

7th International Conference and Exhibition on

Pain Research and Management

October 11-12, 2018 | Zurich, Switzerland

Connecting occupant kinematics to neurological injury and chronic pain in whiplash: Associated visual, auditory and balance disorders in low speed rear impact collisions

Jason Mazarella

Director North American Spine Institute, Canada

Visual, auditory and balance disorders are common symptoms reported after a motor vehicle accident and are typically misdiagnosed as concussion related symptoms. This miss categorization of symptom causation can lead to the development of chronic pain based on the neurological response to continued nervous system over-stimulation. Nervous system hypersensitivity occurs due to spinal wind-up resulting in overstimulation of the dorsal root ganglion due to continued intermuscular c-fiber stimulation. Continued activation of intermuscular c-fibers can result in sensitization due to the presence of ischemic conditions in the muscle, which then leads to the development of trigger points. This continued C-Fiber stimulation of the spinal cord, results in continuous excitation of wide dynamic range neurons (WDRN) whose primary responsibility is to receive and monitor input from a beta type nerve fiber. A beta nerve fiber provides proprioceptive information to the dorsal column; however when acute pain converts to chronic pain, this proprioceptive information stops and pain transmission begins along this pathway. As proprioception is incorporated into our vestibulo-ocular and vestibulo-spinal reflex, continued excitation of WDRN activating a-beta type fibers can lead to visual, auditory and balance disorders post motor vehicle accident.

info@TorontoPainDoctor.com