Research Project Summary

Project Complete

For almost 120 years’ chiropractic has been based on the idea that chiropractic adjustments help people live healthier, happier more active lives by removing interference to the nervous system. Chiropractors have also placed a lot of emphasis on specificity – the idea that the line of drive of the adjustment and the amount of preload applied in setting up for the adjustment are incredibly important aspects of the art of the adjustment. This study aims to add to the understanding of these two ideas by measuring the effect of chiropractic adjustments to adjustments using different preload, force and line of drive.

Most recent theories on the mechanism of chiropractic adjustments emphasise the central role of the thalamus. Its function includes relaying sensation, spatial sense, and motor signals to the cerebral cortex, along with the regulation of consciousness, sleep, and alertness. Since the thalamus serves as an integration and relay site for neural messages sent from the rest of the body, it becomes an excellent location to study the sensory effects of the spinal adjustment.

This study will use electrophysiological recording techniques to record the response from neurons in the thalamus before and after a spinal adjustment has been given to a rat vertebra in the lower back.

Impact of Research

Publications


Presentations

- Reed WR, Cranston JT, Onifer SM, Sozio RS. Effect of spinal manipulation on spontaneous and evoked activity of thalamic submedius neurons (603.05). Society for Neuroscience, Oct. 17-21, 2015 Chicago, IL.
- Reed WR, Sozio R, Pickar J, Onifer SM. Effect of spinal manipulation thrust duration on trunk mechanical activation thresholds of nociceptive specific lateral thalamic neurons. International Research Congress on Integrative Health & Medicine, May 13-16, 2014 Miami, FL.
- Reed WR, Sozio, R, Hussman A. Effect of spinal manipulation on thalamic 2012