



The Physiology of Fear

Beyond the benefits of reduction of pain, spasm, and increased range of motion and function achieved by Myofascial Release, the elimination of fearful behaviors, compulsions, and anxiety attacks is possible.

Other therapeutic approaches are based on the “neuronal doctrine” which has shown to be obsolete as the old, outdated scientific paradigm. The physiological aspects of Myofascial Release eradicating fear is now being supported by the “new” science.

The following is an excerpt from the March/April issue of Discover Magazine by Oril Van Mourik in an article titled, “A Future Reminder: Reshaping the Past”.

“Remember your first encounter with a stove? “Don’t touch that! It’s hot”, you were warned, and the message was clear. “Stove=Danger”. Eventually, of course, you came to understand that stoves are pretty harmless, provided you avoid the burners. And just like that, you unlearned your fear of stoves.

Unlearning a fear may sound simple, but for years neurologists believed such emotion was entrenched, set in stone by fixed neuronal networks in the brain, and thus unaffected by new information. Now a study led by Bong-Kiun Kaang at Seoul National University has altered that view. Every time a long-term memory or an associated emotion, like fear, is retrieved, proteins found in the synapses between neurons are degraded, allowing that memory to be updated by incoming information”. You can go to <http://www.sciencemag.org/cgi/content/short/1150541v1> for more in-depth information. 1

This physiological response corresponds with our Myofascial Release experience. As the mind/body gets in touch with unresolved emotions and/or memories the structure releases and authentic healing begins.

The following excerpts from my book, Myofascial Release: The Search for Excellence, Chapter 8 (www.myofascialrelease.com) may help to explain the scientific aspects of Myofascial Release.

New neurobiologic research and Selye’s classic work are concerned with the phenomenon of state-dependent memory, learning, and behavior. State-dependent memory, learning, and behavior is the general class of learning that takes place in all complex organisms that have a cerebral cortex and a limbic-hypothalamic system, and pavlovian and skinnerian conditioning are specific varieties of it.

Memory and learning of all higher organisms fall into two classes of internal responses:

1. There is a memory trace on the molecular-cellular-synaptic level.
2. An involvement of the amygdala and hippocampus of the limbic-hypothalamic system in processing and encoding, and recall of the specific memory trace may be located elsewhere in the brain.

The limbic-hypothalamic system is the central core to Selye's general adaptation syndrome, the three stages of which, the alarm reaction, the stage of resistance, and the stage of exhaustion, take on a profound significance.

To ask how the mind communicates with the body or how the body communicates with the mind assumes that the two are separate entities. My experience has shown me that they are a single unit. The body is not just a reflection of the personality, it is the personality.

Therefore mind-body awareness are two sides of the same coin, different aspects of the same spectrum, immutably joined, inseparable, connected, influencing, and communicating constantly. Myofascial release techniques and myofascial unwinding allow for the complete communication necessary for healing and true growth. I believe that the body remembers everything that ever happened to it.

The link between mind-body awareness and healing is the concept of state-dependent memory, learning, and behavior (also called *deja vu*). We have all experienced this, for example, when a certain smell, or the sound of a particular piece of music creates a flashback phenomenon, producing a visual, sensorimotor replay of a past event or important episode in our lives with a vividness as if it were happening at that moment. I would like to expand this theory to include "position-dependent memory, learning, and behavior", with the structural position being the missing component in the state-dependent theory.

Studies have shown that during periods of trauma people make indelible imprints of experiences that have high levels of emotional content. The body can hold information below the conscious level, as a protective mechanism, so that memories tend to become dissociated or amnesic. This is called memory dissociation, or reversible amnesia. The memories are state or position dependent and can therefore be retrieved when the person is in a particular state or position.

Myofascial Release is the wave of the future. Enjoy the ride!

John

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, Bong-Kuin Kaang, et al. Synaptic Protein Degradation Underlies Destabilization of Retrieved Fear Memory. *Science*. February 2008
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