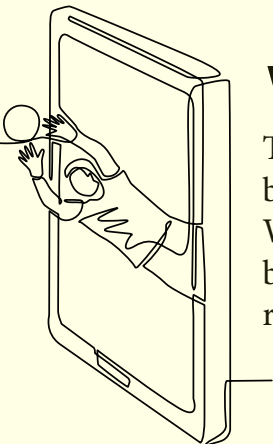


# Chiropractic Care & Reaction Times



*How quickly do you react?  
Are you accident prone or a ninja warrior?*

How quickly we react to a situation is called our reaction time. It will depend on how fast our brain can sense what's happening around us, process the information, come up with a reaction plan, and then perform the response.



## **Why are we interested in reaction times?**

The reason is that chiropractic care aims to improve the communication between your brain and your body so you are better able to react and respond to your environment. When your brain can accurately perceive what is going on inside and out, it can better control your body for the situation at hand, and move your muscles in the right order and at the right speed.<sup>1-3</sup>



## What does the research show?

One of the first conclusive studies to look at how chiropractic care affects reaction time was published back in 2000.<sup>4</sup> In this study, the researchers asked a group of students to look at a computer screen that had a letter 'R' on it and to hit a key on the keyboard to show whether they thought the 'R' was the right way around or back to front.

The researchers then got a chiropractor to either adjust the person or have them lie down on a chiropractic table, without doing an adjustment, as a control intervention. What the researchers found was that after an adjustment the study subjects improved their reaction time much more than the subjects who were in the control group. They concluded that the chiropractic adjustments may have affected how quickly their brain processed the information they were seeing.

In 2016, another study looked at how quickly a group of older people could take a step on a platform that had four panels that could light up.<sup>3</sup> When a panel lit up, they'd have to stand on it as quickly as they could. They tested the older people before, during, and after receiving 12 weeks of chiropractic care, or receiving their usual medical care.

What they found, was that after 12 weeks there was a dramatic, significant improvement in the chiropractic group's step time. The improvement seen in reaction time in this study was actually 2.5 times greater than a large clinical trial that looked at the effects of six months of exercise on the same stepping task.<sup>7</sup>

In another study,<sup>8</sup> researchers tested a group of special operation forces military personnel to see whether chiropractic adjustments improved how quickly they could react and touch a set of panels on the wall in front of them that would light up at random. What they found in this study, was that when these elite soldiers were adjusted, they were quicker at reacting and responding to the lit panels than if they had no adjustment.

Researchers are discovering that chiropractic care really does seem to have an impact on how efficiently your brain can accurately perceive what is going on around you and react to it.

So if you want to improve your reaction times, why don't you consider having your spine checked by your family chiropractor?

### Disclaimer and References

This information is provided for educational purposes only. It is not intended to be professional advice of any kind. Haavik Research Ltd encourages you to make your own health care decisions based on your own research and in partnership with a qualified health care professional.

1. Haavik & Murphy. *J Electromyogr Kinesiol* 2012;22(5):768-76. 2. Haavik & Murphy. *J Manipulative Physiol Ther* 2011;34(2):88-97. 3. Holt et al. *J Manipulative Physiol Ther* 2016. 39(4):267-78. 4. Kelly et al. *J Manipulative Physiol Ther* 2000;23(4):246-51. 5. Lord et al. *Phys Ther* 2003;83(3):237-52. 6. Lord & Fitzpatrick. *J Gerontol A Biol Sci Med Sci* 2001;56(10):M627-32. 7. Lord et al. *J Am Geriatr Soc* 2003;51(12):1685-92. 8. DeVocht et al. *Trials* 2019;20(1):5-5. doi: 10.1186/s13063-018-3133-2.

- **Dr. Heidi Haavik**  
BSc(Physiol) BSc(Chiro) PhD
- **Dr. Kelly Holt**  
BSc, BSc(Chiro), PGDipHSc, PhD
- **Dr. Jenna Duehr**  
BChiro, BHSc(Nursing), MHSc