Neuroplasticity (NP): A quick review of the previous 4 reports. The 2 part conclusion to this series will be sent in the next 2 newsletters.

This is the new science that will win cases for you by explaining why the patient's multiple complaints are real and claim-related. This medical science shows why there are big, scientific holes in many contested claims, with the denial of claims, and with the cases of biased defense IME Drs, while giving a reasonable, scientific explanation of findings such as Waddell's signs, somatization, non-anatomic findings, psychologic disorders, and more..

Persistent pain is the result of NP gone bad. NP refers to actual changes in both the brain's physical structure (anatomy) and functional organization (physiology) which are due to changes in behavior, environment, and bodily injury. This scientific understanding of sensitization of pain from a peripheral injury explains how nervous system changes amplify and distort pain so that it no longer solely reflects the original pain from the peripheral nerves, and then causes new areas of pain.

What are the CONSEQUENCES of chronic pain with bad NP changes?:
-Morbidity (persistent multiple symptoms, delayed recovery, etc.)
-Increased Health Care Utilization/Costs
-Sleep Disturbance;
-Malnutrition
-Physical Function Decline
-Depression;
-Anxiety;
-Impaired Cognition
-Continuing complaints plus new complaints
-Treating and defense IME Drs ignoring and/or not believing the patient's multiple and/or expanding symptoms.

The transition from acute to chronic pain clearly involves peripheral and central sensitization. The past and current AMA guides and all recognized pain literature on both national and state levels note central and peripheral sensitization of nerves and brain tissue, or NP. For example, what is the physiologic basis of chronic pain disorder? Pain neurons stay overloaded and re-route (dump) the excess pain signals by growing new nerve connections (dendrites) into non-pain neurons for pain processing. These non-pain neurons are now stimulated abnormally, causing new and different symptoms. Glial cell (types of brain cells which are far more prevalent than neurons in the central nervous system) become activated and produce Neuroinflammation, which is clearly an underlying mechanism for the centralization of peripheral pain. The basic idea of central sensitization is that the features of the Central nervous system (CNS) change in ways that amplify and distort pain so that it no longer solely reflects the activity of the peripheral nervous system (PNS). A hallmark of this is new areas of pain.

-Per the American Medical Association Guides to the Evaluation of Permanent Impairment, 6th Edition: it notes that there is accumulating

evidence that persistent pain should be considered a disease entity in its own right. Indeed, permanent changes in the responsiveness of both the peripheral and central nervous system can persist even after all tissue healing has ensued; thus, persistent pain can become a self-perpetuating condition. The individual is often left with ongoing pain without identifiable signs of the original inciting disease process that initiated the pain. This results in a multitude of consequences that can lead to significant impairment for the individual affected, including physical impairment, mood dysfunction, and social disruption.

TREATMENT:
Patients with bad NP are generally the most difficult patients to treat.
First, the pain sensitivity levels have to be brought down to a more normal level. Once peripheral pain is centralized, aggressive therapy is required. Treatment relies on a multidisciplinary approach. Minimal reliance on medications is recommended, but not always possible, as medications can lower pain levels to make the patient more active.

From the CO DOWC Medical Treatment Guidelines: current online edition, Chronic pain chapter, DELAYED RECOVERY. By definition, patients with chronic pain fit into the category of delayed recovery. The CO DOWC recognizes that 3 to 10% of all industrially injured patients will not recover despite optimal care, and all of the patients with delayed recovery should have a psychological or psychiatric evaluation, if not previously provided, as well as interdisciplinary rehabilitation or vocational goal setting. It is essential to address all barriers to recovery which might include issues related to psychosocial, personality, employment, litigation, and compensation.

INTERDISCIPLINARY or MULTIDISICPLINARY pain/rehabiliatation programs are the gold standard of treatment for individuals with chronic pain who have not responded to less intensive modes of treatment. There are current studies/good evidence that interdisciplinary programs which include screening for psychological issues, identification of fear-avoidance beliefs and treatment barriers, and establishment of individual functional and work goals, will improve function and decrease disability. In general, interdisciplinary programs evaluate and treat multiple and sometimes irreversible conditions, including but not limited to painful musculoskeletal, neurological, and other chronic painful disorders and psychological issues, drug dependence, abuse or addiction high levels of stress and anxiety, failed surgery; and pre-existing or latent psychopathology. The DOWC recommends consideration of referral to an interdisciplinary program within 6 months post-injury in patients with delayed recovery.

Even though these treatment guidelines/recommendations of psychologic evaluation, interdisciplinary rehab, and vocational goal setting exists both in CO and all National treatment guides, they are commonly ignored. Also, when psychologic evaluation is done, many of the psych providers are very biased in favor of the insurance companies

or do not understand or ignore the new science of NP. It is unfortunate that many healthcare providers use a limited scope of treatments and/or underutilize the scope and length of their treatments and/or use too low a dose of medications they prescribe, and/or ignore or don't try treatments that are recommended in guidelines, because of their treatment biases and specialties. Then, when the patient fails to respond to their treatment protocols, without following the established national or state chronic pain guidelines, the provider states the patient is at MMI and/or has associated psychological factors, but does not treat them.

Next...the 2 part conclusion to this NP series will follow soon.