INTERNATIONAL RESEARCHERS SAY CHIROPRACTIC MAY MAKE YOUR MIND SHARPER

Ground-breaking research indicates that chiropractic care may make your brain function better, according to the New Zealand Chiropractors’ Association (NZCA).

A collaborative study on the effects of manipulation of the spine on brain function between Denmark’s Aalborg University, the New Zealand Centre for Chiropractic Research, the Health & Rehabilitation Research Institute, AUT University and University of Ontario Institute of Technology, published earlier this year¹ in the journal *Neural Plasticity* suggests that, at least in part, the mechanisms by which spinal manipulation improves performance are due to a change in processing of information at the prefrontal cortex.

Dr Cassandra Fairest, chiropractor and spokesperson for the NZCA explains: `The focus of chiropractic care is on the health and integrity of the nervous system. The health and function of the spine affects the entire nervous system. We already know that the spinal cord is an integral part of the central nervous system and processes information just like parts of the brain do² and the latest New Zealand research into the effects of chiropractic care suggests that it may have an important role to play in improving executive function.’

² [http://www.queensu.ca/gazette/content/spinalcordprocessesinformationjustareasbrain](http://www.queensu.ca/gazette/content/spinalcordprocessesinformationjustareasbrain)
Executive function is the mechanism by which the brain integrates and coordinates the operations of multiple neural systems to solve problems and achieve goals based on the ever-changing environment around us\textsuperscript{3,4}.

The researchers point out that executive function is considered to be a product of the coordinated operation of various neural systems and is essential for achieving any particular goal. The prefrontal cortex is believed to be the main brain structure responsible for enabling this coordination and control. It requires planning a sequence of subtasks to accomplish a goal, focusing attention on relevant information as well as inhibiting irrelevant distractors, being able to switch attention between tasks, monitoring memory, initiation of activity, and responding to stimuli\textsuperscript{5}.

Dr Fairest adds: `A change in prefrontal activity following chiropractic care may therefore explain and/or link some of the varied improvements in central nervous system function previously observed in other research, such as improved joint position sense error\textsuperscript{6}, reaction time\textsuperscript{7}, cortical processing\textsuperscript{8}, cortical sensorimotor integration\textsuperscript{9}, reflex excitability\textsuperscript{10}, motor control\textsuperscript{11}, and lower limb muscle strength\textsuperscript{12}.


\textsuperscript{7} D. D. Kelly, B. A. Murphy, and D. P. Backhouse, “Use of a mental rotation reaction-time paradigm to measure the effects of upper cervical adjustments on cortical processing: a pilot
`All this research, much of it from the New Zealand College of Chiropractic Centre for Chiropractic Research and funded by the Australian Spinal Research Foundation strongly suggests that chiropractic care/adjustments can significantly improve brain–body communication and coordination.'


According to Dr Fairest: ‘We know that chiropractic care assists brain function in many ways, one of which is proprioceptive function (perception) and this improves the accuracy of the internal brain map so your brain accurately knows what is occurring within your body and the surrounding environment continuously. Environment relates to the processes inside the body, as well as its immediate surroundings’.