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Body Talk

It's not the 1960s anymore. Biofeedback has gone from being an alternative treatment to mainstream medicine, helping to manage everything from chronic pain to depression. Can it be a solution to what ails you?

By Leslie Garisto Pfaff



The headaches started in 2000, and for Jane Kauer, at the time a grad student at the University of Pennsylvania, they were nearly constant companions. "In a given month," she says, "I could have 25 days of headaches." As she and the neurologist who was treating her discovered, they were also virtually unaffected by medication. After a decade of taking what Kauer describes as "literally every drug for headaches that wasn't severely dangerous or experimental," her doctor suggested she try biofeedback. She has been doing it since January, and though the headaches are still with her, she has fewer of them and no longer has to live with the side effects of medication that left her feeling lethargic and disoriented. "There's no downside to biofeedback," she says — an endorsement that's being echoed by a growing number of patients who have found relief using the alternative therapy for a wide variety of ailments, from anxiety to

epilepsy to hypertension.

If you're old enough to remember biofeedback from its beginnings in the 1960s, you may think of it only as a tool for teaching relaxation. And studies have shown that it does that job particularly well. But over the years, biofeedback has come to be used as a treatment for a growing number of conditions that may not respond to other therapies, including everything from chronic pain and urinary incontinence to depression and attention deficit disorder. Once considered strictly an "alternative" treatment, it is a growing participant in mainstream health care and often is covered fully or partially by health insurance. If you or someone in your family is affected by a medical or emotional problem that hasn't been solved by traditional treatments, read on to find out if, and how, biofeedback might provide an answer.

How does it work?

Imagine that you've been sent to a biofeedback practitioner to help you deal with painful muscle spasms in your neck and shoulders. You'll be hooked up via electrodes to a monitor — an electromyograph (EMG) — that measures tension in the muscles that have been causing you pain and translates that tension into a visual image (say, a vertical bar) that you can see on the EMG screen.

The practitioner will then ask you to relax one or more muscles, and if you do it correctly, the bar will get lower. The object of the therapy is to teach you what it feels like to relax your muscles as much as possible so that ultimately you can do so at will, without the monitor to guide you. That's not likely to happen right away, which is why biofeedback is often called "training": the equipment isn't treating you; instead, it's teaching you over a number of sessions how to treat yourself. A similar system called neurofeedback uses an electroencephalograph (EEG) to measure brain waves. If, for instance, you've been diagnosed with attention deficit hyperactivity disorder (ADHD), you'll be connected to the EEG via electrodes attached to your scalp and earlobes and taught how to alter brain-wave activity. Your visual might be a video "game" in which the goal is to move a ladybug from the bottom of the screen to the top, and the controlling force is your conscious mind. In both biofeedback and neurofeedback,

your training ends when you've learned how to relax your muscles or change your brain rhythm without the machine.

"Biofeedback and neurofeedback enable patients to master the skills needed to regain control over physiological functions — like heart and breath rate, blood flow to the extremities, and muscle tension — that have gone awry," explains Celeste De Bease, a medical psychologist in Bala Cynwyd, Pennsylvania. Biofeedback doesn't just offer proof that mind and body are interconnected. It also uses that connection to help the body heal itself.

Is There Homework?

Patients are often sent home with CDs to help them practice the techniques they've learned in the office, and some therapists may suggest the use of biofeedback equipment at home. "If a client's hands show signs of vascular constriction [a narrowing of blood vessels caused by muscle contractions in the vessel walls], I'll ask her to purchase a thermal home trainer to monitor finger temperature," De Bease says. "If she's an upper-chest breather or if she tends to hyperventilate, I may recommend the emWave" — a personal heart rhythm monitor. (The thermal trainer is about \$20; the emWave is about \$150. Check to see if your health insurance will cover the cost to buy or rent home equipment.)

De Bease recommends against patients buying monitors and trying to master biofeedback on their own, saying that "it isn't a one-size-fits-all kind of thing."

Will it work for me?

Unlike medication, surgery, or therapies such as massage and acupuncture, biofeedback requires your active participation. If you don't do the work, it won't either. "The people who practice — who take home the CDs and use them as we've taught them to do — end up with better results than those who don't think they have the time and don't give the treatment the priority we feel it deserves," says Les Fehmi, Ph.D., a biofeedback practitioner in Princeton and co-author of *Dissolving Pain: Simple Brain-Training Exercises for Overcoming Chronic Pain*. Therapists say biofeedback requires commitment and time — anywhere from a half-dozen to 20 or more sessions, depending on the condition being treated and its severity — and if you can't give a sufficient amount of one or both, you may be disappointed with your results.

In addition, some conditions are more likely to respond to biofeedback than others. Urinary incontinence in women, for instance, is highly responsive to biofeedback training (through the strengthening of pelvic floor muscles). Anxiety, chronic pain, epilepsy, constipation, headaches, hypertension, motion sickness, Raynaud's disease, and temporomandibular joint disorders (TMJ) generally respond well to it, but patients with sleep disorders, irritable bowel syndrome, depression, and tinnitus don't always get the results they're hoping for (though some do).

What about kids?

Larry Rosen, MD, a pediatrician at the Whole Child Center in Oradell, has had significant success in using biofeedback and neurofeedback to treat children with chronic pain (such as headaches and stomach aches) and stress, as well as children diagnosed with attention deficit disorder and ADHD. Though the technology is essentially the same as it is for adults, it tends to be more interactive when children are involved, and the practitioner's approach is likely to require greater flexibility. "You can say to an adult, 'Please sit here for half an hour,' [but] that doesn't always work with kids, especially those with ADHD," Rosen says. If you're considering biofeedback treatment for your child, it's a good idea to find a practitioner who has experience working with children. To be certain that all the appropriate medical issues have been addressed, Rosen recommends starting with your pediatrician. Something that looks like ADHD may turn out to be hyperthyroidism, for example.

Can I afford it?

Individual biofeedback sessions can vary in cost from about \$40 (for a 15-minute session with an occupational or physical therapist) to \$150, but insurance often covers at least a percentage of treatment, especially for certain conditions. According to Fehmi, these conditions include tension headaches, migraines, tinnitus, traumatic brain injury, irritable bowel syndrome, TMJ disorders, Raynaud's disease, anxiety, depression, and chronic pain.

How do I find a practitioner?

Biofeedback therapy is offered by medical doctors, psychologists, psychiatrists, nurses, and occupational and physical therapists, among other practitioners, so it makes sense to see someone who specializes in the condition you're hoping to treat. If you can't get a recommendation for a practitioner from your doctor or from a friend or family member, contact The Association for Applied Psychophysiology and Biofeedback (aapb.org). Make sure that anyone you see is certified by the Biofeedback Certification International Alliance (bcia.org) and don't hesitate to

ask about the practitioner's training. "Some people train in biofeedback for a year; others open shop after a weeklong course," De Bease says. Remember that biofeedback is a team effort between you and your practitioner, and its results are only as good as the members of the team.

