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## EXPERIENCE

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### **Doctor – Universal Health & Rehabilitation, PC** *Toronto, Ontario*

2008 – Present

- Patient Treatment
- Web Design and Publication
- App Design and Production/Distribution
- Business Administrative Duties and Functions
- Social Media Marketing
- Preferred Provider Allstate Insurance Company of Canada – MVA Treatment Services
- Preferred Provider Pembridge Insurance Company – MVA Treatment Services
- Preferred Provider PAFCO Insurance Company – MVA Treatment Services

#### Treatment Services Include

- Chiropractic Care (CMT-D, SOT, Drop, Flexion/Distracton)
- Physiotherapy
- Acupuncture (Needle and Electrical)
- Kinesiology
- Nerve Mobilization
- Vestibular and Concussion Rehabilitation

### **Director - North American Spine Institute, Inc.** *Toronto, Ontario*

2006 – Present

- Independent Medical Review and Assessment
- Post Graduate Instructor and Educator
- Medical Management and Consulting
- Medical Witness - Medical Expert Testimony Services (USA and Canada)
- Preferred Provider, Crash Forensics Assessments – Gore Mutual Insurance Company

#### Independent Medical Assessment Services Include:

- Motor Vehicle Crash Forensics Risk Analysis Examination and Assessments
  - o Completed 44 Assessments
- Chronic Pain Assessments
  - o Completed 984 Assessments
- Mild Traumatic Brain Injury Assessments
  - o Completed 882 Assessments
- Work Site Assessments
  - o Completed 33 Assessments
- Physical Demands Analysis Assessments
  - o Completed 185 Assessments
- Functional Demands Analysis Assessments
  - o Completed 35 Assessments
- Minor Injury Guideline/Whiplash Guideline Assessments for Appropriateness
  - o Completed 59 Assessments
- In Home Assessments
  - o Completed 598 Assessments
- Disability Evaluation Assessments
  - o Completed 1293 Assessments
- Orthotic Gait Analysis Assessments
  - o Completed 69 Assessments
- Rebuttal Independent Medical Assessments

- Completed 987 Assessments
- Independent Medical Assessments plaintiff and defense
  - Completed 56 Assessments

**Medical Advisor / Consultant – Allstate Insurance Company of Canada** 2015 – Present  
*Markham, Ontario*

- Independent Medical Review for Quality and Appropriateness of Medical Assessments

**Medical Advisor / Consultant – Pembridge Insurance Company** 2015 – Present  
*Markham, Ontario*

- Independent Medical Review for Quality and Appropriateness of Medical Assessments

**Medical Advisor / Consultant – PAFCO Insurance Company** 2015 – Present  
*Markham, Ontario*

- Independent Medical Review for Quality and Appropriateness of Medical Assessments

**Medical Advisor / Consultant – Crawford Insurance Company** 2015 – Present  
*Hamilton, Ontario*

- Independent Medical Review for Quality and Appropriateness of Medical Assessments

## EDUCATION

**New York Chiropractic College** 2003 – 2006  
*Seneca Falls, New York*

- Doctor of Chiropractic Degree
- United States Olympic Training Center Elite Science Rotation 2004
- Buffalo New York Veteran’s Hospital 4 month Orthopaedic Rotation 2005
- Buffalo New York Veteran’s Hospital 4 month Chiropractic Rotation 2005
- Buffalo MRI & CT Rotation 2005
- Erie County Medical Centre Emergency Room Rotation 2005
- Western NY MRI Rotation 2006
- Externships
  - Espy Chiropractic 2004
  - Cox Chiropractic 2005
  - Mineral Springs Chiropractic 2005 – 2006
- Completed over 5040 contact hours of training.
- Licenses
  - Pennsylvania Chiropractic License 2006 – Present
  - Pennsylvania Physiotherapy Board Certification 2006 – Present
  - Virginia Chiropractic License 2006 – 2014
  - New York Chiropractic License 2008 – Present
  - National Board of Chiropractic Examiners
    - Part 1
    - Part 2
    - Part 3
    - Part 4
    - Ancillary Procedures
  - Canadian Chiropractic Examination Board
    - Part 1
    - Part 2
    - Part 3

**Pennsylvania State University**

1997-2001

*State College, Pennsylvania*

- Bachelor of Science – Kinesiology Movement Science
- Internship
  - o Centre Chiropractic 2000
  - o Centre Industrial Rehabilitation Associates 2001

**Pennsylvania State University**

1997-2001

*State College, Pennsylvania*

- Bachelor of Science – Health Policy and Administration
- Internship
  - o Windber Medical Center 2000
    - Worked in conjunction with Walter Reed Medical Center in implementing the Dr. Dean Ornish Program for reducing Coronary Artery Disease
  - o Windber Medical Center – HealthStyles 2000
- Externships
  - o Conemaugh Memorial Medical Center 2000
  - o Prince William Health Systems 2005
  - o Annaburg Manor 2005

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**EDUCATION – POST GRADUATE**

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**Toronto Police College**

2013

Toronto, Ontario

- Accident Reconstruction Level 3 Certification
- Contact Hours: 80

Training:

- Drag Factor Determinations
- Grade and Super Evaluation Determinations
- Speed Distance Determination
- Skid to Stop Distance Determination
- Negative Skid to Stop Distance Determination
- Roadway Evidence
- Scaled Diagrams
- Fall, Flip and Vault Speed Calculations
- Yaw Speed Calculations
- Critical Curve Speed Calculations and Analysis
- Dynamic Testing
- Vehicle Dynamics
- Radius Determination
- Lamp Examination
- Tire Examination
- Pedestrian Collision
- Systematic Collision Investigation
- Crush Analysis
  
- At Scene Accident Photography
- Dangerous Goods
- Time Distance Measurements
- Restraint System Evaluation
- Tire Mark Evaluation (Skid Marks, Tire Marks, Imprints, Yaw Marks)

- Interview Techniques
- Series of Events
- Vehicle Dynamics

**Toronto Police College**  
Toronto, Ontario

2012

- Accident Reconstruction Level 2 Certification
- Contact Hours: 80

Training:

- Drag Factor Determinations and Grade Evaluation
- Speed Distance Determination
- Skid to Stop Distance Determination
- Negative Skid to Stop Distance Determination
- Roadway Evidence
- Scaled Diagrams
- At Scene Accident Photography
- Dangerous Goods
- Time Distance Measurements
- Restraint System Evaluation
- Tire Mark Evaluation (Skid Marks, Tire Marks, Imprints, Yaw Marks)
- Interview Techniques
- Series of Events
- Vehicle Dynamics

**Toronto Police College**  
Toronto, Ontario

2011

- Crash Data Retrieval System Operators (Technician) Certification
- Contact Hours: 80
- Accredited by:
  - o Canadian Association of Technical Accident Investigators and Reconstructionist (CATAIR)
  - o Accreditation Commission for Traffic Accident Reconstruction (ACTAR)
- Training
- CDR System Components
- Vehicle Coverage
- Software Operations and Data Collection Analysis and Application for:
  - o Chrysler
  - o Ford
  - o GM

**Toronto Police College**  
Toronto, Ontario

2011

- Crash Data Analysis and Applications Certification
- Contact Hours: 80
- Accredited by:
  - o Canadian Association of Technical Accident Investigators and Reconstructionist (CATAIR)
  - o Accreditation Commission for Traffic Accident Reconstruction (ACTAR)
- Training
- CDR System Components

- Vehicle Coverage
- Software Operations and Data Collection Analysis and Application for:
  - o Chrysler
  - o Ford
  - o GM
- Delta V Reconstruction
- PDOF Reconstruction
- Other Variable Parameters Reconstruction

**Ontario Kinesiology Association**

2009-2012

Mississauga, Ontario

- Certified Kinesiologist
- Assessment and Treatment of Human Movement
- Assessment of Performance and its rehabilitation and management.

**Canadian Academy of Pain Management**

2011

Hamilton, Ontario

- Diplomate – Pain Management
- Multidisciplinary patient centered management and examination training - Rehabilitation

**Northwestern University of Public Health**

2010 – 2011

Chicago, Illinois

- Certification – Crash Investigation 1
- Contact Hours: 80

Training

- Preparation for Traffic Crash Investigation
- Information from and about people
- Information from Vehicles
- Information from Roads
- Measuring and Mapping the Crash Scene
- Photography of the Crash Scene and Damaged Vehicles

**Northwestern University of Public Health**

2010 – 2011

Chicago, Illinois

- Certification – Crash Investigation 2
- Contact Hours: 80

Training

- Vehicle Damage Analysis
- Vehicle Behaviour
- Tire Damage Analysis
- Measurements and Methods
- Lamp and Filament Analysis
- Interpretation of Data and Specialized Data Gathering

**Spine Research Institute of San Diego**

2005 - 2011

*San Diego, California*

- Certificate – Whiplash and Brain Traumatology
- 48 Contact Hours

Topics Included:

- Biomechanics of Whiplash Injury
- Occupant Kinematics
- Automobile Crash Reconstruction Methods
- Current Research and Knowledge of Soft Tissue, Endocrinological, Bony and Nervous System Disorders
- Advanced Imaging Techniques – Whiplash
- Comprehensive Case Management of Whiplash and Related Disorders

**American Academy of Pain Management**

2011

Sonora, California

- Diplomate – Pain Management
- Multidisciplinary patient centered management and examination training

Topics Include:

- History of Pain
- Fibromyalgia
- Neuroscience of Pain and Analgesia
- Overview of Pain Concepts and Classifications
- Culture and Pain
- Pain and the Family
- Sex, Gender, and Pain
- Racial and Ethnic Issues in Chronic Pain Management
- Assuring the Quality of Pain Service, Assessing and Outcomes
- Chronic Pain and Addiction
- Opioid Therapy for Chronic Noncancer Pain
- The Role of Nursing in Pain Management
- Allopathic Specialists
- Pain Management and Dentistry
- Podiatric Medicine and the Painful Heel
- Chronic Spinal Pain
- Occupational Therapy
- Physical Therapy and Pain Management
- Social Work
- Vocational Rehabilitation
- The Pharmacist Role in Pain Management
- The Role of the Chaplain
- Acute Pain Management
- Neuropathic Pain
- Primary Headache Disorders
- Post-Traumatic Headache: Diagnosis, Pathophysiology and Treatment
- Temporomandibular Joint Dysfunction
- Abdominal Pain
- Fundamental Concepts in the Diagnosis of Low Back Pain
- Chronic Pelvic Pain
- Urologic Pain
- Rheumatologic Pain
- Orthopaedic Pain
- Treatment of Myofascial Pain Syndromes
- Complex Regional Pain Syndrome Types 1 and 2
- HIV and AIDS in Pain
- Injuries from Motor Vehicle Accidents
- Diagnosis and Management of Electrical Injury
- Psychological Assessment Tools in Clinical Pain Management
- Laboratory Testing in Pain Disorders

- Functional Capacity Evaluations
- Diagnostic Musculoskeletal Ultrasound
- Electrodiagnosis
- SEMG
- Impairment and Disability Determination
- The Biopsychosocial Perspective
- Psychotherapeutic Approaches in Pain Management
- Relaxation and Biofeedback
- Neurofeedback for Pain Management
- Hypnotherapeutic Advances in Pain Management
- Clinical Applications of Interactive Guided Imagery for Diagnosing and Treating Chronic Pain
- Nonsteroidal Anti-Inflammatory Drugs
- Opioids Used in Primary Care for the Management of Pain
- Natural Supplements in Pain Management
- The Role of Cannabis and Cannabinoids in Pain Management
- Guidelines for the Practice of Interventional Techniques
- Evidence for the use of Interventional Techniques in Chronic Spinal Pain
- Psychological Evaluation in Interventional Pain Practice
- Epidural Steroid Injections
- Sympathetic Neural Blockade in the Evaluation and Treatment of Pain
- Pain Management with Regenerative Injection Therapy
- Cervical Facet Joint Intervention
- Thoracic Facet Joint Intervention
- Lumbar Facet Joint Intervention
- Cervical Discography
- Thoracic Discography
- Lumbar Discography
- Intradiscal Therapy
- Percutaneous Lysis of Lumbar Epidural Adhesions and Hypertonic Saline Neurolysis
- Endoscopic Lysis of Lumbar Epidural Adhesions
- Cryoneurolysis
- Endoscopic Surgery and Minimally Invasive Techniques
- Spinal Cord Stimulation
- Intrathecal Pumps
- Acupuncture and Traditional Chinese Medicine
- Aromatherapy for Pain Relief
- Homeopathy
- Clinical Applications of Massage Therapy in Pain Management
- Interdisciplinary Approaches to Treating Myofascial Pain Syndromes
- Role of Naturopathy in Pain Management
- Electromedicine
- Electric Nerve Blocks
- Static Magnetic Therapy for Pain
- Recurrent and Chronic Paediatrics Pain
- Procedural and Perioperative Pain Management in Children
- Occupational Medicine for the Pain Practitioner
- Pain Management and Geriatrics
- Hospice, Cancer Pain Management
- Ethics, History and Theory
- Bioethics and Pain
- Legal Considerations in Pain Management
- Law Enforcement and Regulatory Issues
- Controlled Substances and Risk Management
- Assessing Patients Spirituality
- Religion and Spirituality in Pain Management
- The Role of Prayer in Pain Management
- Concepts in Multidisciplinary Pain Management
- Implementing a Pain Management Program
- Interdisciplinary Pain Management Programs – The American Academy of Pain Management Model

**American Academy of Experts in Traumatic Stress** 2010  
*Melville, New York*

- Diplomate Academy of Experts in Traumatic Stress
- Certification Acute Traumatic Stress Management
- Certification Motor Vehicle Trauma
- Certification Pain Management

**Spine Research Institute of San Diego** 2010  
*San Diego, California*

- Certification – Advanced Whiplash and Brain Traumatology
- 12 Contact Hours

Topics Included:

- Biomechanics of Whiplash Injury
- Occupant Kinematics
- Clinical Diagnosis of Whiplash
- Clinical Management of Spinal Trauma
- Mild Traumatic Brain Injury
- Comprehensive Case Management of Whiplash and Related Disorders

**Brain Injury Association of American** 2009  
*Vienne, Virginia*

- Certified Brain Injury Specialist

Topics Included:

- Incidence and Epidemiology of Brain Injury
- Continuum of Services
- Brain Anatomy and Brain Behaviour Relationships
- Functional Impact of Brain Injury
- Effective Treatment Approaches
- Children and Adolescents with Brain Injury
- Health and Medical Management
- Family Issues and Legal/Ethics Issues

**Ontario Kinesiology Association** 2009  
*Mississauga, Ontario*

- Certified Kinesiologist

**Spine Research Institute of San Diego** 2006  
*San Diego, California*

- Certification – Motor Vehicle Crash Forensics Risk Analysis
- 18 Contact Hours

Topics Included:

- Live Full Scale Human Volunteer Crash Testing and Research
- Live Full Scale Bio-Rid Dummy Crash Testing and Research
- Low Speed Injury Analysis
- High Speed Injury Analysis
- Pedestrian Injury Analysis



- Human Anatomical Research and Injury Biomechanics
- Human Subject Crash Testing Occupant Kinematics
- Automobile Crash Reconstruction Methods
- Pedestrian Crash Reconstruction
- Current Methods and Strategies in Injury Prevention using Design Engineering
- Motor Vehicle Injury Diagnostic and Non-Invasive Clinical Management Methods
- Soft Tissue Referral Patterns and Pain Management

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**International Academy of Medical Acupuncture**

2005 - 2006

*Phoenix, Arizona*

- Fellowship Certification in Acupuncture
- 305 Total Credit Hours (105 Academic / 200 Clinical)
- Types: Japan, Korea, Taiwan and Southeast Asia People's Republic of China
- Techniques: Needle, Electrical, Hand, Auricular, Scalp, and Laser.

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**PROFESSIONAL PUBLICATIONS, APPAREANCES and APPOINTMENTS**

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1. Elected Board Members – Canadian Institute for the Relief of Pain and Disability
  - a. November 2013 – November 2014
2. International Association for the Study of Pain Case Study Newsletter: Diagnose First, Treat Second. - Pending
3. Claims Canada. Contending with Chronic Pain. How Insurers can find the right expert to diagnose this condition. August-September 2013. Pg 32-33.
4. Rogers TV: Daytime Toronto TV. Physical Medicine Pain Management. Aired February 1, 2013 at 10:00 AM. Live

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**MEMBERSHIPS**

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- American Chiropractic Association: 2006-2013
- National Pain Foundation: 2008-Present
- American Pain Foundation: 2009-Present
- International Chiropractic Association: 2006-2008
- National Pain Education Council: 2007-2009
- College of Chiropractors of Ontario: 2008 – Present
- American Academy of Pain Management: 2009-Present
- Ontario Kinesiology Association: 2009 – 2014
- Brain Injury Association of America: 2009 – Present
- Ontario Brain Injury Association: 2009 – Present
- Brain Injury Society of Toronto: 2009 – Present
- The National Center for Crisis Management: 2010 – 2015
- The American Academy of Experts in Traumatic Stress: 2010 – 2015
- Canadian Academy of Pain Management: 2011-Present
- International Association for the Study of Pain: 2012 - Present
- Canadian Institute for the Relief of Pain and Disability 2012- 2014

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**TEACHING EXPERIENCE – POST GRADUATE**

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**North American Spine Institute**

2006 - Present

Toronto, Ontario

Ebensburg, Pennsylvania

Registered Educational Institute – Canada

As director of the North American Spine Institute, I am responsible for developing and teaching post graduate continuing education courses on the subject of pain, whiplash traumatology and treatment to chiropractors, medical doctors, osteopathic doctors, physician assistants and physiotherapist/physical therapists throughout the United States and Canada.

## 2008

- Continuing Education Credit Provided by:
  - o University of Buffalo School of Medicine and Biomedical Sciences
  - o National University of Health Sciences
  - o American Chiropractic Association
  - o American Academy of Family Physicians
  
- 2008-2010 Whiplash Traumatology and Treatment Seminar Series
  
- Whiplash Traumatology and Treatment: A Multidisciplinary Approach to Care. Module 1: Basic Concepts in Whiplash and Whiplash associated Brain Injury and Chronic Pain.
  - o History of Whiplash, Brain Injury and Chronic Pain
  - o Epidemiology: Prevalence, Incidences, Risk Factors, Statistics and Research
  - o Anatomy: Cervical, Thoracic and Lumbar Spine: Muscles, Ligaments, Discs, and Nerves
  - o Muscle Referral Patterns: Whiplash Specific Muscles
  - o Pathophysiology: Lesions, Soft tissue Healing, Stages of Injury
  - o Pathophysiology: symptoms of whiplash, secondary symptoms of whiplash
  - o Whiplash, Brain Injury and Chronic Pain Guidelines
  - o Biomechanics: definitions and explanations of relevant terms. Biomechanics: ROM, biomechanics of spine and supporting structures.
  - o Kinematics: crash sequence of events
  - o Whiplash Common Syndromes: TOS, CTS, Fibromyalgia, Headaches.
  - o Whiplash Common Syndromes: TMJ, SI dysfunction, QL s/s, Insomnia.
  - o Whiplash common Syndromes: Depression, Chronic Pain, PTSD
  
- Whiplash Traumatology and Treatment: A Multidisciplinary Approach to Care. Module 2: Health Professional Management of Whiplash.
  - o Chiropractic: Treatment, Evaluation, Cervical Traction, Posture Analysis, Nutrition and Gait analysis
  - o Physical Therapy: Modalities, Stretching Exercises, Stabilizing Exercises, Core Strength, Isometrics and Nerve Mobilization.
  - o Acupuncture: basics, clean needle technique, types of acupuncture.
  - o Acupuncture: treatment points
  - o Medicine: the role of family physicians
  - o Medicine: the role of neurologists, orthopaedic surgeons, and psychologists.
  - o Massage Therapy: trigger point referral patterns of involved musculature.
  - o Massage Therapy: trigger point referral patterns of involved musculature.
  - o Medicine: the role of emergency room physicians
  - o Complimentary Care: yoga, palates, and electromagnetic therapies
  - o Whiplash Guidelines when they apply and how to utilize them appropriately.
  - o Whiplash Guidelines when they apply and how to utilize them appropriately.
  
- Whiplash Traumatology and Treatment: A Multidisciplinary Approach to Care. Module 3: Recording Keeping and Narrative Reports.
  - o History and Examination questions
  - o Physical Examination: muscles

- Physical Examination: nerves
  - Physical Examination: orthopaedic testing
  - New Patient Forms
  - Self Assessment Questionnaires, describe and explain forms and validity
  - Self Assessment Questionnaires, describe and explain forms and validity
  - Insurance Forms
  - Patient Reports
  - Doctor's Training, education and CV
  - Letters for Payment
  - IME Reports
  - Medical Shorthand
- Whiplash Traumatology and Treatment: A Multidisciplinary Approach to Care. Module 4: Medicolegal Concepts, Crash Forensics, Depositions, Arbitrations and Court Room Testimony.
- Crash Forensics: introduction
  - Crash Forensics: Occupant kinematics, terminology, Delta V, definitions and explanations.
  - Crash Forensics: Risk Factors and Crash Vectors
  - Accident Reconstruction: introduction, qualifications and vehicle dynamics
  - Accident Reconstruction: reports, reliability, and ACR reconstruction
  - Accident Reconstruction: Crash Forensics Assessment Reports Review
  - Depositions
  - Arbitrations
  - Testifying in Court: questions and answers review
  - Testifying in Court: CV and appearance
  - Testifying in Court: Research
  - Testifying in Court: Medical vs. Chiropractic vs. Physical Therapy
- Whiplash Traumatology and Treatment: A Multidisciplinary Approach to Care. Module 5: Special Tests / Imaging and Whiplash, Chronic Pain and Mild Traumatic Brain Injury Research.
- Radiographs: general terms and pictures
  - Radiographs: views, Davis Series and x-ray regulations
  - MRI and CT Studies
  - Videofluoroscopy and PET Scan Studies
  - Whiplash and Brain Injury Mechanism Research
  - Chronic Pain Research
  - Risk Factor and Yellow Flags Research
  - Immune Response Research and Facet Joint Injury Research
  - Whiplash Epidemiology Research
  - Delayed Onset of WAD, Primate Studies, TMJ and Headaches  
Research associated with Whiplash, Brain Injury and Chronic Pain.
- Whiplash Traumatology and Treatment: A Multidisciplinary Approach to Care. Module 6: Whiplash Research.

## 2009

In 2009, I was asked to develop a post graduate chiropractic continuing education course (CCE) by the American Chiropractic Association. The topic of this seminar was Chiropractic Treatment for Whiplash Injuries.

Seminar: Postgraduate instructor of the program: Chiropractic Treatment of Whiplash Tele-seminar offered by the American Chiropractic Association – October 20, 2009.

## 2010

In 2010, I was asked to develop a post graduate chiropractic continuing education course (CCE) by the American Chiropractic Association. The topic of the first seminar was Pain Management Treatment Options and Research. The topic of the second seminar was Whiplash Injury: Guidelines and Rebuttal/IME Report Writing.

Seminar: Postgraduate instructor of the program: Pain Management Treatment Options and Research Tele-seminar offered by the American Chiropractic Association – May 27, 2010.

Seminar: Postgraduate instructor of the program: Whiplash Injury: Guidelines and Rebuttal/IME Report Writing offered by the American Chiropractic Association – September 21, 2010.

## **2013**

In 2013, I was asked to develop a professional accident reconstruction and crash forensics seminar by Stephen O'Donovan Sergeant 735, Toronto Police Service, Collision Reconstruction Squad. The topic of this seminar was Occupant kinematics, Injury Biomechanics and Crash Forensics.

Professional Accident Reconstruction Seminar: Occupant kinematics, Injury Biomechanics and Crash Forensics. November 13, 2013 at the Toronto Police College. Level 4 Accident Reconstruction Toronto Police Accident Reconstruction Department.

In 2013, I was asked to develop a professional medical presentation by Dr. Eldon Tunks, President of the Canadian Academy of Pain Management for Physical Medicine and Rehabilitation Residents and Faculty at McMaster's Medical School. The topic of this seminar was Crash Forensics, Injury Biomechanics, Occupant Kinematics and the Biopsychosocial Model of Pain.

Professional Medical Presentation: Crash Forensics, Injury Biomechanics, Occupant Kinematics and the Biopsychosocial Model of Pain. December 18, 2013 at McMasters Medical School. Presentation to McMaster Department of Physical Medicine and Rehabilitation / McMaster University first to fifth year residents and staff.

## **2014**

In 2014, I became an Education Provider for the Ontario Kinesiology Association. This entailed developing 5 professional seminars for Kinesiologist in Ontario.

Seminars topics and subjects included:

### Nerve Mobilization - Upper Extremity: June 21 - June 22, 2014

Radial Nerve:

1. Functional Anatomy and Physiology of the Nervous System
2. Clinical Neurobiomechanics - Radial Nerve
3. Anatomy Review - Radial Nerve and Muscle Innervation
4. Radial Nerve innervated Muscle and Function Testing
5. Radial Nerve innervated Muscle referral and Pain Patter Review
6. Radial Nerve innervated Muscle Rehabilitation
7. Clinical Reasoning and Examination - Radial Nerve
8. Nerve Mobilization Technique and Treatment Protocol - Radial Nerve
9. Pathological Processes and Special Conditions - Radial Nerve

Median Nerve

1. Functional Anatomy and Physiology of the Nervous System
2. Clinical Neurobiomechanics - Median Nerve
3. Anatomy Review - Median Nerve and Muscle Innervation
4. Median Nerve innervated Muscle and Function Testing
5. Median Nerve innervated Muscle referral and Pain Patter Review
6. Median Nerve innervated Muscle Rehabilitation
7. Clinical Reasoning and Examination - Median Nerve

8. Nerve Mobilization Technique and Treatment Protocol - Median Nerve
9. Pathological Processes and Special Conditions - Median Nerve

#### Ulnar Nerve

1. Functional Anatomy and Physiology of the Nervous System
2. Clinical Neurobiomechanics - Ulnar Nerve
3. Anatomy Review - Ulnar Nerve and Muscle Innervation
4. Ulnar Nerve innervated Muscle and Function Testing
5. Ulnar Nerve innervated Muscle referral and Pain Patter Review
6. Ulnar Nerve innervated Muscle Rehabilitation
7. Clinical Reasoning and Examination - Ulnar Nerve
8. Nerve Mobilization Technique and Treatment Protocol - Ulnar Nerve
9. Pathological Processes and Special Conditions - Ulnar Nerve

Summary, Conclusion and Certificate Test.

#### Nerve Mobilization - Lower Extremity: July 12 - July 13, 2014

This seminar will discuss:

#### Sciatica Nerve:

1. Functional Anatomy and Physiology of the Nervous System
2. Clinical Neurobiomechanics - Sciatica Nerve
3. Anatomy Review - Sciatica Nerve and Muscle Innervation
4. Sciatica Nerve innervated Muscle and Function Testing
5. Sciatica Nerve innervated Muscle referral and Pain Patter Review
6. Sciatica Nerve innervated Muscle Rehabilitation
7. Clinical Reasoning and Examination - Sciatica Nerve
8. Nerve Mobilization Technique and Treatment Protocol - Sciatica Nerve
9. Pathological Processes and Special Conditions - Sciatica Nerve

#### Peroneal Nerve

1. Functional Anatomy and Physiology of the Nervous System
2. Clinical Neurobiomechanics - Peroneal Nerve
3. Anatomy Review - Peroneal Nerve and Muscle Innervation
4. Peroneal Nerve innervated Muscle and Function Testing
5. Peroneal Nerve innervated Muscle referral and Pain Patter Review
6. Peroneal Nerve innervated Muscle Rehabilitation
7. Clinical Reasoning and Examination - Peroneal Nerve
8. Nerve Mobilization Technique and Treatment Protocol - Peroneal Nerve
9. Pathological Processes and Special Conditions - Peroneal Nerve

#### Tibial Nerve

1. Functional Anatomy and Physiology of the Nervous System
2. Clinical Neurobiomechanics - Tibial Nerve
3. Anatomy Review - Tibial Nerve and Muscle Innervation
4. Tibial Nerve innervated Muscle and Function Testing
5. Tibial Nerve innervated Muscle referral and Pain Patter Review
6. Tibial Nerve innervated Muscle Rehabilitation
7. Clinical Reasoning and Examination - Tibial Nerve
8. Nerve Mobilization Technique and Treatment Protocol - Tibial Nerve
9. Pathological Processes and Special Conditions - Tibial Nerve

Summary, Conclusion and Certificate Test.

Chronic Pain Management - Neuroplasticity and Rehabilitation - August 2 - August 3, 2014

This seminar will discuss:

1. Pain Concepts and Terminology
2. Pain Physiology and Neurology
3. Concepts of Neuroplasticity and Pain
4. Introduction into the Biopsychosocial Model of Pain
5. Pain Orthopaedic Testing
6. Pain Muscle Function Testing
7. Musculoskeletal Pain Referral Patterns
8. fMRI Pain Research
9. Pain Special Conditions - Fibromyalgia
10. Functional Treatment Options
  - Stimulation of Descending Inhibitory Pain Pathways
  - Exercise Prescription - What Intensity Reduces Subjective Pain

Neck Pain: Whiplash Traumatology Diagnosed - August 9 - August 10, 2014.

This seminar will discuss:

1. Whiplash Concepts and Terminology
2. Whiplash Injury Biomechanics - Neck
3. Whiplash Occupant Kinematics Based on Collision Vector - Neck
4. Introduction into Whiplash Treatment Guidelines
5. Cervical Spine Orthopaedic Testing
6. Thoracic Outlet Orthopaedic Testing
7. Cervical Spine Muscle Function Testing
8. Cervical Spine Musculoskeletal Referral Patterns
9. Cervical Spine Rehabilitation Protocol - Facet Joint Injury
10. Cervical Spine Rehabilitation Protocol - Musculoskeletal Injury
11. Cervical Spine Exercise Protocol
12. Secondary Sequelae

Whiplash: Independent Medical Assessment, Guidelines and Protocols. September 6 - September 7, 2014.

This seminar will discuss:

1. Basic Concepts and Terminology of Whiplash
2. Qualifications: Who has them and why do they matter
3. Physical Examination and Orthopaedic Testing
4. Outcome Assessment Tools
5. Whiplash Traumatology Guidelines
6. Epidemiological Risk Factors - Injury Potential Determination
7. Diagnosis: WAD II vs WAD III
8. Case Law, Whiplash and Chronic Pain
9. Report Writing - Narrative Reports
10. Report Writing - Rebuttals and IME Response Letters

In 2014, I was asked to develop a professional medical presentation by Stuart Moulton, Executive Director of the Ontario Kinesiology Association. The topic of this seminar was Pain Management: Median Nerve Entrapment, Muscle Testing and Nerve Mobilization Treatment.

Professional Medical Presentation: Pain Management: Median Nerve Entrapment, Muscle Testing and Nerve Mobilization Treatment. November 9, 2014 at the Sheraton Hotel Niagara Falls Canada. Presentation to Ontario Kinesiology members and faculty, as Kinesiologists throughout Ontario Canada.

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**POST GRADUATE CONTINUING EDUCATION**

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**Traumatic Stress**

<b>Organization</b>	<b>Title</b>	<b>Date</b>	<b>Credit</b>
American Academy of Experts in Traumatic Stress	Certified Acute Traumatic Stress Management	February 15, 2011	NA
Greensboro AHEC	Treating the Invisible Wounds of War Series: Part 1 - Post Traumatic Stress Disorder	June 16, 2010	3
Harvard Medical School	Lifestyle Medicine for Stress Management	December 21, 2009	1
University of Pennsylvania School of Medicine	Treating Major Depression: From Remission to Long Term Recovery	April 17, 2007	1
University of Texas Medical School	Post-traumatic Stress Disorder	October 24, 2007	1

**Special Imaging**

<b>Organization</b>	<b>Title</b>	<b>Date</b>	<b>Credit</b>
Johns Hopkins University School of Medicine	5th Annual MRI World Summit -- Section 1	October 24, 2007	1.5
Johns Hopkins University School of Medicine	5th Annual MRI World Summit -- Section 2: Neuro	October 24, 2007	1.25
Johns Hopkins University School of Medicine	5th Annual MRI World Summit -- Section 3: Body	October 24, 2007	1.25
Johns Hopkins University School of Medicine	5th Annual MRI World Summit -- Section 4: Ortho	October 24, 2007	1.5
Harvard Medical School	Challenging Cases in Chest Radiology	April 3, 2007	1

**Health Conditions**

<b>Organization</b>	<b>Title</b>	<b>Date</b>	<b>Credit</b>
Duke Medicine	Dissecting Diabetic Dyslipidemia: Understanding Causes and Implementing Solutions	October 30, 2009	1.5

University of Florida College of Medicine	Anti-inflammatory and Anti-Atherogenic effects on Insulin	October 30, 2009	1
Medscape	American Society of Health Systems Pharmacists Midyear Clinical Meeting - Highlights of the 2006 ASHSP Midyear Clinical Meeting	July 20, 2007	15
Medscape	American College of Allergy, Asthma, Immunology 2006 Annual Meeting - New Advances	July 20, 2007	1
Medscape	AHA Statement Totes Benefits of Resistance Training for Cardiovascular Health	July 20, 2007	1
Medscape	Tendonopathy - From Basic Science to Treatment	July 20, 2007	1
AHC Media LLC - AMA	Improving the Detection of Common Adult Cancers	April 7, 2007	1
AHC Media LLC - AMA	Skin and Soft Tissue Infection	April 7, 2007	2.25
Baylor College of Medicine	Benefits of Moderate Weight Loss in Reducing Cardiometabolic Risk	April 4, 2007	0.5
The Cleveland Clinic	Disease Management Multiple Sclerosis	April 4, 2007	0.75
The Cleveland Clinic	Disease Management Tremors	April 7, 2007	0.5

## Psychology

Organization	Title	Date	Credit
Yale University	Psychology - Food on the Brain Ralph DiLeone	January 31, 2012	0.25
Yale University	Psychology - Lack of Sleep Leads to Health Problems Like Obesity Tamas, Horvath, Xiao-Bing, Gao	January 31, 2012	0.25

## Pain Management



<b>Organization</b>	<b>Title</b>	<b>Date</b>	
University of Pennsylvania School of Medicine	Pain and Relief Signals Muted in Fibromyalgia	January 17, 2014	0.25
American Medical Association	Module 12 Pain Management: Management of Cancer Pain: Other Analgesic and End-Of-Life Care	July 26, 2013	1
American Medical Association	Module 11 Pain Management: Pharmacotherapy for Cancer Pain	July 26, 2013	1
American Medical Association	Module 10 Pain Management: Overview and Assessment of Cancer Pain	July 25, 2013	1
American Medical Association	Module 9 Pain Management: Assessing and Treating Neuropathic Pain	July 25, 2013	1
American Medical Association	Module 8 Pain Management: Assessing & Treating Persistent Nonmalignant Pain: Common Persistent Pain Conditions	July 25, 2013	1
American Medical Association	Module 7 Pain Management: Assessing & Treating Persistent Nonmalignant Pain: An Overview	July 24, 2013	1
American Medical Association	Module 6 Pain Management: Pediatric Pain Management	July 24, 2013	1
American Medical Association	Module 5 Pain Management: Assessing & Treating Pain in Older Adults	July 24, 2013	1
American Medical Association	Module 4 Pain Management: Assessing & Treatment Pain in Patients with Substance Abuse Concerns	July 23, 2013	1
American Medical Association	Module 3 Pain Management: Barriers to Pain Management & Pain in Special Populations	July 23, 2013	1

American Medical Association	Module 2 Pain Management: Overview of Management Options	July 23, 2013	1
American Medical Association	Module 1 Pain Management: Pathophysiology of Pain and Pain Management	July 23, 2013	1
Johns Hopkins University School of Medicine	Challenges in the Assessment and Management of Chronic Pain: A Virtual CME Summit Series. Practical Strategies for Assessing and Diagnosing Neuropathic Pain.	July 9, 2013	1
American Academy of Pain Management	Integrative Approaches to Fibromyalgia: Part 2. Treatment of Fibromyalgia	June 12, 2013	1
American Academy of Pain Management	Integrative Approaches to Fibromyalgia: Part 1. Clinical Characteristics and Pathophysiology of Fibromyalgia	June 11, 2013	1
University of Pennsylvania School of Medicine	Spine Injections May Set Stage for Fractures	June 7, 2013	0.25
University of Pennsylvania School of Medicine	3 Questions Help Docs Predict Pain Course	May 24, 2013	0.25
Medscape	No Offense Doctor, But I Want a Referral for My Pain	May 24, 2013	0.25
Johns Hopkins University School of Medicine	Challenges in the Assessment and Management of Chronic Pain: A Virtual CME Summit Series, "New Insights into the Pathophysiology & Assessment of Chronic Pain.	May 21, 2013	1
University of Pennsylvania School of Medicine	Inflammation Continues in Chronic Pain Patients.	May 13, 2013	0.25

University of Pennsylvania School of Medicine	Functional MRI can be used to Assess Pain	April 11, 2013	0.25
University of Pennsylvania School of Medicine	MRI for Low Back Problems Deemed "Overused"	March 27, 2013	0.25
University of Pennsylvania School of Medicine	Repeat MRI No Help After Sciatica Tx	March 21, 2013	0.25
University of Pennsylvania School of Medicine	Osteopathic Tx Ease Low Back Pain	March 20, 2013	0.25
University of Pennsylvania School of Medicine	Fibromyalgia Not One-Size Fits-All Disorder	February 21, 2013	0.25
University of Pennsylvania School of Medicine	Nerve Stimulation Cuts Down on Migraines	February 11, 2013	0.25
University of Pennsylvania School of Medicine	Brain Imaging Predicts Response to Depression Tx	February 7, 2013	0.25
University of Pennsylvania School of Medicine	Study: Check Brain Blood Flow in TBI	February 7, 2013	0.25
University of Pennsylvania School of Medicine	Phone Visits Speed Time to Physical Therapy	January 30, 2013	0.25
University of Pennsylvania School of Medicine	TV Before Bed May Rob Kids of Sleep	January 14, 2013	0.25
University of Pennsylvania School of Medicine	Painkillers May Protect Liver	January 1, 2013	0.25

University of Pennsylvania School of Medicine	Mild Head Injury Upset's Brain Resting State	November 25, 2012	0.25
University of Pennsylvania School of Medicine	Epidural Steroids Ineffective for Sciatica	November 25, 2012	0.25
University of Pennsylvania School of Medicine	Low Back Pain Eases but Doesn't Vanish	November 25, 2012	0.25
University of Pennsylvania School of Medicine	Vitamin D May Be of Help in Fibromyalgia	November 25, 2012	0.25
University of Pennsylvania School of Medicine	Brain Activity Reflects Pain in Fibromyalgia	November 25, 2012	0.25
University of Pennsylvania School of Medicine	Acupuncture Does help for Chronic pain	November 25, 2012	0.25
University of Michigan School of Medicine	Managing Patients with Chronic Non-Terminal Pain Including Prescribing Controlled Substances	August 15, 2012	1
Johns Hopkins University School of Medicine	Pain Management Virtual Congress 2012: Chronic Pain and Addiction: Does Everybody taking Opioids eventually become an addict?	August 10, 2012	1
Johns Hopkins University School of Medicine	Pain Management Virtual Congress 2012: Pain Management: Strategies for Balancing Patient, Physician and other Stakeholders Needs.	August 10, 2012	1
Johns Hopkins University School of Medicine	Pain Management Virtual Congress 2012: "Central Sensitization" Are Conditions like Fibromyalgia, Irritable Bowel Syndrome, and Interstitial Cystitis all Related?	August 10, 2012	1

Johns Hopkins University School of Medicine	Pain Management Virtual Congress 2012: Predictors of Chronic Pain: How Should the Case of Acute Pain be Formulated	August 10, 2012	1
Johns Hopkins University School of Medicine	Pain Management Virtual Congress 2012: Neuroimaging and Pain: Have we Really found the Soul of Suffering?	August 3, 2012	1
American Academy of Family Physicians	Principles of Neuropathic Pain Assessment and Management Pain	August 3, 2012	1
American Academy of Family Physicians	Tailoring the Treatment of Neuropathic Pain: Case Studies	August 3, 2012	1
American Academy of Family Physicians	Fibromyalgia in Family Medicine: Challenges in Pain Management	August 3, 2012	1
Johns Hopkins University School of Medicine	Pain Management Virtual Congress 2012: Rational Polypharmacy for Chronic Pain: What do all of these Medications Actually do for the Patient?	August 2, 2012	1
Johns Hopkins University School of Medicine	Pain Management Virtual Congress 2012: Chronic Pain Rehabilitation: The Basics of Changing Illness Behaviors	August 2, 2012	1
University of Pennsylvania School of Medicine	Insights into Pain Management: Module 7: Multidisciplinary Pain Management	August 2, 2012	1
University of Pennsylvania School of Medicine	Insights into Pain Management: Module 6: Use and Abuse of Opioids Analgesics	August 2, 2012	1
University of Pennsylvania School of Medicine	Insights into Pain Management: Module 5: Comprehensive Pharmacological Management of Pain	August 2, 2012	1
University of Pennsylvania School of Medicine	Insights into Pain Management: Module 4: Understanding Chronic Pain	July 31, 2012	1

University of Pennsylvania School of Medicine	Insights into Pain Management: Module 3: Understanding Acute Pain	July 31, 2012	1
University of Pennsylvania School of Medicine	Insights into Pain Management: Module 2: Assessment of the Patient with Pain	July 30, 2012	1
University of Pennsylvania School of Medicine	Insights into Pain Management: Module 1: Introduction into Pain	July 30, 2012	1
American Academy of Family Physicians	Diagnosis and Treatment of Acute and Chronic Low Back Pain with Leg Pain	February 24, 2012	1
University of Chicago	The Empathy Switch: How Doctors Regulate Pain Perception Jean Decety	February 8, 2012	0.25
American Academy of Pain Management	Pain and Brain 2: The Recognition and Management of Chronic Pain in Primary Care	December 22, 2011	1.5
American Pain Society	Pain: Pain Current Understanding of Assessment, Management, and Treatment.	November 16, 2010	1
American Pain Society	Pain: Section 5 Strategies to Improve Pain Management	November 16, 2010	1
American Pain Society	Pain: Section 4 Management of Acute Pain and Chronic Non-Cancer Pain	November 16, 2010	1
American Pain Society	Pain: Section 3 Types of Treatment	November 15, 2010	1
American Pain Society	Pain: Section 2 Assessment of Pain	November 15, 2010	1
American Pain Society	Pain: Section 1 Background and Significance	November 14, 2010	1
American Academy of Family Physicians	Managing Coexisting Pain and Depression	March 28, 2010	1
American Academy of Family Physicians	Practical Aspects of Chronic Pain Management: A Case based Approach.	March 28, 2010	1
American Academy of Family Physicians	Disparities in Care: Special Populations in Pain Management	March 28, 2010	1

American Academy of Family Physicians	Challenging Issues in Chronic Pain Management	March 28, 2010	1
American Academy of Family Physicians	Managing the Chronic Pain Patient at Risk or with a History of Addiction	March 26, 2010	1
American Academy of Family Physicians	Assessment and Management of Chronic Pain	March 25, 2010	1
American Chiropractic Association	Pain Management Treatment Options and Research Dr. Jason Mazzearella	May 27, 2010	1
American Academy of Experts in Traumatic Stress	Certified in Pain Management	May 27, 2010	NA
University of Nebraska Medical School	Pain Management with Opioid Analgesics	October 30, 2009	1.5
Johns Hopkins University School of Medicine	Pain and the Sensory System of RLS: XP13512 Treatment of RLS	July 07, 2009	0.5
Johns Hopkins University School of Medicine	Pain and the Sensory System of RLS: RLS Severity and Endogenous Opioids in the Medical Pain System	July 07, 2009	0.5
Johns Hopkins University School of Medicine	Pain and the Sensory System of RLS: Iron Dopamine Connection: Cellular Studies and Possible	July 07, 2009	0.5
Johns Hopkins University School of Medicine	Pain and the Sensory System of RLS: Pain and Sensory Disturbances in RLS: Prevalence and Clinical Significance.	July 07, 2009	0.5
Beth Israel University Hospital Albert Einstein College of Medicine	Overcoming Barriers to Pain Relief	December 16, 2008	1.25
Medscape	Treating Fibromyalgia Pain and Beyond: Pathophysiology and Management of Multiple Symptom Domains	December 16, 2008	1
Medscape	Sciatica and Low Back pain: Does Physical Therapy Provide Long-Term Benefits? A Best Evidence Review	December 16, 2008	1
Memorial University	Joint Adventures - Optimizing the Management of MSK Pain	November 13, 2007	2

Memorial University	Chronic Non Cancer Pain: Comprehensive Assessment and Management	November 12, 2007	3
American Medical Association	Pathophysiology of Pain and Pain Assessment	November 11, 2007	1
American Medical Association	Overview of Management Options	November 11, 2007	1
American Medical Association	Management of Cancer Pain: Other Analgesic Approaches and End of Life Care	November 11, 2007	1
American Medical Association	Cancer Pain: Pharmacotherapy	November 11, 2007	1
American Medical Association	Overview and Assessment of Cancer Pain	November 11, 2007	1
American Medical Association	Assessing and Treating Neuropathic Pain	November 11, 2007	1
American Medical Association	Assessing and Treating Persistent Nonmalignant Pain, Common Persistent Pain Conditions.	November 11, 2007	1
American Medical Association	Assessing and Treating Persistent Nonmalignant Pain, An Overview	November 11, 2007	1
American Medical Association	Pediatric Pain Management	November 10, 2007	1
American Medical Association	Assessing and Treating Pain in Older Adults	November 10, 2007	1
American Medical Association	Assessing and Treating Pain in Patients with Substance Abuse	November 10, 2007	1
American Medical Association	Barriers to Pain Management and Pain in Special Populations	November 10, 2007	1
Primed - American Medical Association	Mechanism for Managing Chronic Pain	September 24, 2007	1
Primed - American Medical Association	Acupuncture in the Treatment of Low Back Pain	September 24, 2007	1
Primed - American Medical Association	Management Strategies for Patients with Moderately Severe Low Back Pain	September 24, 2007	2
Primed - American Medical Association	Managing Depression in a Patient with Pain	September 24, 2007	2
Primed - American Medical Association	Young Women Evaluated for Headache and Facial Pain	September 24, 2007	2



Primed - American Medical Association	Lower Extremity Pain in a Patient with Diabetes Mellitus	September 24, 2007	2
University of Michigan School of Medicine	Back Pain: Acute Low Back Pain in Adults	August 2, 2007	1
Medscape	American Academy of Pain Medicine 23 <sup>rd</sup> Annual Meeting - Highlights of the American Academy of Pain Medicine 23 <sup>rd</sup> Annual Meeting	July 20, 2007	1.5
Medscape	American Pain Society 26 <sup>th</sup> Annual Scientific Meeting - Highlights of the American Pain Society 26 <sup>th</sup> Annual Scientific Meeting.	July 20, 2007	1.5
Medscape	Breakthrough Pain: Strategies for Effective Assessment and the Role of Rapid-Onset Opioids in Treatment	July 20, 2007	1
Medscape	Undermanaged Pain in the Orthopedic Surgical Patient: Techniques to Improve	July 20, 2007	2
Medscape	Advances in Neuropathic Pain: Case Studies in Uncomplicated Postherpetic Neuralgia and Painful Diabetic Polyneuropathy	July 20, 2007	1
Medscape	Exercise in the Age of Evidence - Based Medicine: A Clinical Update	July 20, 2007	0.25
Medscape	Herbal Medicine May Be Effective for Low Back Pain	July 20, 2007	0.25
Medscape	Haloperidol Useful in Acute Treatment of Migraine	July 20, 2007	1
AHC Media LLC- American Medical Association	Relieving the Burden of Pain in Fibromyalgia	April 7, 2007	1
Dannemiller Memorial Education Foundation	Dialogues in Persistent Pain	April 4, 2007	1
Dannemiller Memorial Education Foundation	Musculoskeletal Pain Modules 2006	April 4, 2007	1
Dannemiller Memorial Education Foundation	The Association between Chronic Pain and Mood and Anxiety Disorder	April 4, 2007	1
Dannemiller Memorial Education Foundation	The Pain Processing Pathways	April 4, 2007	1.5

NYCC	Chiropractic Case Management of Acute & Chronic Pain Syndromes		
NYCC	Appropriate Opioid Pharmacotherapy for Chronic Pain Management: Interactive LBP Case Study		
NYCC	Appropriate Opioid Pharmacotherapy for Chronic Pain Management: Improving Functional Ability in Patients with Whiplash		
NYCC	NPEC-Chronic Pain 411: Assessing the Chronic Pain Patient		

### Biomedical Sciences

Organization	Title	Date	Credit
Yale University	Biomedical Engineering with W Mark Saltzman Biomechanics and Orthopedics	July 5, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Renal Physiology 2	June 22, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Renal Physiology	June 22, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Cardiovascular Physiology 2	June 20, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Cardiovascular Physiology	June 13, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Biomolecular Engineering: General Concepts 2	May 31, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Biomolecular Engineering: General Concepts	May 31, 2012	1

Yale University	Biomedical Engineering with W Mark Saltzman Biomolecular Engineering: Engineering of Immunity.	May 31, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Biomolecular Engineering: Engineering of Immunity.	May 18, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Cell Communications and Immunology	May 17, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Cell Communications and Immunology	May 16, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Cell Culture Engineering	May 15, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Cell Culture Engineering	May 14, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Genetics Engineering	May 14, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Genetics Engineering	April 24, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman Genetics	February 15, 2012	1
Yale University	Biomedical Engineering with W Mark Saltzman What is Biomedical Engineering	February 15, 2012	1

### Neurology and Brain Injury

Organization	Title	Date	Credit
University of Pennsylvania School of Medicine	Cognitive Tx Helps Kids with Migraines	July 7, 2013	0.25
University of Pennsylvania School of Medicine	Wii May Help Balance in Parkinson's	June 29, 2013	0.25

University of Pennsylvania School of Medicine	Biomarkers Can Diagnose Mild Brain Injury	June 23, 2013	0.25
University of Pennsylvania School of Medicine	Heading Soccer Ball Injures Brain	June 11, 2013	0.25
University of Pennsylvania School of Medicine	Mild Head Injury Upsets Brain's Resting State	November 25, 2012	0.25
Massachusetts Institute of Technology	Brain Structures and Origins Gerald Schneider Introduction: Brain Orientations, Primitive Cellular Activities	February 20, 2012	1
University of Chicago	Circuit Breaking: The Startle Response and Neuromotor Function Melina E. Hale, PhD	February 8, 2012	0.25
University of Chicago	Color Binding in the Brain Steven Shevell	February 8, 2012	0.25
University of Chicago	Evolving Brain Bruce Lahn	February 8, 2012	0.25
Massachusetts Institute of Technology	Brain Structures and Origins Gerald Schneider Introduction: Brain Orientations, Primitive Cellular Activities	January 31, 2012	1
Columbia University	Neuroscience Frontiers of Science Darcy B. Kelly How Sex Differences in Motor Neurons and in the Muscle Fibers Develop.	January 31, 2012	0.25
Neuroskills	Brain Anatomy and Function	August 15, 2011	1
Neuroskills	Brain Injury and Rehabilitation: An Overview	August 14, 2011	1
Neuroskills	Applied Behavior Analysis	August 13, 2011	1
Neuroskills	Mild Traumatic Brain Injury	August 12, 2011	1
Greensboro AHEC	Treating the Invisible Wounds of War Series: Part 2: Traumatic Brain Injury	June 16, 2010	4
Ontario Brain Injury Association	Brain Injury Module 1 - Parts and Functions of the Brain	November 19-20, 2009	12 t
Ontario Brain Injury Association	Brain Injury Module 2 - ABI Types and Causes	November 19-20, 2009	12 t
Ontario Brain Injury Association	Brain Injury Module 3 - ABI General Strategies	November 19-20, 2009	12 t

Ontario Brain Injury Association	Brain Injury Module 4 - ABI Consequences and Strategies Physical	November 19-20, 2009	12 t
Ontario Brain Injury Association	Brain Injury Module 5 - ABI Consequences and Strategies Cognitive	November 19-20, 2009	12 t
Ontario Brain Injury Association	Brain Injury Module 6 - ABI Consequences and Strategies Behavioural	November 19-20, 2009	12 t
Ontario Brain Injury Association	Brain Injury Module 7 - Support Roles: Team and Family	November 19-20, 2009	12 t
University of Alabama School of Medicine	Traumatic Brain Injury: Assessment, Impact and Recovery	October 30, 2009	2.5
American Academy of Brain Injury Specialists	Certified Brain Injury Specialist	August 25, 2009	NA
British Medical Journal	Diagnosis and Management of Headaches	August 25, 2009	1
AHC Media LLC - American Medical Association	Managing Concussion in Young Athletes	April 7, 2007	1
Thomson American Health Consultants	Pediatric Controversies: Diagnosis and Management of Traumatic Brain Injuries	April 7, 2007	2.5
University of Washington Medial School	Topics In Neurology	February 26, 2008	1.5

### Sleep Medicine

Organization	Title	Date	Credit
University of Pennsylvania School of Medicine	Sleep Quality Often Affected by Trauma	June 11, 2013	0.25
University of Pennsylvania School of Medicine	Gene Mutations Tied to Migraine, Sleep Disorder	June 10, 2013	0.25
Johns Hopkins University School of Medicine	Recognizing and Treating Insomnia	June 12, 2009	0.5
Johns Hopkins University School of Medicine	Sleep University	June 12, 2009	0.75
Johns Hopkins University School of Medicine	The Art of Sleep: Recognizing and Treating Insomnia in the Primary Care Practice	June 12, 2009	1

	Prevalence of Sleep Disturbances and Its Relationship to Pain in Adults with Chronic Pain		
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**Traffic Accident Investigation, Reconstruction and Analysis**

Organization	Title	Date	Credit
Northwestern University of Public Health	Accident Investigation 2 Includes: Vehicle damage analysis, Vehicle behavior, Lamp and Filament analysis, Tire damage analysis, measurement methods, interpretation of data and specialized data gathering.	Present	80
Toronto Police College	Accident Reconstruction Level 3 Includes 80 contact hours of training. Topics include: Drag Factor determination, Grade and Super Evaluation determination, Speed Distance Determination, Skid to Stop distance, Negative Skid to Stop Distance Determinations, Roadway Evidence, Scaled Diagrams, Fall, Flip and Vault speed calculations, Yaw speed calculations, critical curve speed analysis, Dynamic testing, Vehicle Dynamics, Radius Determination, Lamp Examination, Tire Examination, Pedestrian Collision, Systematic Collision Investigation, Crush Analysis, Commercial Motor Vehicle Examination, Motorcycle Collision Analysis, Mock Fatal Crash Test.	April 8-19, 2013	80

Toronto Police College	Accident Reconstruction Level 2 Includes Drag Factor determination and Grade Evaluation, Speed Distance Determination, Skid to Stop distance, Negative Skid to Stop Distance Determinations, Roadway Evidence, Scaled Diagrams, At Scene Accident Photography, Dangerous Goods, Time Distance Measurements, Restraint System Evaluation, Tire Mark Evaluation (Skid Marks, Tire Marks, Imprints, Yaw Marks), Interview Techniques, Series of Events, and Vehicle Dynamics	June 18-29, 2012	80
Michigan State University	Accident Investigation AI 12 Pedestrian Accidents: Includes Includes: Determining impact points through vehicle evaluation and estimation of impact speeds based upon pedestrian movement and vehicle damage characteristics. Session with forensic pathologist regarding pedestrian injury patterns.	December 20-22, 2011	36
Crash Data Group	Crash Data Analysis and Applications Certification	May 10-13, 2011	48
Crash Data Group	Crash Data Retrieval Systems Operators (Technician) Certification	May 9, 2011	12
Northwestern University of Public Health	Accident Investigation 1 Includes: Preparation for traffic crash investigation, information from and about people, information from vehicles, information from roads, measuring and mapping the crash scene and photographing the crash scene and damaged vehicles.	January - December 2011	80

### Whiplash and Motor Vehicle Trauma

Organization	Title	Date	Credit
Stanford University	Functional Anatomy: The Neck and Parotid Region Robert Chase MD/Richard Sneil MD	February 26, 2012	1

American Academy of Experts in Traumatic Stress	Certified Motor Vehicle Trauma	May 4, 2011	NA
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 1995	December 2010	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 1996	January 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 1997	February 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 1998	March 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 1999	April 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2000	May 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2001	June 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2002	June 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2003	July 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2004	July 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2005	August 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2006	August 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2007	September 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2008	September 2011	12



Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2009	September 2011	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Advanced Course 2010	November 2010	12
American Chiropractic Association	Whiplash	October 20, 2009	1
MedScape	Aggressive Care May Delay Recovery in Whiplash	July 20, 2007	0.25
Spine Research Institute of San Diego	Motor Vehicle Crash Forensics Risk Analysis Certification	August 18-20, 2006	18
Spine Research Institute of San Diego	Advanced Medico-legal Seminar and Mock Trial	February 10-12, 2006	12
Chiropractic Certification in Spinal Trauma	Integrative Weekend	October 17, 2005	12
Chiropractic Certification in Spinal Trauma	Chiropractic Jurisprudence	October 10, 2005	12
Chiropractic Certification in Spinal Trauma	Diagnosis, Treatment, Rehabilitation: Clinical Case Management	October 6, 2005	12
Chiropractic Certification in Spinal Trauma	Diagnosis, Treatment, Rehabilitation: Clinical Case Management	September 30, 2005	12
Chiropractic Certification in Spinal Trauma	Record-keeping, Patient Exam and Documentation	September 26, 2005	12
Chiropractic Certification in Spinal Trauma	General Clinical Trauma Management	September 19, 2005	12
Chiropractic Certification in Spinal Trauma	Accident Imaging: X-ray, MRI, CT, VF and Analysis	September 12, 2005	12
Chiropractic Certification in Spinal Trauma	Understanding Mechanisms of Vehicular Accident Injury	September 12, 2005	12
Chiropractic Certification in Spinal Trauma	Principles of Soft Tissue Injury and Repair	August 29, 2005	12
Chiropractic Certification in Spinal Trauma	Trauma Neurology and Chiropractic	August 17 2005	12
Dan Murphy - ICA	New Era in Whiplash and Spinal Trauma - Part 2	August 13-14, 2005	
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Module 1	August 6-7, 2005	12

Spine Research Institute of San Diego	Whiplash and Brain Traumatology Module 4	July 30-31, 2005	12
Dan Murphy - ICA	New Era in Whiplash and Spinal Trauma - Part 2	July 9-10, 2005	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Module 3	2004	12
Spine Research Institute of San Diego	Whiplash and Brain Traumatology Module 2	2004	12
	Improving Functionability in Patients with Chronic Whiplash		

### Orthopaedics / Surgery / Trauma

Organization	Title	Date	Credit
University of North Carolina Medical School	Professionalism in an Academic Medical Center Douglas R. Dirschi, MD	February 26, 2012	0.25
University of North Carolina Medical School	Initial Management of Open Fractures of the Tibia Douglas R. Dirschi, MD	February 15, 2012	0.25
University of Arizona	Surgery Ground Rounds: The Evidence of Trauma Systems effectiveness Jerry Jurkovich, MD	February 8, 2012	1
University of North Carolina Medical School	Fracture Healing after Intramedullary Nailing Douglas R. Dirschi, MD	February 2, 2012	0.25
University of North Carolina Medical School	The History of Fracture Care Douglas R. Dirschi, MD	February 2, 2012	0.25

### Therapies and Treatments

Organization	Title	Date	Credit
PRIMED- American Medical Association	Sports Injuries in Children	September 24, 2007	1

New York Chiropractic College	Sacro-Occipital-Technique Part 1 Dr. Kurt Larson	January 21-22, 2006	12
International Academy of Medical Acupuncture	Acupuncture Module 6	January 7-8, 2006	15
International Academy of Medical Acupuncture	Acupuncture Module 5	December 10-11, 2005	15
International Academy of Medical Acupuncture	Acupuncture Module 4	November 19-20, 2005	15
International Academy of Medical Acupuncture	Acupuncture Module 3	October 29-30, 2005	15
International Academy of Medical Acupuncture	Acupuncture Module 2	October 1-2, 2005	15
International Academy of Medical Acupuncture	Acupuncture Module 1	September 10-11, 2005	15
New York Chiropractic College	Low Level Last Workshop	November 10, 2005	3
New York Chiropractic College	Solving Ergonomics	August 25, 2005	3
New York Chiropractic College	Diagnosis and Management of Headaches	June 23, 2005	3
New York Chiropractic College	Chiropractic Nutrition Part 2	July 23, 2005	6
New York Chiropractic College	Chiropractic Nutrition Part 1	June 25, 2005	6
New York Chiropractic College	Advanced Nimmo Receptor Tonus Technique: Jeffrey Cohen	June 11-12, 2005	12
New York Chiropractic College	Spinal Trauma: The Rest of the Story Dr. Murphy	May 15, 2005	3
New York Chiropractic College	Nimmo Receptor Tonus Technique: Jeffrey Cohen	April 2-3, 2005	12
New York Chiropractic College	The Shoulder Made Simple Dr. Dale Buckberger	March 21-22, 2004	12
New York Chiropractic College	Practical Nutrition for the Chiropractic Office		3
New York Chiropractic College	Integrative Healthcare an Evolving Model		3

New York Chiropractic College	Sacro-Occipital-Technique Part 2 Dr. Kurt Larson		12
New York Chiropractic College	Sacro-Occipital-Technique Part 3 Dr. Kurt Larson		12
New York Chiropractic College	Cox Flexion Distraction Technique		NA
	Acupuncture Clinical Application		
	Spinal Cord Stimulation and Occlusive Peripheral Vascular Disease		

### Ethics and Documentation

Organization	Title	Date	Credit
University of Pennsylvania School of Medicine	Muscle Building May Help Teens Avoid Early Death	November 25, 2012	0.25
Yale University School of Medicine	Art and Medicine	October 24, 2007	1
New York Chiropractic College	Documentation and Record Keeping	December 3-4, 2005	12
New York Chiropractic College	Ethical and Boundaries	August 27, 2005	3
New York Chiropractic College	Ethical Considerations in Private Practice	June 18, 2005	3
New York Chiropractic College	Avoiding Ethical Landmines & Criminality in Your Employment Contract	**	**
New York Chiropractic College	Fee-Splitting, Self Referrals, Kickbacks: The Latest Word on Prohibited Healthcare	**	**
New York Chiropractic College	Hospital Procedures and Protocols	**	**
New York Chiropractic College	Success - Coding and Documentation	**	**

### Book - Self Study and Research

Subject	Title and Author
Acupuncture	Hecker HU. Steveling A. Peuker E. Kastner J. Liebchen K. Color Atlas of Acupuncture. Body Points, Ear Points, Trigger Points. New York, New York. 2001. January 31, 2012
Anatomy	Warfel JH: The Extremities Muscles and Motor Points. Sixth Edition. Williams & Wilkins Media PA 1993. June 1, 2006 – July 2, 2006
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