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Treatment of neuropathic pain by modulation of inflammatory mediators using specific frequencies and microamperage current

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Neuropathic pain for which there is often no effective therapy is mediated by inflammatory cytokines IL-1, IL-6, TNF α and substance P. Microamperage current has been shown to increase ATP production by 500%. It is theorized that microcurrent stimulates membrane peptides and voltage gated ion channels causing them to reconfigure in the correct orientation to normalize cellular function. Treating neuropathic pain in fibromyalgia associated with spine trauma using microamperage current and one specific frequency combination reduced IL-1(330 to 80 pg/ml, p=0.004), Il-6(239 to 76 pg/ml, p=0.0008), TNF α (305 to 78, p=0.002) and substance P (180 to 54pg/ml, p=0.0001) and increased endorphins (8.2 to 71.1 pg/ml, p=0.003). Pain scores were reduced from an average of 7.3+/-1.2 to 1.3+/- 1.1 in 45 of 54 patients (P=0.0001). Studies have shown an association between induction of Cox-2 increased prostaglandin release and nociception.FSM demonstrated a reproducible, application time dependent and frequency specific 62% reduction in Lox and Cox inflammation in a mouse model controlled trial. A retrospective study of 20 neuropathic pain patients with a mean chronicity of 6.7 years showed reductions in pain from an average 6.8+/-1.8 to1.8+/-2.1(p<0.001). Frequency modulated microcurrent is low risk, cost effective and widely available making it a reasonable method for treatment of neuropathic pain.

Biography

Carolyn McMakin developed Frequency Specific Microcurrent (FSM) in 1996. She has a part-time clinical practice and does Clinical Research and Teaches FSM seminars in the US and abroad. She consults with and treats professional teams and elite athletes. She has lectured at the National Institutes of Health and at conferences on fibromyalgia and the differential diagnosis and treatment of chronic pain syndromes. She has authored seven peer-reviewed articles, four book chapters and two abstracts in the areas of chronic pain and differential diagnosis. Her textbook, *"Frequency Specific Microcurrent in Pain Management"* was published by Elsevier in 2010.

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