

The Spine-Brain Connection: A New Twist to the "Brain-Body Connection"

With technology advancing and the ability to measure brain activity and health improving each year, studies and theories about the brain-body connection are finding ever-increasing popularity.

Advancements in brain-body research are incredibly important, as the brain is responsible for all body function, thought and social interaction. The more we discover about the functions of the brain and the pathways in which it communicates with cells and the senses, the more likely we can expand our mental, emotional and functional capacities and overcome disease.

The Real Connection

With so much thought going into the brain and how it keeps the body going, we bet you're wondering **what keeps the brain going**. The answer is pretty simple: **Your body**. While the brain keeps the body developing and moving along, it is the nutrients that come from the body through eating, drinking, breathing air and the products of cellular function that keep the brain developing and moving along.

Important nutrients the brain needs for survival such as oxygen, glucose and neurotrophins (nutrients that keep neurons strong) get from the body to the brain through the cerebro-spinal (brain-spine or spine-brain) fluid (CSF) that flows from inside your spinal canal. This fluid gets from the spine to brain with the use of a CSF "pump."

This CSF pump doesn't use electricity. The power for the pump is generated by the movement of the sacrum (the lowest portion of the spine) and the cervical spine (upper portion of the spine).

For the CSF pump to move effectively, you need a healthy spinal column. Irregular or reduced motion of the sacrum and/or cervical spine will lead to an abnormal and reduced flow of oxygen, glucose, neurotrophins and other important nutrients to the brain. That's why the spine-brain connection is so important. A bad back or neck will literally give you a **bad brain**.

The Damage

News stories concerning tragedies in which oxygen was cut off to the brain for too long a period during near-drowning incidents are very popular. Because of these reports, we all know that the effect of spending too much time without air causes brain damage. A lack of normal nutrient support to the brain will lead to damaged brain

tissues and aberrant brain functions resulting in a significant increase in risk of disease process both in the brain and organ systems of the body.

Because many people suffer from undetected spinal imbalance and misalignments called subluxation, they lose the CSF pumping mechanism. As a result, nutrients are not delivered to the brain in the right quantity and quality. A poor spine-brain connection has been the cause of the average brain beginning to atrophy (shrink and deteriorate) by the age of 25.

Additionally, it's important to recognize that, for the brain to do any communicating with the body it must send the signals through the spinal column. Within the spinal column lies the brain stem and spinal cord. Again, misalignment or poor placement of the spine would then traction the brain that could lead to poor development, altered brain function, and potentially reduced output of important glandular chemical hormones.

Off of the spinal cord emanate the spinal nerves. These nerves bring brain signals to all of the organ and muscle functions in the body. If the spinal nerves were to suffer from pressure or damage from the spinal column, it could affect heart, lung and glandular functions. This would, in turn, affect the brain due to abnormal levels of oxygen, blood and chemicals flowing to it.

Good Spine Hygiene

The success of the "brain-body connection" is linked to the health and function of the spinal column. This new twist, however, gives us the "spine-brain connection." Damage, misalignment (subluxation), altered curves and imbalance of the spine will lead to an ineffective "brain-body connection." That's why, regardless of symptoms, people who want their brains to "talk" to their bodies should make sure to establish proper spinal hygiene, which consists of the following criteria:

- Exercises to strengthen the paravertebral (back) musculature, abdomen and quadriceps (front of legs) which all become weak or atrophied due to sitting too often.
- Proper stretching of anterior musculature including the pectorals (chest) and anterior deltoids (front of shoulders) as well as calves and hamstrings.
- An evaluation by a chiropractor for proper spinal alignment and correction of spinal curves.

An unhealthy spine-brain connection can lead to almost any disorder of the brain or body. Fortunately, the spine-brain connection can be enhanced by a chiropractor. Certain types of chiropractic can even improve or even completely restore this important connection. For more information on how chiropractic can improve your contact the International Chiropractic Association at 1800-423-4690 www.chiropractic.org or the Connecticut Chiropractic Council at 1-800-353-3332 www.ctchiropractic.org

