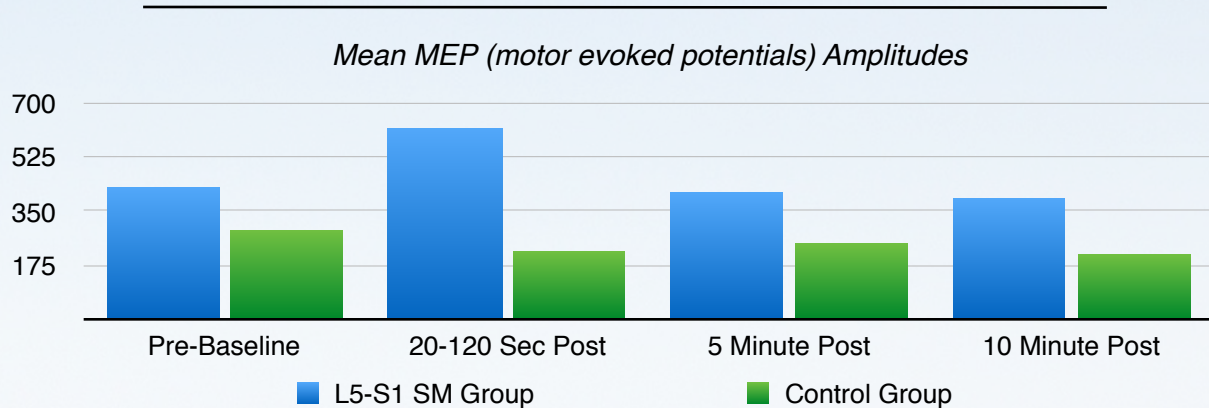




Central Motor Excitability Changes After Spinal Manipulation: A Transcranial Magnetic Stimulation Study

Journal of Manipulative and Physiological Therapeutics. Volume 25. Number 1. January 2002



This award-winning piece of research examined the physiologic effect of spinal manipulation via central motor facilitation. Spinal manipulation has long been considered one of the most safe and effective treatment options for a variety of neuro-musculoskeletal complaints. This research article highlights the mechanism of action based on the alteration of motor evoked potentials post-manipulation.

Aside from decreasing intradiscal pressure, providing a segmental reflex response, and reducing mechanical nerve compression; spinal manipulation can also reduce hypertonicity by decreasing motoneuron activity. The multifactorial impact of the spinal manipulation is perhaps why patients, with a variety of complaints, respond very well to treatment. The non-pharmacological impact to the central nervous system is also beneficial for those patients that have risk factors which may preclude them from commonly prescribed medications.

"The purpose of this study was to determine the effects of lumbar SMT (spinal manipulative therapy) on the central motor system by using TMS (transcranial magnetic stimulation) to activate the gastrocnemius muscle."

"MEP amplitudes were significantly facilitated from 20 to 60 seconds after the L5-S1 SMT procedure as compared with the pre baseline value."

"This data suggests that there is a postsynaptic facilitation of alpha motoneuron, corticomotoneurons, or both that may be specific to the HVLA (high velocity low amplitude) thrust."

We believe in creating a healthier community. We believe patients have better outcomes when physicians work together.
Let's build a healthier tomorrow.

Dr. Brian L. Baldia, DC
421 E. Main Street, Endicott, NY 13760
607.321.7674 CHIROsportandspine.com