

How The Mid Brain Hijacks Dental Procedures

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The acute stress response is designed to keep us alive. The problem is, it is also killing us. Technological advancements allow us to live more comfortably today, but our survival instinct has remained unchanged for thousands of years. Stressors like work pressures, family illness, relationship conflicts, financial struggles, even traffic congestion can trigger an acute stress response. Our primordial midbrain reacts to all triggers without discrimination as if our lives were in danger. As a business owner doing complex procedures on moving targets, leading a team of professionals, and serving the needs of all types of people, you have your share of stress. On top of that, many of your patients experience an acute stress response and are literally trying to survive in your chair. This makes your profession one of the most difficult in the world. Your quality of life depends on your ability to develop healthy stress management techniques and coping strategies. What can you do about it?

When someone experiences a stressful event (real or perceived), the amygdala sends a distress signal to the hypothalamus, triggering the unconscious neurobiological motivational system known as the "fight-or-flight" response. The hypothalamic-pituitary-adrenal axis (HPA axis) triggers a series of hormonal signals to keep the sympathetic nervous system in a state of hyper-alertness. The hypothalamus releases corticotrophin-releasing factor (CRF), which signals the anterior pituitary gland, to release adrenocorticotrophic hormone (ACTH). This hormone travels to the adrenal glands, prompting them to release cortisol (the stress hormone). As epinephrine circulates through the body, it brings on a number of physiological changes, including accelerated heart rate which pushes blood to the muscles, heart, and other vital organs. Respiratory rate quickens and sight, hearing, and other senses become sharper. Meanwhile, epinephrine triggers the release of glucose to provide energy to muscles. All of these changes happen so quickly that people are not aware of them. In fact, the process is so efficient that it occurs in milliseconds – before the neocortex knows what is happening.

For dentists, this midbrain hijack manifests in patients as gagging, excessive salivary flow, aggressive tongue movement, flinching, clutching, burning through local anesthetic, irrational social behaviors, and confusion. A stressed patient is not able to cognitively process information and is likely to have little or no memory of any dialog during and after the procedure. The cortisol flood also exaggerates



the inflammation response, which leads to excessive bleeding and complicates the healing process. The hardest thing to understand is that your patients, during an active stress response, are not in control of their actions – they are crippled by their survival instinct and neural circuitry.


Why does the dental chair trigger such a primal response? The answer is simple. We are animals and we must protect our mouths to survive. For humans, our mouth is our source for food, communication, and intimacy. It is not natural for any animal to lie on its back and open its mouth for treatment with sharp instruments. This is why for many people, the mere thought of going to a dentist elicits a "fight-or-flight" response.

Every workday you are faced with challenges most other professionals never encounter, or even think about. Your working environment is compromised by the human survival instinct. The anxious patient behaviors you have to deal with everyday are human adaptations to a situation that the central nervous system considers unsafe. Managing your patient's stress response and psychological vulnerability can be exhausting.

What if you could use a clinical solution that naturally interrupts the stress response, puts you in a state of deep relaxation, allows your body to rejuvenate and re-tool, and builds your resilience to stressful situations? What if you could help your family and friends better manage their personal stress? What if your team could get relief from stress and perform better at your practice? What if you could convert your patients from resistant to relaxed in less than five minutes?

This neuroscience technology is available today and is being used by the U.S. military, top research universities, oncologists, cardiologists, psychotherapists, professional athletes, top executives, and dentists. Dentists in the U.S., Canada, UK, Europe, Russia, and Australia are currently benefiting from this technology called NuCalm.®

NuCalm is a clinical solution that safely and effectively neutralizes the stress response at the midbrain and guides you to a state of deep relaxation. Your thoughts remain active, but your body idles in parasympathetic nervous system dominance. Parasympathetic nervous system dominance is the only time your body can recover – cellular waste is removed, autonomic nervous system balance is restored, neuromuscular tension is resolved, biological clocks are tuned, and mental focus is improved.

A woman with long brown hair is shown from the chest up, wearing a dark blue eye mask with the 'NuCalm' logo in white. She is also wearing large black headphones. Her eyes are closed, and she has a serene expression, looking upwards. The background is a deep blue night sky filled with numerous bright, multi-pointed stars. A large, pale moon is visible in the lower-left background. The overall mood is peaceful and relaxing.

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NuCalm mimics your body's own process for "winding down" and preparing for sleep. Your body experiences a natural slow down every time you go to sleep. This process typically occurs when you are in the comfort and safety of your own home. The power of NuCalm is that it can produce this same physiological experience in an uncomfortable environment, where your midbrain perceives a threat and triggers the stress response.

NuCalm turns off the stress response at its source in the midbrain. By redirecting your brain's communication pathways, NuCalm pivots you out of hypervigilance and suspends you in deep relaxation. The NuCalm dietary supplements and the Cranial-Electrotherapy Stimulation (CES) device work synergistically to turn off the "fight-or-flight" chemical response. The all-natural ingredients of the proprietary formulation include inhibitory neurotransmitters Gamma-Aminobutyric Acid (GABA) and L-Theanine. The CES catalyzes the absorption and efficacy of the amino acids to ensure rapid and predictable relaxation. The NuCalm neuroacoustic software embedded in soothing music entrains brainwave function from beta or high beta down to the alpha/theta range. The neuroacoustic software utilizes binaural beat physics and frequency-following-response to systematically cycle brainwave function between 12Hz and 4Hz.

Dentistry is a noble and rewarding profession. It is also extremely stressful. You now have a choice to replace the primordial midbrain hijack with the NuCalm "relaxation hijack" that will protect you from the challenge of being human.