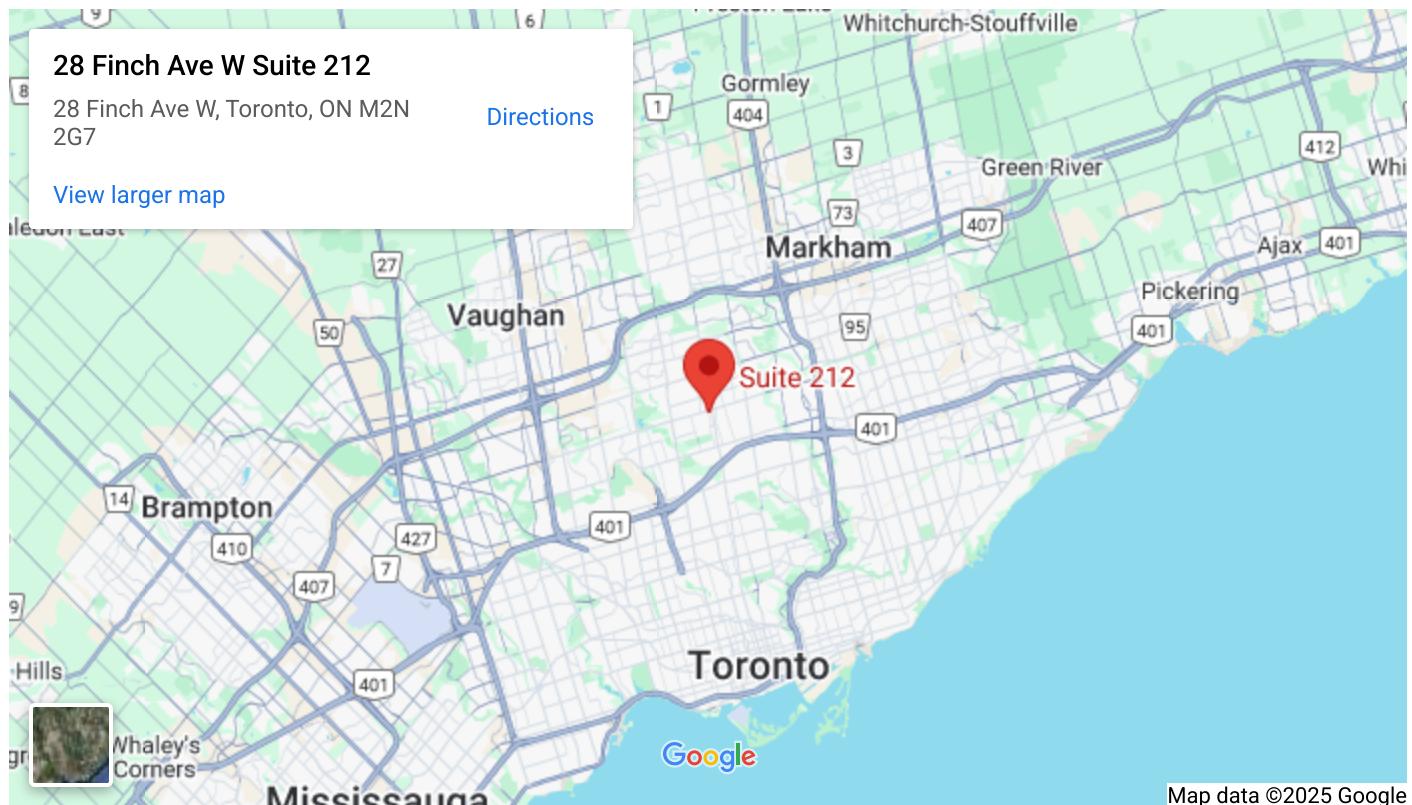


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Whiplash Traumatology and Treatment: Injury Mechanisms, Neurophysiology, Pain, Special Testing and Treatment



Course Date

Start: 01-11-2023 @ 10:00 am

End: 01-11-2025 @ 6:30 pm

Course Location

Online – On Demand

28 Finch Avenue West, Suite 212
Toronto
Ontario
M2N2G7
Canada

Course Description

Course Presenter:

Jason Mazzarella, DC, DAAPM, DCAPM, DAAETS, FIAMA, MVC-FRA, CATSM, CBIS, CMVT, CPM, CDRSC, CDAAC, BSc Kin, BSc HPA

Dr. Jason Mazzarella, the director of the North American Spine Institute has been actively engaged in Whiplash Traumatology and Treatment for the past 19 years. He has developed and lectured on the topics of Whiplash Traumatology and Treatment that were accredited for Chiropractic and Medical continuing education.

Academically, Dr. Mazzarella has reviewed over 20,000 research articles to date on Whiplash Traumatology, Chronic Pain, Crash Forensics, mild Traumatic Brain Injury, has developed and lectured both nationally and internationally on the topics of Whiplash Traumatology and Chronic Pain. His Whiplash Seminar Series (105 credit hours) was taught in 2008-2010 and is the only program on Whiplash ever to be accredited by both the Chiropractic and Medical community. Dr. Mazzarella has developed continuing education programs for the Toronto Police College on Accident Reconstruction, the Ontario Kinesiology Association on Nerve Mobilization, the American Chiropractic Association on Whiplash Traumatology and Treatment and Chronic Pain, McMasters University Medical School on Whiplash and Crash Forensics, and has spoken at numerous Chronic Pain symposiums.

Clinically, Dr. Mazzarella has treated and assessed over 40,000 motor vehicle accident patients and actively runs a Whiplash Traumatology and Chronic Pain treatment center located in Toronto, Ontario Canada. He has been selected as a medical advisor to Allstate Insurance Company to review and make recommendations on the provincial treatment guidelines for Whiplash. He has also been selected as a preferred treatment and assessment provider by Allstate Insurance

Company, Pembridge Insurance Company, PAFCO Insurance Company, and Echelon Insurance Company.

Professionally, Dr. Mazzarella was elected as a board member by the Canadian Institute for the Relief of Pain and Disability, elected as a medical board journal review member by the Journal of Anesthesia & Pain Research, qualified as a Medical Expert in Virginia USA, and has appeared on Rogers TV on Daytime Toronto to discuss Physical Medicine Pain Management.

Program Contact:

Dr. Jason Mazzarella

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Email: info@JasonMazzarella.com

Course Outline:

Seminar Topics – Topics 35Credit Hours (approximately 8 credit hours per module)

Module 1: Motor Vehicle Crash Forensics

Presentation Format – Online – On Demand

- What is Crash Forensics
- Types of Collision Vectors / PDOF
 - Roll over
- Rear Impact
 - Phases of Injury/Sequence of Events
 - General Crash Times – Kinematic response in msec.
 - Reverse S Curve
 - Neurophysiological consequences
 - Example Live Crash Testing
 - Common Injury Patterns Assessment and Diagnosis
 - Acceleration Deceleration Injury Patterns
- Front Impact
 - Phases of Injury/Sequence of Events
 - Kinematic Response

- Side Impact
 - Phases of Injury/Sequence of Events
 - Kinematic Response Near Side Collision
 - Kinematic Response Far Side Collision
- Special Considerations
 - Elastic vs. Plastic Collisions
 - Human factors affecting injury outcome
 - Force loads acting on the spine
- Accident Risk Factors
 - Acute Risk Factors
 - Late/Chronic Risk Factors
- Accident Reconstruction and Injury
 - ACR it's start in personal injury
 - General objective of ACR
 - ACR and Injury Analysis
 - ACR and court rulings on injury
- Introduction to Event Data Recorders

Module 2: Physical Examination

Presentation Format – Online – On Demand

- History and Intake
- Relevant Past Medical History
- Physical Examination – Muscle
- Physical Examination – Neurological
 - Trauma Neurology
 - Spinal Cord Hypersensitivity after Trauma
 - Glia Cell Response
 - Brain fMRI studies and pain
 - Receptive Field enlargement
- Consideration of alterations in Endocrine function
 - Hypothalamus controls limbic system and affect on autonomic and endocrine function.
 - Hypothalamus role in regulating neuroendocrine and immune response.
- Physical Examination – Vestibular
- Physical Examination – Orthopedic
- Types of Referred Pain
 - Neurotome
 - Angiotome
 - Dermatome

- Myotome
- Sclerotome
- Viscerotomes
- Whiplash Traumatology Associated Common Syndromes/Disorders
 - Thoracic Outlet Syndrome
 - Carpal Tunnel Syndrome
 - Headaches
 - Sacroiliac Joint Injury
 - Vestibular Injury
 - Tinnitus
 - Traumatic Stress – Psychological components of Injury and Pain
 - Memory Acquisition and Storage

Module 3: Neurophysiology

Presentation Format – Online – On Demand

- Concussion Injury Mechanisms
 - Coup Counter Coup Injuries
 - Pressure Gradient Injuries
 - Diffuse Axonal Injuries
 - Closed Head Injuries
- Concussion Sub-Types
 - Mild Traumatic Brain Injury
 - Blood Brain Barrier Disruption
 - White Matter Disruption
 - Grey Matter Disruption
 - Head Injury
 - Post-Concussion Syndrome
 - General Cognitive Processing Ability
 - Reduced Cerebral Metabolism
- Neuropathy Injury Mechanisms
 - Human Factors – Steering Wheel
 - Crash Factors – Offset Collision
 - Vehicle Factors – Seatbelt and Airbag
- Traumatic Stress
- Pain Pathophysiology
 - Pain Terminology
 - Pain Pathophysiology
 - Pain Generators

- Pain Fiber Evaluation and Testing
- Pain Neurotransmitters
- Pain Response
 - Inflammation
 - Muscle Guarding/Splinting
 - Altered Biomechanics
- Digital Algometry Testing
- Nerve Adhesion Testing
- Biomechanics in Pain Assessment
- Neurophysiological Special Testing
 - Quantitive Electroencephalography (qEEG)
 - Surface Electromyography (sEMG)
 - Electromyography (EMG)
 - Nerve Conduction Velocity (NCV)
 - Motor NCV study
 - Sensory NCV study
 - AMA Guidelines 6° Edition Impairment

Module 4: Treatment and Medicolegal Concepts

Presentation Format – Online – On Demand

- Vestibular Testing
 - Electronystagmography (ENG)
 - Visual Evoked Potentials (VEP)
 - Somatosensory Evoked Potentials (SEP)
 - Posturography Computerized Testing
 - AMA Guidelines 6° Edition Impairment

Physical Medicine Treatment Options and Protocol

- Postural Analysis
- Cervical Traction
- Alpha Stimulation
- Photobiomodulation
- Pulsed Radio Frequency
- Neurofeedback
- Biofeedback
- Nutrition
- Spinal Manipulation

- Acupuncture
 - Traditional Chinese Acupuncture
 - C-Fiber / Chronic
 - Auricular Acupuncture
 - fMRI Studies
 - Whiplash Treatment Options
- Electrical Therapy
 -
- Laser Therapy
- Exercise
 - Strengthening
 - Neurokinetic Exercises
 - Muscle Re-Education
 - Vestibular Exercises
 - Nerve Mobilization
- Massage Therapy
 - Lymph Drainage
 - Trigger Point Therapy
 - Counter Rotation
- Medical
 - Opioid Usage
 - Pharmaceuticals
 - Injections
 - Trigger Point Injections
 - Nerve Blocks
 - Epidural Steroid Injections (ESI)
 - Botox
 - Radiofrequency Neurotomy (RFN)
 - Surgery
- Complementary Care Post Rehabilitation
 - Yoga
 - Pilates
- Consequences of Inadequate or Under Treatment

Additional Special Testing

- Radiographic Examination
 - Primary Views of Consideration
 - Primary Lines of Measurement

- Standard of Care – Davis Series
- Videofluoscopy Examination
- MRI Examination
 - Diffuse Tensor Imaging (DTI)
 - Magnetic Transfer Imaging (MTI)
 - Magnetic Resonance Spectroscopy (MRS)
 - Magnetic Source Imaging (MSI)
 - Functional MRI (fMRI)
 - BOLD fMRI (Blood Oxygen Level Dependent fMRI)
 - Contrast-Enhanced MRI
 - PET (Positron Emission Tomography)
 - Radionuclide Bone Scan
 - SPECT (Single Photon Emission Computed Tomography)
- CT Examination
 - Myelography
- Discography
- Bone Scan
- Thermography
- Regional Cerebral Bloodflow Perfusion Examination
- POCUS US
 - Angiography and Color-Coded Duplex Sonography (CCDS)
 - Muscular Evaluation

Sample Assessment and Report Writing – MedLegal

- Sample report review
 - Documentation
 - Intake and Examination Forms
 - Outcome Assessments
 - Report Writing for Success
 - Medical Review and Rebuttals
 - Example Rebuttal Reports.
 - What I learned as a Preferred Provider for Allstate.

Module 5: Research Symposium

Presentation Format – Online – On Demand

- Review of the relevant research published every 3 months.

- Recommendations on how to implement this into Whiplash Traumatology Assessment, Diagnosis, Treatment and Patient Care

Background Reading:

1. Fox S, Croft A: Whiplash Injuries: The Cervical Acceleration / Deceleration Syndrome. Lippincott Williams & Wilkins Nov 1, 1995.

Website

<https://www.DrJasonMazzarella.com>

Course Credits

34

Course Contact

If you are interested in taking this course, please contact the course provider.

Dr. Jason Mazzarella

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[Download File Attachment](#)



Contact Us

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