In his 1910 text, The Chiropractor's Adjuster, D.D. Palmer identified the causes of vertebral subluxation as the Three T’s—thoughts, trauma and toxins. Since that time, we have expanded our understanding of how these factors impact our body’s function, but the basic concepts Palmer laid down for the profession he founded have survived the test of time.

What we understand now is that subluxation is more than a spinal bone out of place and pinching a nerve, as was once thought. While this may be true in a small percentage of cases, a subluxation involves changes throughout the nervous system, and not just in the nerves exiting at the level of the misaligned segment.
Thoughts, Trauma and Toxins: Three Causes of Subluxation

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So how do the Three T’s cause subluxation and affect the function of the nervous system as a whole? First of all, let’s consider the area of trauma, specifically physical trauma, as a cause. It is easy to understand how a vertebra can become misaligned as a result of physical trauma to the spine—forceful birthing procedures that pull and twist a baby’s head to expedite the delivery process, falls endured while learning how to walk, playground injuries, or even bad posture. The body will logically try to stabilize this area with muscle splinting, which will heal in this configuration unless something is done to restore integrity to the area.

However, apart from direct force causing a bone to misalign, the body can be affected by chemical exposure and emotional stresses in such a way as to cause subluxations. The nervous system perceives these non-physical stressors to be threatening and directs the muscles to react, defend and brace the body, holding bones in positions that can cause asymmetry and imbalance in the spine. No muscle moves a bone without a nerve purposefully telling it to do so. Realize that the vertebrae never move without a muscle pulling them. These misalignments and alterations in spinal curvature are only a result of the internal, neurological response to the overwhelming presence of the Three T’s.

Keeping Signals Clear

When our brain senses harm either from a traumatic injury, stressful thought or exposure to a toxin, it shifts into protection mode—the fight-or-flight response. The brain notes the body’s level of harm and determines whether we should be in fight-or-flight mode or if we have the “all clear” and can invest energy in growth and repair. Our entire body is hardwired neurologically to respond to these signals one way or another: We cannot be both in growth and protection at the same time. The signals that inform the brain of our status are our “thoughts,” both from our mind and our body. While stressful mental activity includes negative, angry, fearful or depressed thoughts, physical traumas and toxic exposures represent negative “body thoughts,” influencing the same centers of the brain as these mental thoughts do.

These harm signals reach four key areas in the brain, of which three are subconscious and one is conscious. As you can imagine, we can be consciously aware of being angry, feeling nauseous from something we smell, or feeling pain from an injury, but an abundance of subconscious signals from these same circumstances reach the following key areas of the brain: the hippocampus (the center for learning), the amygdala (the stress and anxiety center),
and the hypothalamus (the neuroendocrine control center, which initiates a cascade of events preparing us for fight or flight).

To give you an idea of the amount of signals detected by our brain each second, according to Bruce Lipton, Ph.D., we are able to perceive 40 bits of information consciously each second. In that time, 20,000,000 (yes, 20 million!) bits reach the brain subconsciously. Being that the majority of this input is subconscious, by definition you are not aware of it! Clearly, then, the quality of this abundant information profoundly influences the brain's function. Chiropractic adjustments and whole-body exercise, purity and sufficiency of our daily nutrient intake, and positive and loving thoughts contribute to creating high-quality input to the nervous system. This constructive input enhances healing, growth and balanced function. Health really boils down to homeostasis (balanced function) at the cellular level. To create a lifetime of health that can survive like D.D. Palmer's principles, we must provide our bodies with optimal input throughout our lives.