



# CHIROPRACTIC & THE IMMUNE SYSTEM



**Dr. Jenna Duehr**

BChiro, BHSC (Nursing), MHSc

**Dr. Kelly Holt**

BSc, BSc(Chiro), PGDipHSc, PhD

**Dr. Heidi Haavik**

BSc(Physiol), BSc(Chiro) PhD

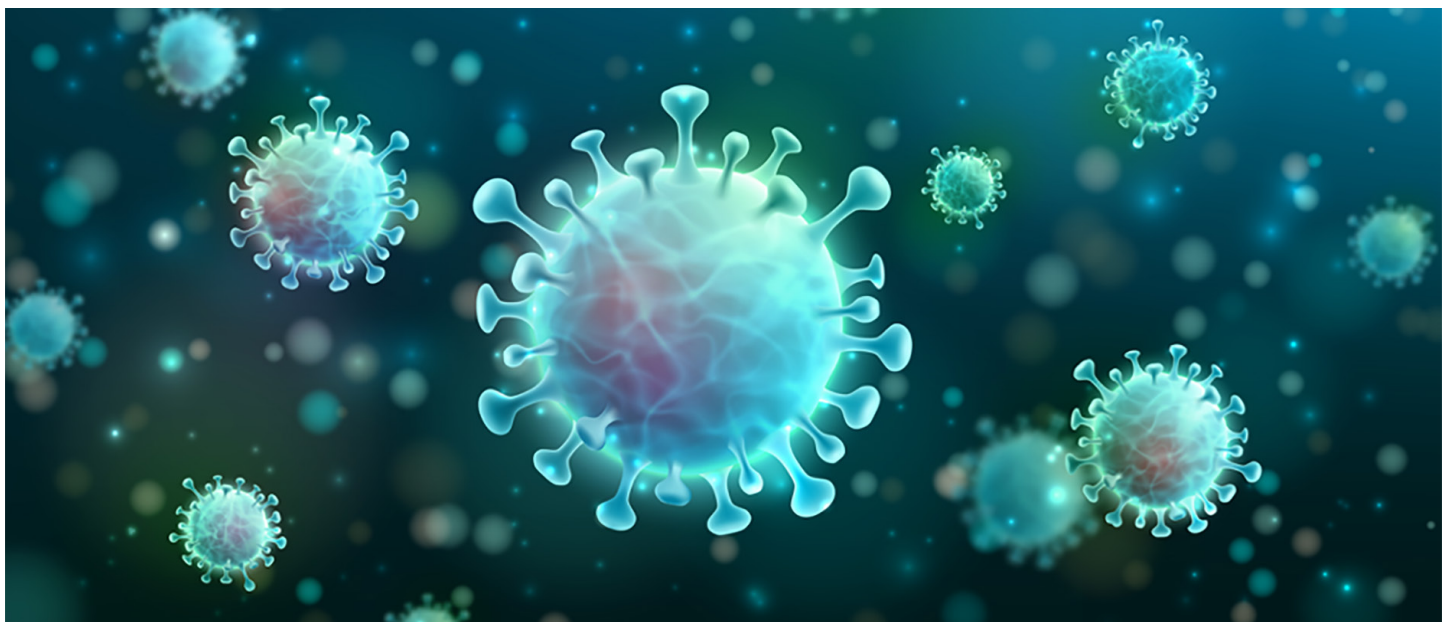
**As the coronavirus pandemic spreads across the world, one of the questions many people have asked is ‘what can I do to help boost my immune system’? One of the goals of chiropractic care is to help you to function at your optimal potential, including the function of your immune system. So, let’s look at how chiropractic care may affect your immune function.**

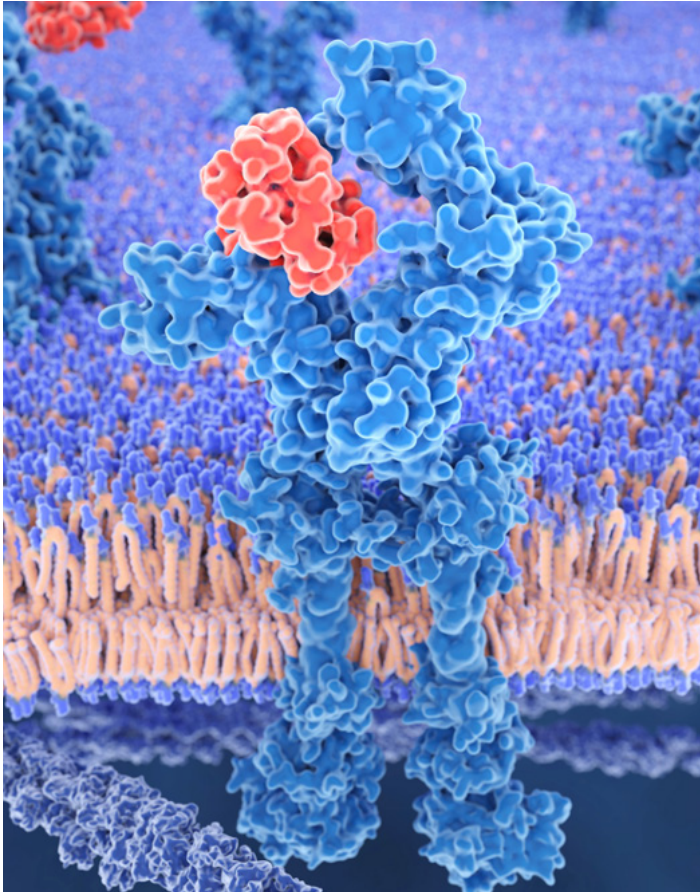
We all know that there are lots of ways we can help protect ourselves and others and stop viruses like Covid-19 from spreading. We know that washing your hands with soap, sneezing or coughing into your elbow or a tissue and keeping away from others if you are sick are all really important. However, what is also really important is to have a healthy immune system, because that is your built-in defence against things like bacteria and viruses that can harm your body.

Research has clearly shown us that your immune system relies on your brain and central nervous system to guide the way it responds to potential threats to your health.<sup>1</sup> These 2 super-systems, your central nervous system and immune system, are closely linked and they work together to detect and appropriately respond to anything that may harm you.<sup>1</sup> Your immune system actually acts

as a sensory system, providing information to your brain about what is occurring in your body and your brain responds to help create an appropriate immune response.<sup>1-8</sup>

So, we know that your brain and immune system communicate and work together to launch an effective and appropriate immune response.<sup>1-8</sup> We also know that when your spine is not moving properly, this changes the way your brain can sense what is going on in and around your body and the way it controls your body.<sup>9-11</sup> And we know that if your chiropractor adjusts your spine and improves the way it’s moving, it helps your brain to more accurately ‘see’ what is going on in and around your body.<sup>12-15</sup> This suggests that having a well-adjusted spine could have an impact on your immune function, so let’s take a look at what the research tells us about this potential link.





Two recent scientific studies have summarised the research that has investigated chiropractic care or spinal manipulation and how it affects the immune system.<sup>16 17</sup> One of these reviews<sup>16</sup> found 13 different studies that looked at spinal manipulation and the immune system. Most of these studies focused on a very important immune chemical called cortisol. In the second review,<sup>17</sup> they found 8 studies that looked at spinal manipulation and a number of immune chemicals, including cortisol. What the scientists found in these reviews was that spinal manipulation seems to trigger the activation of the neuro-immuno-endocrine system... in other words, when you get adjusted by your chiropractor, it alters the way your nervous system works, which then has an impact on the way your immune system works. However, there is a big BUT when it comes to understanding what these findings mean. This is because we simply don't know yet whether these chemical changes in the immune system have an important impact on your overall immunity or not. To fully understand this, we need to do more research. So, we know that when your spine is adjusted by your chiropractor

it often influences your immune system, but we don't know if this will have a real impact on the way your immune system will fight off something nasty like a virus.

From these two reviews there are 2 'bottom-line conclusions' about the link between chiropractic and the immune system:

1: Chiropractic adjustments have been shown in the research literature to affect the levels of chemicals in your body that are important for a healthy immune response.

2: We don't know yet whether these chemical changes have an important impact on your overall immunity or not, to fully understand this we need to do more research.

So, there is a link, but scientists don't yet know if that means chiropractic care will improve your immune system in a way that will help prevent you from getting sick, or whether chiropractic will reduce your symptoms if you get sick, or shorten the duration of your illness. Unfortunately, no studies have yet been done that have looked at these very important questions.

This means that when you get adjusted by your chiropractor, it might help you to be able to respond and adapt to your environment better and allow your nervous system and your immune system to talk to each other more clearly, to keep you balanced and healthy. But, we need to do more research to really find out if chiropractic care really does help boost the function of your immune system in a way that's important for your health.



References  
1. Kawli T, He F & Tan M-W. Disease models & mechanisms 2010;3(11-12):721-31. 2. Buckingham JC, et al. Pharmacology Biochemistry and Behavior 1996;54(1):285-98. 3. Elenkov IJ, et al. Pharmacological reviews 2000;52(4):595-638. 4. Herkenham M & Kigar SL. Progress in neuro-psychopharmacology & biological psychiatry 2017;79(Pt A):49-57. 5. Kipnis J. Scientific American 2018;319(2):28-35. 6. Kox M, et al. Proceedings of the National Academy of Sciences 2014;111(20):7379-84. 7. Pearce BD, Biron CA & Miller AH. Advances in Virus Research: Academic Press 2001:469-513. 8. Sanders VM & Kohm AP. International review of neurobiology 2002;52:17-41. 9. Uthakhpur S et al. Arch Gerontol Geriatr 2012;55(3):667-72. 10. Haavik H & Murphy B. J Electromyogr Kinesiol 2012;22(5):768-76. 11. Treleaven J. Man Ther 2008;13(1):2-11. 12. Daligadu J, et al. JMPT 2013;36(8):527-37. 13. Haavik H & Murphy B. Journal of Electromyography and Kinesiology 2012;22(5):768-76. 14. Haavik H, et al. 2017 doi: 10.1016/j.jmpt.2016.10.002 15. Taylor HH & Murphy B. JMPT 2008;31(2):115-26. 16. Colombi A & Testa M. Medicina 2019;55(8):448. 17. Kovanur-Sampath K, et al. Musculoskeletal Science and Practice 2017;29:120-31.