A protocol for brain function; integrating trauma, degenerative, and vascular compromise

• A protocol for cognitive enhancement

**12:15 – 1:15 p.m. Lunch**

**1:15 – 2:15 p.m. Neurological Conditions & Case Studies (Examination Procedures & Diagnosis) (Dr. Trevor Berry)**

* LLLT and mirror therapies/advanced neuro rehab for complex conditions
* Trigeminal neuralgia
* Tinnitus

**2:15 – 2:30 p.m. Break**

**2:30 – 3:30 p.m. Neurological Conditions & Case Studies (Continued) (Examination Procedures & Diagnosis) (Dr. Trevor Berry)**

* LLLT and mirror therapies/advanced neuro rehab for complex conditions
* Trigeminal neuralgia
* Tinnitus

**3:30 – 4:30pm Case Studies (Examination Procedures & Diagnosis) (Dr. Trevor Berry)**

* Course review
* Closing remarks