

Spinal manipulative therapy effects in autonomic regulation and exercise performance in recreational healthy athletes: a randomized controlled trial

Spine. October 2018

The use of SMT (spinal manipulative therapy) has taken the sports world by storm. Everyone from professional athletes to local Crossfitter's have sought SMT, a hallmark of chiropractic care, as a way to reduce pain while improving function and performance.

Increased motoneuron excitability and altered central sensory processing have been a few of the proposed neurophysiological mechanisms by which SMT improves performance. This recent study from *SPINE* found a moderate parasympathetic dominance after receiving SMT.

The researchers assert the performance enhancement related to SMT may depend upon the segment mobilized, with the thoracic spine being a region of specific interest.

Our practice has been fortunate with work with athletes of all fitness levels and look forward to continuing our co-management of these patients with your office.

"A single pre-exercise SMT session induced an acute shift towards parasympathetic dominance..."

"Recent studies have observed an increased corticospinal excitability and electromyographic activity after a single SMT session..."

"A significant and very likely lower SS (stress score) was found in response to actual SMT compared to sham SMT. A trend for significant and likely lower S:PS (sympathetic:parasympathetic ratio), and a likely higher LnRMSSD (natural logarithm of root-mean-square difference between successive heartbeat intervals) were observed with actual SMT."

Effects of spinal manipulative therapy on autonomic function measuring stress score (SS) and sympathetic:parasympathetic ratio (S:PS)

