

## DISORDERS & TREATMENT

Efficacy is rated on a scale of 1 - 5 with 5 being the best. All the disorders listed below were rated at level 2 efficacy (possibly efficacious) or higher by *Evidence-Based Practice in Biofeedback and Neurofeedback* (3rd ed.).

- ADHD
- Alcohol and Substance Use Disorder
- Anxiety Disorders
- Arthritis
- Asthma
- Autism
- Bell Palsy
- Cerebral Palsy
- Chemobrain
- Chronic Pain
- Depressive Disorders
- Diabetes
- Epilepsy
- Erectile Dysfunction
- Fecal Incontinence
- Fibromyalgia
- Headache
- Hypertension
- Insomnia
- Irritable Bowel Syndrome
- Low Back Pain/ Neck Pain
- Motion Sickness
- Optimal Performance
- Preeclampsia
- PTSD
- Raynaud's
- Repetitive Strain Injury
- Stroke
- TMJD
- Tinnitus
- Traumatic Brain Injury
- Urinary Incontinence

The Association for Applied Psychophysiology and Biofeedback's (AAPB) biofeedback and neurofeedback professionals are committed to respect for diversity and evidence-based practice.

## BIOFEEDBACK

The American Psychological Association (APA) recognizes biofeedback as a Proficiency.

Skilled professionals utilize biofeedback assessment and training to treat diverse clinical disorders and enhance performance and quality of life within their legal scope of practice.

AAPB encourages its members to attain Biofeedback Certification International Alliance (BCIA) Certification to demonstrate entry-level knowledge.

For information for your clients, please see our Client Information Brochure.

AAPB members are committed to the highest standards of clinical and optimal performance practice. For referral for biofeedback training, contact:

For information about AAPB and biofeedback contact:

**Association for Applied Psychophysiology and Biofeedback**

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info@aapb.org

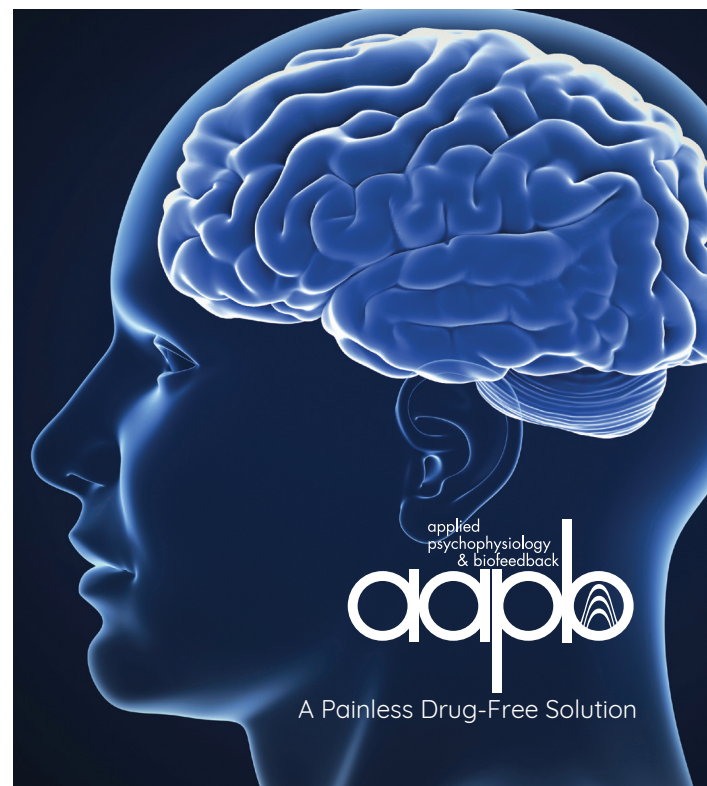


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## BIOFEEDBACK TRAINING

Professional Information Brochure





## What is BIOFEEDBACK?

“Biofeedback is a process that enables an individual to learn how to change physiological activity for the purposes of improving health and performance. Precise instruments measure physiological activity such as brainwaves, heart function, breathing, muscle activity, and skin temperature. These instruments rapidly and accurately “feed back” information to the user. The presentation of this information — often in conjunction with changes in thinking, emotions, and behavior — supports desired physiological changes. Over time, these changes can endure without continued use of an instrument.” (www.aapb.org).

## Operant Conditioning

Operant conditioning is a method of learning that uses rewards and punishments. The likelihood of a specific behavior is increased through positive or negative reinforcement each time the behavior is exhibited, so that the client comes to associate the pleasure of the reinforcement with the behavior.

Biofeedback can target any number of physiological behaviors. For example, releasing muscle tension through the use of biofeedback skills may decrease pain. A decrease in pain serves as a negative reinforcer for the behavior of releasing muscle tension, helping the client perform this behavior more frequently. Over time, the person learns to self-regulate their physiology without the need for a computerized biofeedback device, can perform the behavior outside the clinic, and can create clinical improvement associated with self-regulation.



## Neuroplasticity

Historically the brain has been seen as hard wired, with each area having its own function. If that area was injured, its function was lost. Today the concept of neuroplasticity has replaced the hard-wired model.

Neuroplasticity refers to changes in neural pathways and synapses which are due to changes in behavior, environment, and neural processes, as well as changes resulting from bodily injury. Neuroplasticity occurs on a variety of levels ranging from cellular changes to large-scale changes involved in cortical remapping. The role of neuroplasticity is widely recognized in healthy development, learning, memory, and recovery from brain damage.

## Why Biofeedback?

Biofeedback is a drug-free behavioral intervention. “The goal of biofeedback is to increase your body’s ability to regulate itself. Self-regulation is the ability of your nervous system to respond adaptively to changes in your environment, both internal and external.” (Khazan, 2019)

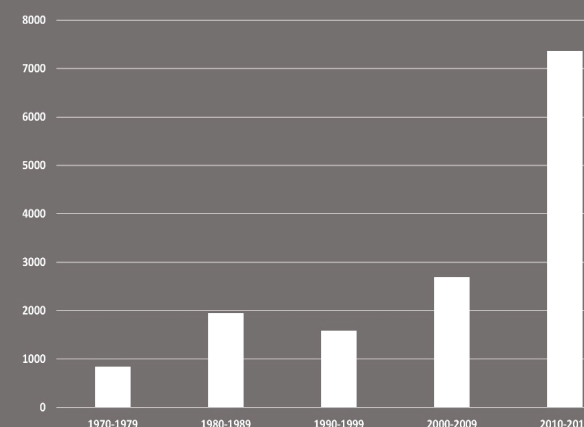
Biofeedback is often as effective as accepted medical treatment and typically causes no side-effects. This evidence-based training expands clients’ treatment options while reducing reliance on medication and surgery. Biofeedback can pay for itself by reducing medication and surgical costs and increasing productivity and quality of life.

## Research

Researchers have rigorously studied biofeedback since its inception in the 1960s. A search of the National Institute of Health’s database (PubMed) for biofeedback or neurofeedback shows a dramatic increase in publications after 1999.

While during the 1970s there were fewer than 1000 indexed articles, by the 2000s there were almost 3000 articles. The last decade saw an exponential increase to over 7000 articles underscoring biofeedback’s growing scientific foundation.

## Biofeedback & Neurofeedback Articles



## BIOFEEDBACK

When well-controlled research is conducted, the results are impressive. Biofeedback has been shown to be an effective treatment for many medical and psychological disorders. You can find examples on the outside fold of this brochure. Corporate executives, musicians, artists, and athletes including Olympic medal winners, use biofeedback and neurofeedback to reach their peaks in competition and performance. See *Evidence-Based Practice in Biofeedback and Neurofeedback* (3rd ed.) (www.aapb.org).