Our Three Brains — and the Emotional Component of Health!

by Scott Walker, D.C., and Deborah Walker, D.C.

Three Brains? ... Normally we think of the brain as singular! However, that concept changed when Neuroscientist Paul MacLean, Ph.D., identified three different parts of the brain: the Reptilian, Mammalian and Neocortex Brains. Each is distinctly unique and radically different from the other in chemistry, structure and behavior. MacLean describes the three brains saying, “Stated in popular terms, the three evolutionary formations might be imagined as three interconnected biological computers, with each having its own special intelligence, its own subjectivity, its own sense of time and space, and its own memory, motor, and other functions.”

Essentially, each of our three brains has its own agenda and can influence our health in different ways. According to MacLean: “... the forebrain could be compared to the driver of a vehicle. A fundamental difference is that, in the course of evolution, the brain has acquired three drivers, all seated up front and all of a different mind. While the three brains are interconnected, they also act individually. It deserves reemphasis that the three formations are markedly different in chemistry and structure and, in an evolutionary sense, eons apart. Moreover, it should be emphasized that, despite their interconnection, there is evidence that each brain type is capable of acting somewhat independently. With the evolution of the forebrain, the neural chassis acquired three drivers, all of different minds and all vying for control.”

In many ways, this is a scary thought! Three different minds with three different agendas are trying to run the show, and it’s often not always clear who’s in control. Most of us would like to think that our Neocortex (Thinking) Brain is in control but, surprisingly, the Mammalian (Emotional) Brain is often more in control than we realize!

You’ve probably had an experience where you make a logical decision, like, “I’m not going to eat any chocolate or sugar today.” Then someone brings in a freshly made batch of brownies and, boy, do they smell great! You say to yourself, “No, I’m not going to eat any of those.” Then, before long, you start thinking, “Well, maybe just one little bite wouldn’t hurt.”

That’s the Mammalian Brain starting to take over. From there, a short battle ensues between the Mammalian and Neocortex Brains and, if you’re like most people, guess who wins? Yep, the Mammalian (Emotional) Brain wins almost every time!

A Brief Recap of Our Three Brains—

The Reptilian Brain is related to survival instinct, exploring our environment, responding to danger, the four F’s (feeding, fleeing, fighting and reproduction), instinctive or genetically-programmed behaviors, primitive sensations, aggression, territoriality and dominance, hunger, breathing, heart rate, primitive muscle reflexes, sensory motor functions, etc. Some of the physical structures related to the Reptilian Brain are the spinal cord, medulla, pons, midbrain and cerebellum.

The Mammalian Brain is related to emotions, emotional memory formation, short term memory and storage, long term memory, altruism, religious tendencies, sexuality (differences), complex sensation and perception, hormones, temperature control, timelessness (no yesterday, today or tomorrow), etc. Some of the physical structures related to the Mammalian Brain are the hippocampus, amygdala, hypothalamus, pituitary and thalamus.

The Neocortex Brain is related to reasoning, executive decision making, mathematics, composition, invention, understanding, coordination of all voluntary muscle movements, purposeful behavior, language, nonverbal ideation, spelling, grammar, etc. Some of the physical structures related to the Neocortex Brain are the cerebral cortex, corpus callosum, and cerebrum.

How the Three Brains Affect the Health of our Patients—

Our patients want to get well; truly they do. The average patient comes to our office because his/her Neocortex (Thinking) Brain has made a decision that it’s time to get help. As chiropractors, we do our best to resolve the patient’s complaint and, in most cases, we are very successful in helping the patient by applying our skills in adjusting the spine (here, in a large part, we’re working with the Reptilian Brain).

It’s important to note that the Mammalian Brain is probably the most powerful of the three brains in terms of healing. Much like the chocolate brownie battle described above, the Mammalian and Neocortex Brains can be in conflict as to what is best for the patient’s health. When this happens, the doctor can continue to do what he/she normally does with little to no results, while the stubborn Mammalian Brain continues to maintain its position. Often the Mammalian Brain is operating from a learned response that, at one point and time, probably served the patient in a very beneficial way. The problem is that the Mammalian Brain has no sense of time, and it may be holding on to an old pattern that is no longer appropriate or needed. To break this kind of condition, we need to address the Mammalian Brain.
How can we use the Three Brains to help our patients?—

1. Understanding that we have three brains and how they function can be very helpful in the healing process. You can always Google the Internet for more information and/or find books, charts, etc., that relate to this cutting-edge information.

2. It's often a huge relief for patients to discover that they might have a mind-body physiological component that's affecting their health. Let them know that they really have three brains and that, in most cases, they're not even consciously aware when the Mammalian (Emotional) Brain is in control. Sometimes, however, patients are very aware that there's an emotional component happening. In these cases, if you already have a way to address this factor, use your present technique(s).

   If you don't already have a way to work with the Mammalian (Emotional) Brain, here's an easy-to-do approach that can offer relief during times of emotional and/or physical stress. It uses the Neurovascular Reflexes originally discovered by Bennett and is from an Applied Kinesiology textbook written by David Walther, D.C.: The neurovascular reflex is located bilaterally on the frontal bone eminence and is treated with a light, tugging contact, as is usual for neurovascular reflexes. It is necessary to vary the vector of tug on the skin until maximum pulsation is felt. In some cases, it may be necessary to hold the contact for several minutes.3

3. Keep learning. Nowadays, there are many techniques that engage the powerful Mammalian Brain.

The **Neuro Emotional Technique (NET)** is one such approach that brings the Mammalian (Emotional) Brain into the healing process. Unresolved issues related to the patient's condition are quickly identified, which immediately activates changes in the patient's physiology. Then a specific spinal adjustment is made to help the patient's body come to closure with this unresolved response. The whole process takes only a few minutes and can bring amazing relief to many chronic physical problems. As you can imagine, this is very rewarding for patients who have been suffering with chronic conditions and, many times, it seems like a miracle!

**References**
