

THE NEW GENERATION OF MIND-BODY THERAPIES

Biofeedback and Brain Training

Mind-body therapies, including guided imagery, progressive relaxation and biofeedback, have been widely associated with stress reduction and behavioral change—and mind-body technology offers massage therapists a new avenue to address client needs.

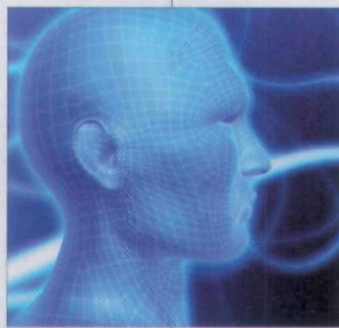
by Chris Cunningham

Lee Gerdes, founder of Brain State Technologies, recognized that the two Buddhist monks who agreed to help him test his brain-conditioning software would be ideal subjects.

Gerdes, a mathematician and systems analyst, ultimately used the monks' contributions to write some of the initial algorithms for his brain-training software, Brain State Conditioning™, in 2004.

Contrary to conventional beliefs about meditative states, the monks' brain wave patterns were highly charged and controlled, rather than resting in a dream or sleep state. What's more, Gerdes noted the monks were able to activate and deactivate parts of their brains at will.

Greg Field, sales and marketing associate at Brain State Technologies, based in Scottsdale,



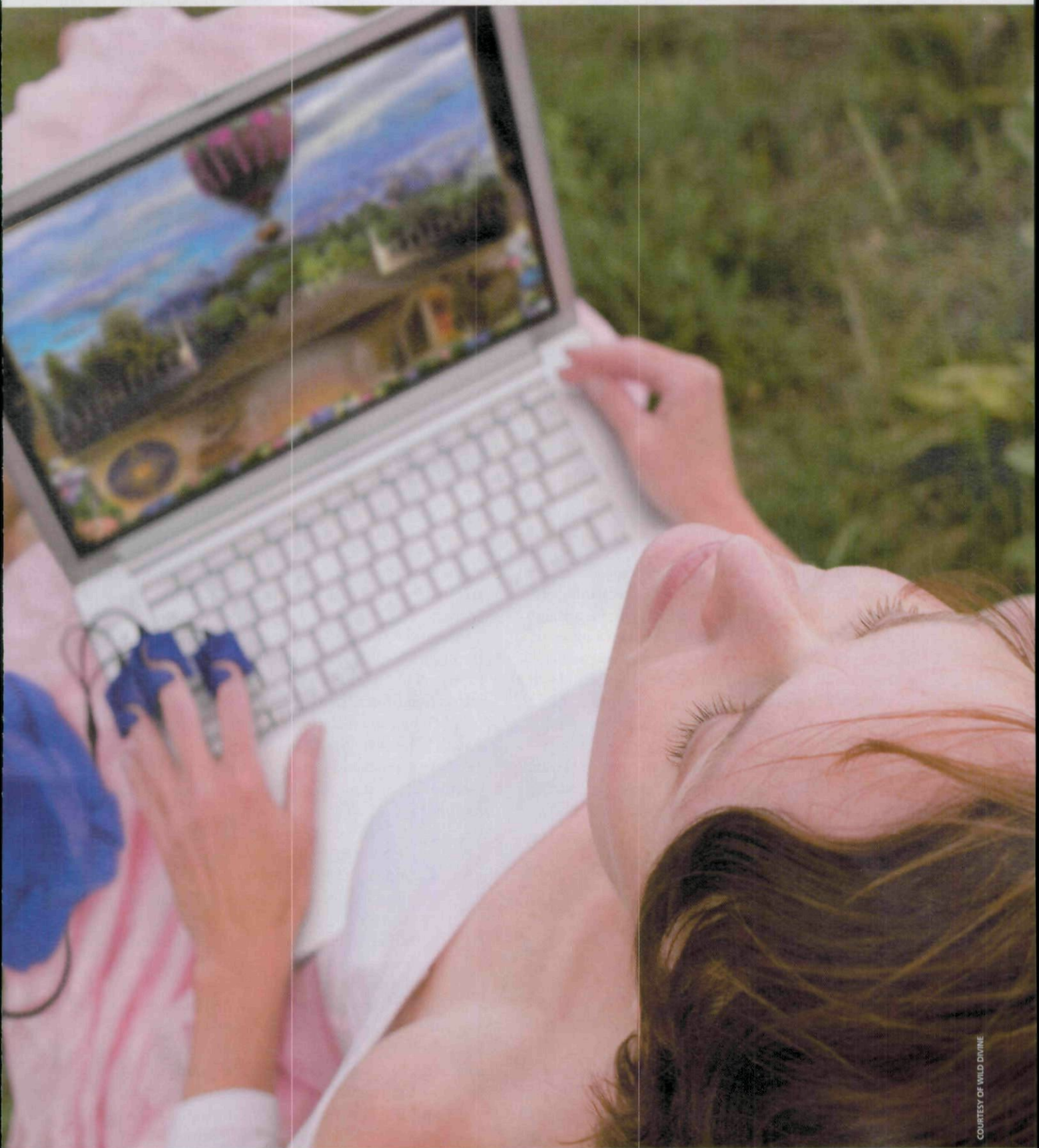
Arizona, said, "[But unlike the Buddhist monks] most brains are over-activated."

As a result, Field said, quieting frequencies for many clients puts them to sleep. "This is not a bad thing, as it allows the brain to rest and carry out the necessary repairs that it has not been able to do in its previous imbalanced state.

However, we prefer clients to be in a very relaxed state without falling asleep."

Mind-body medicine is based on a decades-old premise that people can learn to adjust their physical reactions to stimuli when they receive feedback from physiologic monitors. Research has shown biofeedback is effective in addressing anxiety disorders, hypertension, migraine headaches, urinary incontinence and cardiovascular disease.





COURTESY OF WILD DIVINE



Walk the exhibit hall at any massage-therapy tradeshow and biofeedback and brain-training machines will be in attendance. This is because new mind-body technologies can be incorporated into massage practices with potent results, including pain reduction, deep relaxation and elimination of negative lifestyle habits. Resell opportunities also allow therapists to send biofeedback and brain-training products home with clients.

Brain waves signal pain

Researchers began to experiment with biofeedback in the 1960s. Studies at that time examined results from electroencephalogram (EEG) machines that spewed reams of paper with measurements of the electrical activity in human brain waves. Technicians were able to identify specific speeds of brain wave patterns, called alpha, beta, theta and delta.

The Association for Applied Psychophysiology and Biofeedback (AAPB) Web site posits when people perform specific tasks, their brains produce a predictable pattern of waves in various parts of the brain. And when normal brain waves aren't present, a practitioner might rightly assume the person is experiencing some kind of pain or discomfort.

The neurosciences have broadened our understanding of these brain waves and associated behaviors, according to the AAPB. Certain feelings and responses are



COURTESY OF NEWREALITY

NewReality's biofeedin device

newest generation of mind-body systems: biofeedin (the name given to the newest generation of biofeedback devices), featuring creative visualization and relaxation programs; an interactive computer video that presents progressive learning with virtual characters and events; and Brain State Conditioning, which uses a visualization protocol to create changes in brain waves.

A mental vacation during massage

Joyce Farkas, an employer of massage therapists and owner of Positive Mind and Body Wellness Center in Mount Pleasant, South Carolina, wrote her own creative visualization script. She bought NewReality's biofeedin

equipment and contracted with the company's founder and psychologist, Patrick Porter, Ph.D., to narrate her script.

She asked Porter to read because, "I like to stay under the umbrella of a psychologist. I think the subconscious mind will more readily receive the information and instruction from a licensed psychologist.

"He'll talk about the beach and feeling stress-free," she added. "The client's body is getting a massage, and the mind is on a mental vacation ... [and] getting some very positive information that promotes health and self-esteem."

NewReality equipment includes lenses (similar to sunglasses) with relaxation-inducing LED lights that work through closed eyes; headphones that send pulsating sounds; and scripts that guide the user through different brain-wave states—all intended to promote relaxation by increasing serotonin levels, Farkas said.

Massage therapist Leslie White, who works at Farkas' clinic, uses the biofeedin equipment and Porter's soothing voice to full advantage during her massage sessions. She said the combination of light, pulsating sound and "Dr. Porter's very pleasant voice softly saying, 'Now you will feel her hands massaging,'" really helps the clients "focus on themselves."

Farkas has developed scripts for the numerous conditions her clinic addresses, including headaches,

You can develop creative visualization scripts to address a variety of conditions, such as headaches, low-back pain, pain management, sciatica, sports performance and weight loss.

characteristic of particular brain waves: beta (fast) waves indicate conscious processes, rational-analytical thinking and concentration; alpha (medium) waves indicate activity that is normally conscious, but internally focused, relaxed, wakeful and calm; and theta (slow) waves usually indicate activity that is unconscious, internally focused, detached and intuitive.

In this article, we describe three different types of the



low-back pain, pain management, sciatica, sports performance and weight loss. For someone with fibromyalgia, for example, the clinic staff—which includes bariatric physicians, chiropractors, massage therapists and personal trainers—uses a DVD that “talks a lot about managing pain and the importance of exercising and drinking water.”

Farkas’ clients pay \$55 for a 30-minute massage and \$90 for a 60-minute massage. She charges an extra \$10 for “visage,” the name given for the combined use of massage, creative visualization and guided relaxation. She purchases NewReality handheld units with limited downloads for \$295, and resells them to clients for \$600, receiving a percentage for additional programs clients download on topics, such as sports performance, weight loss, smoking cessation and pain reduction.

Optimal learning

“Our technology was originally developed for pain management,” NewReality President Dale Springer said. Springer also noted the American Pain and Wellness Center, one of 13 certified critical pain-care centers in the U.S., uses the company’s equipment.

Springer entered Porter’s biofeedin program when

her back pain was so severe she could barely walk across the room. “By session number five, I was stopping the pain [myself and I also] lost 35 pounds,” she said.

Porter, who founded the California-based NewReality in 2006, said, “The main difference between biofeedback programs and biofeedin is that you don’t need a [biofeedback] practitioner. The machine does all the work.

“Biofeedback is immensely effective while the client is wide awake, at which time the brain is capable of following light and sound from a beta (wide awake) to an alpha (daydreaming) state,” he added. The company’s NXYLink control system is designed to prevent the client from falling into sleep, or the delta state, and to remain in the theta state, the state in which people are most receptive, Porter said.

Which is to say, the system aims to train the mind to move from the alert awake stage, where negative emotions are processed, into the intuitive, creative mind and, ultimately, toward a deeper meditative state, where the deepest learning and transformation occur.

Unlike Farkas, who wrote her own script, most of the 225 bodywork practitioners using NewReality

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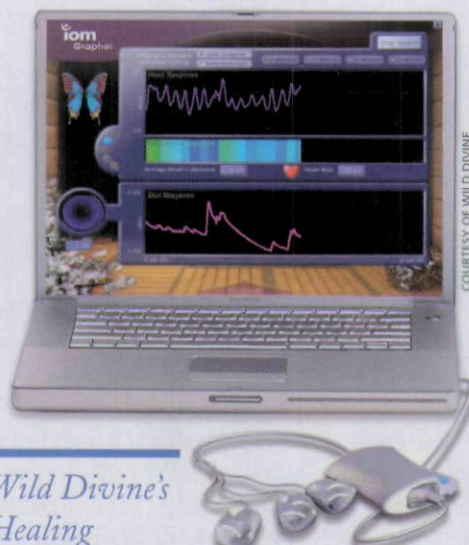


equipment have purchased the company's complete system that includes guided meditations and creative visualization scripts.

A NewReality biofeedin session typically lasts 20 minutes. Porter said most bodywork therapists charge an extra \$20 per session or \$1 per minute for the CVR program. NewReality sells its professional system for \$4,000.

Changing lifestyles

Sandra Quintana, spa operations manager at The Broadmoor resort in Colorado Springs, Colorado, said many of its guests are business people who are receptive to new ways to energize and decompress. They travel extensively, "jump time zones" and, consequently, feel exhausted. Quintana said she believes Wild Divine's Healing Rhythms, an interactive computer biofeedback



Wild Divine's Healing Rhythms program

Wild Divine's guided meditations feature celebrated physicians Deepak Chopra, Dean Ornish and Andrew Weil.

program, can change lifestyles through modules that teach deep-breathing, relaxation and meditation techniques.

Quintana and spa director Ella Stimpson were looking for a new product line when they read about Wild Divine's product. The spa began offering the interactive Journey to Wild Divine in April 2008, in increments during or after a massage.

The technology is similar to an interactive video game that takes the user on a journey. Along the way, the user meets wise mentors and learns how to respond to difficult scenarios more constructively and positively. Quintana said of the more than 40 scenarios clients can view before or after a massage, "The graphics are phenomenal," and the equipment "is very easy to operate and user friendly."

Wild Divine's guided meditations feature celebrated physicians Deepak Chopra, Dean Ornish and Andrew Weil. Client learning is cumulative, with each new lesson building on the previous one. The kit includes three ring sensors that gently attach to the fingers to measure skin conductance level and heart rate, both of which fluctuate

as the user responds to new and challenging scenarios.

Quintana said she thinks the program is "more impactful at the beginning of a massage," because it helps the client relax. It's possible, she speculates, following a deeply calming massage the client might be too relaxed to track the video instructions.

Yet, clients do find it easy to recall the program's rich visual imagery, like the client who uses its breathing and relaxation techniques while sitting behind the steering wheel in a traffic jam, Quintana said.

Spa customers can purchase a 15-minute healing meditation session that concentrates on the breath for \$40. For \$120, they can experience a 50-minute "mind massage" session with Healing Rhythm's interactive, guided creative visualization.

Wendy Goldner, Wild Divine's CEO, said the company sells Journey to Wild Divine retail to therapists for \$299. However, the therapist can purchase the product to resell, "which we highly recommend as a source of profit." Therapists may purchase cases of three or five of the product for the wholesale cost of \$164.45

"We recommend that practitioners offer (the program) either as part of a full wellness coaching session or as an add-on

to their existing services to help the customer really maximize the benefits of the treatment they are about to receive," she added.

Tap into the subconscious

Gina Campala, who operates Tranquil Waters healing center in Ft. Pierce, Florida, began doing deep emotional-release work when she became a licensed massage therapist eight years ago. Since then she has also practiced Matrix Energetics, a healing art based on quantum physics that uses light touch and focused intention to bring about personal change.

Campala learned about Brain State Conditioning, a type of brain optimization rather than straight biofeedback, at a healing-arts trade show in Florida. After she watched Brain State Technology's introductory DVD, which included client testimonials, she signed up for an assessment. The company's nonsymptom-based approach was compatible with her own view of wellness.

"There may be deeper issues beyond those physical symptoms," she explained. "A lot of what manifests physically could very well stem from a past or perceived

trauma. I keep a contact list of psychologists I can refer clients to at any time for further help."

Campala also was intrigued by Brain State Conditioning because she received great benefit from a biofeedback therapist when she suffered from migraine headaches 10 years ago. In the biofeedback sessions, "I was conscious. I had to partake in the sessions. I had to use my mind to change the feedback." After numerous sessions, her headaches disappeared.

People are starting to realize that learning how to turn their minds off and unclutter their thinking will significantly reduce the stress in their lives.

Brain State Conditioning's benefits are both "immeasurable and subtle," Campala said. She mentioned one client who had difficulty staying asleep and also suffered from depression. One day he returned and said, "He hadn't received (any) benefits." But when they sat down and compared his pre- and post-condition surveys, he realized he was sleeping better and the "traumatic memories that were once intrusive no longer invaded his thoughts."

She provides Brain State Conditioning sessions independently from her massage sessions and sees the two modalities as separate, but compatible. "After a series of Brain State Conditioning, clients tend to relax even deeper into receiving the healing power of massage," Campala said.

Typically, Brain State Conditioning's two-hour assessment costs \$200, but Campala offers a free assessment because she thinks it's an easy way to build her client load. She charges \$1,495 for 10 90-minute Brain State Conditioning sessions.

Since becoming a Brain State Technology affiliate in December 2007, Campala has administered Brain State Conditioning to 15 clients, ranging from 5 to 81 years old.

Combine touch with brain balancing

Just as the massage therapist's touch reduces stresses held in the body, Brain State Conditioning reconditions and balances the brain's pathways to produce a heightened sense of well-being.

In combining massage and Brain State Conditioning, Field said, "We are deepening the container, so the person has a deeper ability to manage stress."

Brain State Conditioning uses electrodes on six different areas across the scalp. The electrodes map brain waves and measure imbalances among four brain lobes. The lobes are responsible for different brain functions, including emotional responses and sensory perceptions. It takes about 90 minutes to map brain waves, which are the physical display of the brain's electromagnetic energy.

"Everyone's brain looks different," and reacts different, Field said. For example, every brain innately responds to threat, but personality and history determine how each person will respond to danger.

Studies of war veterans show men and women who suffer Post Traumatic Stress Disorder (PTSD) have pathological brain imbalances because their brains maintain chronic arousal states resulting from extended perilous situations. Field said Brain State Technology

technicians are learning that veterans from the Vietnam War respond more slowly to Brain State Conditioning software than Iraq War veterans because they have sustained long-term imbalances in their brains.

Gerdes' software algorithms map and translate brain wave patterns into sound patterns. Trained affiliates, who monitor the

brain wave readouts on a computer screen, receive protocols for specific visualizations that help rebalance the client's brain. Visualization protocols help the brain create predominantly positive brain patterns, or as Field puts it, condition the brain through sound to move "into a more balanced state" of health and wellness.

Field said clients report Brain State Conditioning has helped reduce many of the physical and emotional challenges they have faced the majority of their lives, including relief from chronic pain, sleep disorders, depression, chemical addiction and PTSD.

The Brain State Technology package includes Brain State Conditioning software, a desktop computer, office furniture and a comprehensive three-week training program. The cost is \$43,500. Providers, or affiliates, are not franchises; they set their own marketing strategies, profit goals and pricing packages, and can incorporate the technology into their practices as they wish.

"People are starting to realize that learning how to turn their minds off and unclutter their thinking will significantly reduce stress in their lives," Quintana said. By incorporating the new mind-body technology into a practice, massage therapists can play a pivotal role in helping their clients cultivate a state of balance and harmony that remains with them long after they leave the massage table.

Chris Cunningham has written for MASSAGE Magazine since 2000. She also publishes media and marketing materials for private clients and magazine feature stories for trade and general interest magazines, including business, higher education and medical publications. Prior to her freelance career, Cunningham worked for 20 years in nursing home and hospital administration and management, in which she holds a master's degree.



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