

The Calming Evolution

How an American neuroscience company is changing minds about managing patient stress, one dental treatment at a time



After 15 years in business and expansion into 7 industries across 5 continents, there's only one conclusion you can make about Solace Lifesciences as a company—they don't settle for the status quo. And there's only one conclusion you can make about the company's flagship product, NuCalm—there's nothing else like it in dentistry, or for that matter, in the world.

"The interesting thing about our company is that we're not sitting in an ivory tower. We are literally out there every week, NuCalming people, getting feedback, and interfacing with our clients," Jim Poole, CEO of Solace Lifesciences, told *Dental Product Shopper*.

NuCalm is the first and only patented technology clinically proven to lower stress without drugs. The system is comprised of 4 components: a cream or dietary supplement to counteract adrenaline, microcurrent simulation to catalyze the effect of the supplementation, noise-canceling headphones with neuroacoustic software, and a light-blocking eye mask. Together, these components help leverage the biochemistry, neurophysiology, and



physics to suspend the mind and body in parasympathetic nervous system dominance. The user enters a deep state of relaxation and recovers within minutes with no side effects. Oftentimes, dentists don't believe it works until they try it themselves.

When Poole took over Solace Lifesciences in 2009, he believed NuCalm worked in managing his own stress, and he believed the data and the science. But to validate it, he needed an opportunity to manage an acute stress response, so he turned to dentistry.

The "Proving Ground"

"Dental has been a springboard for us to get into all these other areas, and you never forget where you came from," Poole said. It was—and in many ways still is—a conservative industry, and not an easy target market to penetrate. However, Poole believed the technology could be proven if it could help quell patients' fear, stress, and anxiety before and during dental surgery.

He asked Omer Reed, DDS, a highly sought-after lecturer and an early adopter of advanced dental technologies, to help test NuCalm.

"They tried it in dentistry first because we're most famous for creating anxiety," said Dr. Reed. "When Jim [Poole] called me for my feedback, I said, 'Well, I sure don't know everything you need to know about this yet, but all I know is that it really works.'" He has been using it in his practice for the past 7 years, recalling cases where a patient with fibromyalgia and veterans with posttraumatic

3 FACTS ABOUT NUCALM RESEARCH:

- 1 Testing: concussion recovery with Dr. Tom Allen, former medical director of the NFL
- 2 Testing: stage IV cancer research with Dr. Janet Hranicky at the Comprehensive Cancer Wellness Program
- 3 Additional partners: Dr. CK Peng, statistical biophysicist at Harvard Medical School, scientists from NASA, and Dr. Elio Conte, leading expert on heart rate variability.

stress disorder especially benefited after a NuCalm treatment.

While Dr. Reed was impressed by the efficacy, it wasn't the first time he had heard about using neuroacoustics to disrupt patterns in the brain in such a way that it leads to deep relaxation. Decades earlier, Russian scientists had developed what he called a "cacophony" of 2 different frequencies, one in each ear. He then recalled that his friend, Dr. Norm Thomas, director of neuromuscular research at the Las Vegas Institute for Advanced Dental Studies, had tried to develop a similar method using neuroacoustic technology, but it had never gone to market. He decided to call Dr. Thomas and asked him to try NuCalm. "He put it on, and about 5 minutes later he said, 'Holy smoke! That's exactly what I was trying to do.'"

In all of his years of experience, Dr. Reed doesn't know of a technology that is as advanced or as unique as NuCalm. This relates to comments Poole made about the technology creating a "paradigm shift" in a mature industry. "It doesn't have any objective symptoms postoperative. If I gave you IV sedation or nitrous oxide, you'd have signs and symptoms. [NuCalm] has nothing—you can't feel anything," said Dr. Reed.

Dentists also NuCalm themselves for restoration. As Poole explained, most patients don't want to be in the dentist's chair, and the central nervous system elicits a "fight or flight" reaction to dental treatment. Dentists take that stress on, which can affect them on a professional and personal level.

Dr. Reed believes that dentists can make the most difference in helping their peers discover NuCalm. "Dentistry changes slowly, but I think NuCalm is catching on, and it's catching on well," he said. He has recommended the system to his own staff and peers not only in dentistry but in other disciplines, adding that health care professionals take the use of new technologies quite seriously. "In God we trust; all others bring data," he said, quoting W. Edwards Deming. "I haven't had one disappointed friend yet."

To date, more than 850,000 dental patients have been NuCalmed with 95% satisfaction, according to the company. But they still weren't satisfied. Within the past few months, NuCalm 2.0 was

introduced with updated neuroacoustic software on a new, patent-pending platform. "The advent of NuCalm 2.0 was simply out of a desire not to be status quo," Poole said. "It's incredible, and it's a quantum leap forward from what we launched in September 2010."

The Future of NuCalm

While NuCalm's scientific method is patented, the outcome is not. This is an important distinction that enables Solace Lifesciences to explore how to use the system to achieve different outcomes.

Recently, Poole worked with the U.S. Special Operations Command Navy SEALs, NuCalming them into a deep relaxation and then "igniting" them, through neuroacoustic software, to a state of mental readiness that enables them to perform at a high level. The effectiveness of this method has also been seen with the more than 35 professional sports teams that use NuCalm, including the Chicago Blackhawks, who won the Stanley Cup in 2013 and 2015.

Conversely to the "warrior brain" outcome, NuCalm's technology can be used for meditation, stage fright, or a power nap. In the past few weeks, Poole has worked with Stage 4 cancer patients, corporate wellness experts and the U.S. Veterans Administration. Earlier this year, NuCalm was awarded "Best at CES" at the Consumer Electronics Show in Las Vegas.

"It's the method that we've proven, patented, and validated to be highly efficacious," Poole said. "The future for us is to constantly push the envelope forward in the method we use to create different physiologic outcomes."

NUCALM 2.0: THE EVOLUTION OF "PERFECT"

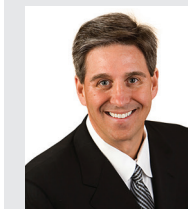
In the history of *Dental Product Shopper*, a perfect 5.0 score among current users of a product is a rarity. NuCalm's 5.0 "Best Product" designation is a testament to what dentists think about this system. So why attempt to change it?

In a move that speaks to the company's goal to not settle for the status quo, Dr. Blake Halloway, the neuroscientist inventor of NuCalm, revisited the physics and made key improvements to the neuroacoustic software. The challenge was how to ensure that the central nervous system trusts the technology as safe, enabling the user to relinquish control and go where NuCalm takes them—a state of deep relaxation. "The technology has improved itself tremendously over the past 6 months," Dr. Reed said, adding that he appreciates the upgrade to JBL headphones and a Samsung Galaxy tablet that's preloaded with software.

Scan the QR code to learn more about NuCalm 2.0.



EVOLVING VIEWS ON SEDATION



If there's a dentist who knows about an effective alternative to sedation, it's David Little, DDS, who has educated thousands of clinicians around the world. Dr. Little sees technologies like NuCalm becoming a regular part of dental treatment because patients want to avoid narcotics if they can. In an interview with *DPS*, he said, "I

have a rotating group of specialists in my practice, and we are equipped to provide every level of sedation, from intravenous and oral to nitrous oxide and NuCalm. Even our extremely phobic patients who used to request that we 'put them out' are now choosing NuCalm because they can drive themselves and are not wiped out afterwards."

After thorough review of evidence, the ADA House of Delegates voted on Oct. 24, 2016, to adopt revisions to the guidelines concerning the use of sedation and anesthesia by dentists and teaching sedation and anesthesia to dentists and dental students.