DISORDERS & TREATMENT

Efficacy is rated on a scale of 1 - 5 with 5 being the best. All disorders listed have been rated as having a level 2 & 3 evidence supporting their efficacy.

- ADD & ADHD
- Alcoholism
- Anal Spasm
- Arthritic Joints
- Chronic & Acute Anxiety
- Chronic Pain
- Drug Addiction
- Epilepsy
- Extrinsic Asthma
- Facial Muscle Pain/ Bell's Palsy
- Fecal Incontinence
- Gait Dysfunction
- Headache/Tension Headache/
- Migraine
- Hypertension
- Insomnia

- Irritable Bowel Syndrome
- Low Back Pain/ Neck Pain
- Major & Minor Joint Pain/
- Dysfunction
- Motor Dysfunction
- Muscular/ Myofascial Pain and
- Dysfunction
- Non-Cardiac Chest Pain
- Phantom Limb Pain
- Post-Stroke Muscular Dysfunction
- Substance Abuse
- TMJ Disorders/ TMD
- Urinary Incontinence

• Vaginismus

The mainstream of biofeedback practitioners, as represented by AAPB follow a standard of care based on scientific evidence that supports the use of particular biofeedback and neurofeedback methods, instruments, and claims of efficacy.



BIOFEEDBACK

For information on how to become a biofeedback practitioner or add it to your practise contact:

Association for Applied Psychophysiology and Biofeedback 10200 W 44 Ave., #304

Wheat Ridge, CO 80033-2840 (303) 422-8436 (800) 477-8892 info@aapb.org www.aapb.org www.biofeedback.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 occurs through the use of rewards and punishment. The likelihood of a specific behavior is increased or decreased through positive or negative reinforcement each time the behavior is exhibited, so that the subject comes to associate the pleasure or displeasure of the reinforcement with the behavior. Biofeedback can target any number of behaviors (ie: increasing muscle tension) displaying the level of tension to the trainee. This information in itself may be rewarding or may be coupled with other rewards (ie. viewing a video) while performing the task (ie: keeping the muscle tension high). Over time the reward is not needed and the ability to perform the task generalizes to outside the treatment room. Biofeedback by its very nature fits the definition of operant conditioning.

Neuroplasticity

Historically the brain was seen as hard wired with each area having its own function; when that area was injured the 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 due to learning to large-scale changes involved in cortical remapping in response to injury. The role of neuroplasticity is widely recognized in healthy development, learning, memory and recovery from brain damage.

Basis of Biofeedback

Operant conditioning and neuroplasticity form the philosophical and physiological basis of biofeedback. Precise information about the brain/body is presented to the subject. Through repeated presentations the subject learns to control/modify the physiology. The information can be paired with a reward of the individual's choosing increasing the likelihood of a changed response.

The repeated stimulation leads to neuroplastic changes in the brain/body leading to physical changes as predicted by the neuroplasticity model.

Research

Since its inception in the 1960s biofeedback has been rigorously studied. A recent review of the term biofeedback on the National Institute of Health's database 'PubMed' produced the following results:

ARTICLES ABOUT BIOFEEDBACK BY YEAR



This graph shows how Biofeedback has gained attention in recent years showing only 948 articles published between 1990 and 1995, and 2,267 published since 2010 to present.

BIOFEEDBACK

When well controlled research is conducted the results are impressive. Biofeedback has been shown to be an effective treatment for many disorders, an example of which can be found on the inside 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. (www.aapb.org).