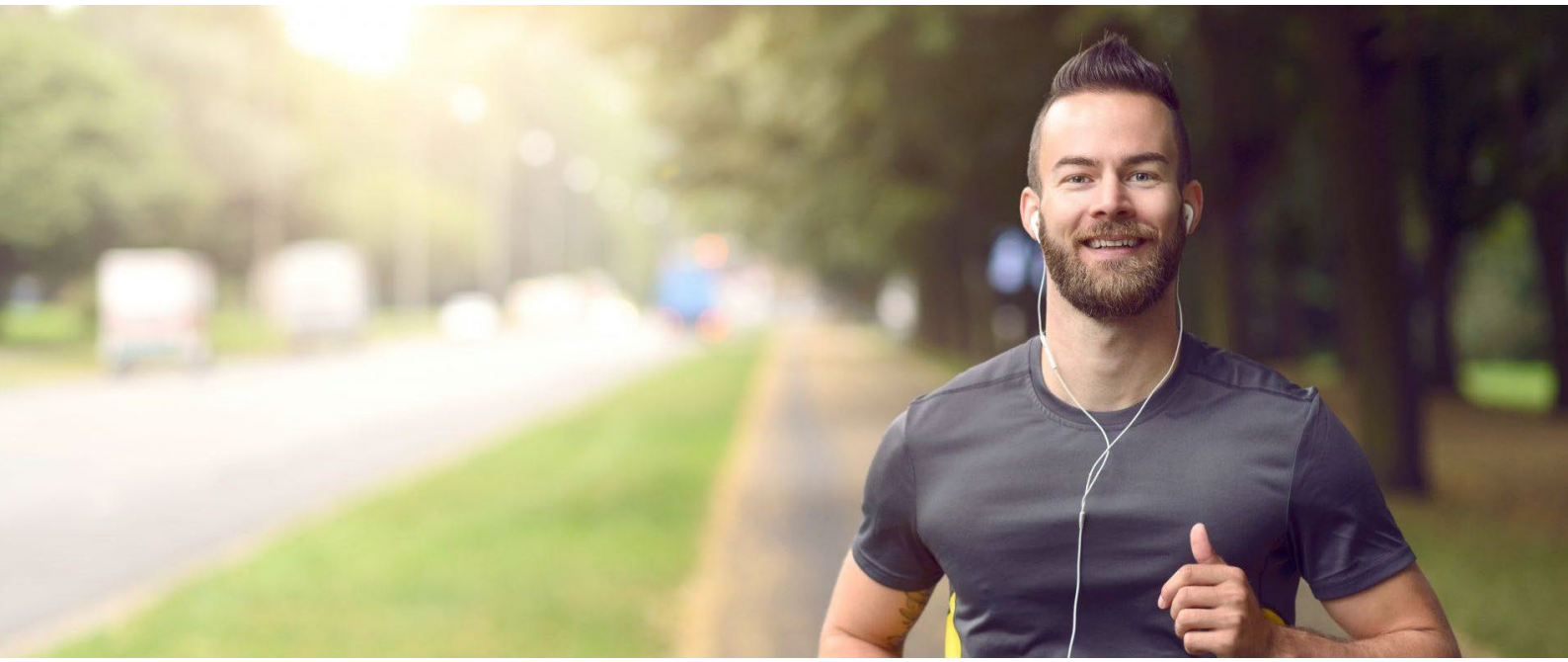
Can Chiropractic Help The Young, Athletic Patient?



There are many important, continuing conversations that occur around the role and effectiveness of chiropractic care at various points in the lifespan. The common ones include non-musculoskeletal conditions, older adults, and paediatric and infant care. But nestled in among these cohorts is another one that doesn't get too much of a loud shout: chiropractic care for fit, healthy people including athletes.

Occasionally chiropractic gets a shout out from the pit crew of a big-name athlete: Usain Bolt, Tiger Woods and the legendary Michael Jordan are all names synonymous with sporting prowess, who have also been said to benefit from chiropractic care. But a celebrity endorsement does not equate to evidence in terms of research.

A new case report covering the resolution of lower limb neuropathy in an 18-year-old cricketer has just been released, and perhaps it's a good time to revisit the evidence surrounding chiropractic care and enhanced physical functioning or performance.

First, the case report

The case report, published in a recent edition of the Chiropractic Journal of Australia, detailed the care of an 18-year-old male who had sought out the services of a chiropractor to help with a "2-year history of low back, leg and foot pain, and associated neuropathy [1]." He had sought other treatment over the course of 13 months and still faced worsening symptoms, before receiving chiropractic care.

His symptoms were associated with an injury he sustained as a [cricket] fast-bowler. He rated his pain as constant, stating that it could be as severe as 8/10. He reported "a stabbing sensation in his left piriformis, mpain in his left calf, "pins and needles" at the front and medial side of the foot when sitting and loss of strength in the left forefoot [1]."

Unsurprisingly, this affected sleep, exercise, tasks in daily living, and quality of life (including stress, life enjoyment, and mental/emotional state). His care was not symptoms-focused, but rather focused on the correction of vertebral subluxations. These subluxations were detected via commonly used clinical indicators including leg length inequality, static palpation, thermography and surface electromyography. The patient was found to have subluxations and areas of hyperactivity in vast portions of his spine (see the full case report

for more details). Chiropractic care, twice weekly for six weeks using Activator Methods and Torque Release Techniques, had a significant impact on his subluxations and "coincidentally" his symptoms.

At the end of the six weeks, the patient reported:

- Feeling better, with less pain
- Being the "most pain free" he had been in "ages."
- Improvements in quality of life, including a significant improvement in physical functioning.

His chiropractor noted indicators of reduced subluxation over the course of care. Full details are available in the original report, but they do include:

- Significant changes in range of motion, thermography and sEMG readings after the progress examination
- Significant improvements in postural examination results
- Balanced leg length (prone)
- Improvements in a previously-abnormal neurological test.

This patient had shown pain and neuropathy as the result of a sport injury, and his symptoms improved concomitant with chiropractic care. But his was a class of injury not uncommon in cricketers. He is not the first, and will not be the last, athlete to seek and/or benefit from chiropractic care.

What does the research have to say on human performance and chiropractic?

Recently published research indicates that chiropractic care can have an impact on the way the brain drives the muscles. These are significant findings, as they suggest change occurs at the brain level and not just the spinal cord. *I.e.* When we adjust and correct the subluxation, we can have an impact on the brains ability to communicate with muscles.

These landmark studies include:

- A study that showed changes to cortical drive to upper and lower limb muscles following chiropractic care [2]
- A study revealing changes in the H reflex and V waves following chiropractic care. Lead author, Dr Heidi Haavik told Spinal Research, "What we can say based on this study is that when we adjust subluxations, we improve strength, we prevent fatigue and we change the way the brain drives our muscles [3]."
- A more recent study revealing the impact of chiropractic care on bite force. Once again, this indicates an improvement in the brains ability to drive the muscles following chiropractic care [4].
- Research showing the effect of subclinical neck pain on cerebellar processing, and the impact of chiropractic care on this phenomenon [5].
- A paper indicating chiropractic care can increase sensorimotor function in older adults – shown via increased choice stepping reaction time and decreased falls risk [6].
- A growing bank of data showing the impact of chiropractic care on proprioception, which is essential to balance [7].

All in all, we are slowly but surely amassing a bank of data that indicates chiropractic care has a potential role in human performance, not just pain.

Athletic pursuits will always carry the risk of injury, and the case study covered in this article indicates that even in young, athletic patients, chiropractic care has a role. But the potential impacts on drive to the muscles, proprioception, cerebellar processing is where it gets truly interesting to the chiropractor or chiropractic patient interested in furthering human performance and not just reducing pain.

We are truly excited to see where subluxation-based research may take us!

References:

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Tips For Using This Article In Practice

It is becoming increasingly obvious that Chiropractic has effects beyond musculoskeletal complaints, as this article illustrates.

Here are some tips to help you and your team in practice:

- This study is an encouragement to retain an open mind when caring for a practice member. It can be easy to focus on their primary concerns and setting goals around the resolution of those issues. As we know, individuals are complex, and their health journey can rarely be categorised into simple checkboxes. With this in mind, it is important to try and see beyond the resolution of their primary pain concerns, or at very least keep your mind open to other possible outcomes after pain has been addressed.

  The true benefit of supporting the nervous system to function optimally can affect many aspects of patients' quality of life. Unexpected improvements in their daily lives through enhanced nervous system function will leave patients with a greater sense of satisfaction after your care, and generate practice members seeking long-term maintenance care.

- In addition to keeping your own mind open, educating patients and challenging their expectations of care can elevate both your patients' and your own experience. The above article is a valuable resource when discussing care goals with patients, especially the young and healthy ones, who view chiropractic care as a means to the end of their pain and nothing more. It is a great resource to have on-hand to revisit the summarised papers and provide a reliable base of evidence for your care recommendations.

- An important part of broadening the scope of care for a patient is great communication. In order to challenge preconceived ideas, held by a patient, of what chiropractic can do, you first need to understand what these ideas are and where they have come from. Asking open-ended questions such as *'What do you expect to gain from care?*', '*What are the kind of changes you think care can bring about?*', and '*How much do you feel like you know about how Chiropractic affects the body*?' can initiate conversations that can provide you with a well-rounded understanding of where your patient is coming from in terms of expectations.

  Asking questions that are open-ended in nature allows patients to articulate their understanding and beliefs, and may prompt further questions and discussion. Understanding is key to effective and relevant education. These conversations can enhance a patients' awareness of their health and lead to the acknowledgement of non-musculoskeletal improvements following care.

Get you and your team involved and use this article and the above tips to help you better communicate your chiropractic messages and recommendations to your community. Enjoy!