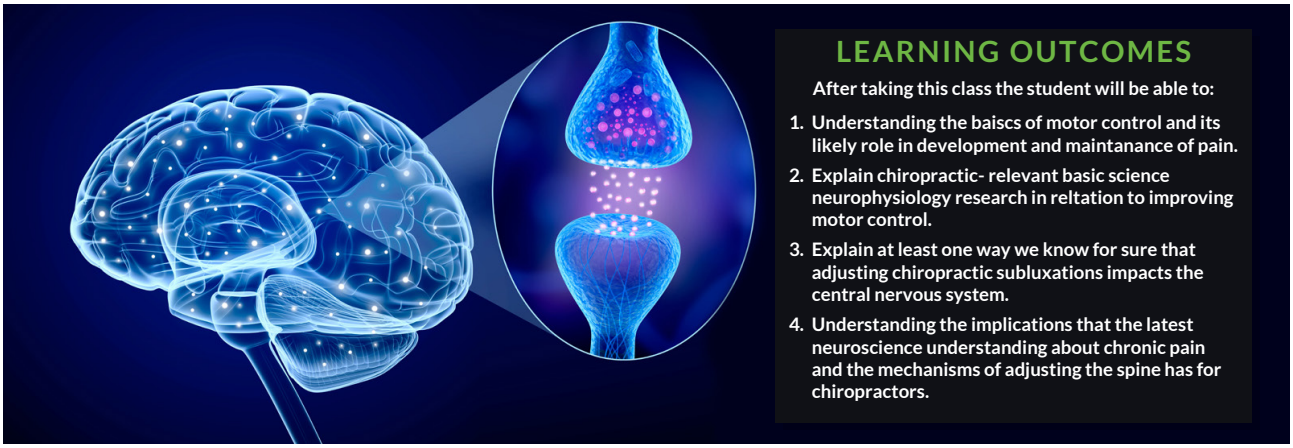
The Brain, Pain and the Neuroplastic Effects of Chiropractic Care

This class will cover the latest scientific understanding about the function of the spine and how the brain controls movement. There are now strong links between the gut, the microbiome, stress, inflammation and pain. This class will also cover the importance of healthy spinal movement for proper brain function.

This class will focus on the mechanisms of an adjustment, based on the latest scientific research studies, and how this is likely altering the way a person's brain is 'feeling' pain, and how the brain controls spinal movement patterns. We used to think we were 'fixing' problems locally in the spine, when it now turns out we are more likely to be 'fixing' problems in the brain.

BASIC SCIENCE LEVEL 2 - CLASS 10



LEARNING OUTCOMES

After taking this class the student will be able to:

1. **Understanding the baiscs of motor control and its likely role in development and maintanance of pain.**
2. **Explain chiropractic- relevant basic science neurophysiology research in reltation to improving motor control.**
3. **Explain at least one way we know for sure that adjusting chiropractic subluxations impacts the central nervous system.**
4. **Understanding the implications that the latest neuroscience understanding about chronic pain and the mechanisms of adjusting the spine has for chiropractors.**

LESSON CONTENT

Every lesson has a practice quiz. At at the end of the lessons there is a final quiz and if you pass the final quiz, you will receive a certificate of completion.

1. What is motor control?

- How sensory information can impact motor control of the spine.
- The motor control changes that take place with low back pain or injury.
- The importance of the inner body schema in accurate motor control.

2. The link between, the microbiome, stress, sleep, limbic brain reactivity and pain.

- How chiropractic adjustments can improve spinal motor control.
- Gut microbiome and the brain.
- The relationships between the gut, the microbiome, stress, sleep, limbic brain reactivity and pain.

3. The neuroplastic effects of chiropractic adjustments.

- Why its likely chiropractic adjustments turn down or off the pain in the brain itself.
- That the clinical research shows chiropractic is beneficial for neck pain, back pain and cervicogenic headaches and migraines.
- The image summary of the neuroplastic effect of chiropractic adjustments.

4. How to explain to patients how neck pain can impact your life.

- How chronic stress and pain affect the prefrontal cortex and how this can lead to opioid addictions.
- Why its important the public learn about the neurophysiology of pain.
- The research showing us that pain is quite common even in kids and this does not go away by itself (instead it often gets worse).

5. Tech neck problems and what to do about it.

- Tech neck problems.
- The relationship between stress, prefrontal cortex and addictions.
- The evidence showing that people who see chiropractors are significantly less likely to take opioid drugs.

6. How best to communicate chronic pain to patients.

- Recap the key points our patients need to know about chronic pain.
- Discuss how best to communicate about chronic pain to patients.
- Discuss the importance of communicating the neuroscience of chronic pain to pain patients.

7. Goals as chiropractors when working with chronic pain patients.

- Reassessing what our goals as chiropractors need to be when working with chronic pain patients.
- The implications that the latest neuroscience understanding about chronic pain has for chiropractors.

CREATED BY:

Dr. Heidi Haavik
Ph.D., BSc (Chiro)