

BIOFEEDBACK THERAPY

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Biofeedback therapy has been used to treat a variety of disorders and conditions, including some dangerous or even destructive issues that affect millions of individuals across the United States. In 2016, approximately [20.4% of adults](#) suffered from chronic pain, which has been linked to opioid dependence, anxiety, depression, and reduced quality of life. The 2017 [National Survey on Drug Use and Health](#) estimated that 14.1 million adults ages 18 and older and 443,000 adolescents ages 12 to 17 had an alcohol use disorder, and approximately 19.7 million people ages 12 or older had a substance use disorder. These are just a few of the issues that biofeedback therapy can be helpful in treating.

Biofeedback is a noninvasive therapy that measures involuntary bodily functions and provides feedback that lets you better control these functions, which helps you gain more control over your health. The goal is to help you make subtle changes to your body that result in a desired effect. Biofeedback primarily promotes relaxation, which may help relieve numerous conditions related to stress. It can also help with chronic pain, anxiety, headaches, and other conditions that might lead to substance abuse or be triggered by withdrawal from alcohol or substance addiction.

This guide covers basic information on how biofeedback therapy, [Debab in Houston](#) used to treat various conditions, including chronic pain, alcohol and/or drug addiction, and other disorders. Details are also provided on how biofeedback therapy is administered, the cost of therapy, potential side effects, and other considerations of using biofeedback therapy.

[Biofeedback](#) teaches you how to control involuntary bodily functions to improve overall health. A biofeedback therapist attaches electrical sensors to your body to measure breathing, skin temperature, heart rate, blood flow, brain waves, muscle tension, and sweat glands. Feedback from these measurements tells a therapist how to help you recognize bodily cues and potentially modify these cues in positive ways to promote relaxation and help alleviate things like stress, chronic pain, headaches, high blood pressure, and symptoms of withdrawal. The goal is to improve your physical, emotional, and mental health.

Treatment Name	Biofeedback Therapy
Different Types of Biofeedback Therapy	Electromyography, Thermal biofeedback, Neurofeedback, Electrodermography, Pneumography, Hemoencephalography, Photoplethysmograph
Conditions Commonly Treated	ADHD, alcoholism, anxiety, arthritis, asthma, cerebral palsy, chronic obstructive pulmonary disease, chronic pain, constipation, drug addiction, epilepsy/seizures, fibromyalgia, headaches/migraines, high blood pressure, incontinence (bowel or urinary), insomnia/sleep disorders, irritable bowel syndrome, leaky bowels, stress, stroke, substance abuse, traumatic brain injury, and TMJ/TMD
Availability/How to Receive Therapy	Your doctor may refer you to a biofeedback therapist as part of an alternative or adjunctive therapy, but a referral isn't required. While there aren't any state laws regulating biofeedback therapist training , many therapists obtain certification from the Biofeedback Certification Institute of America as proof of professional education and experience.
What's Measured During Therapy	Breathing, heart rate, blood flow, brain waves, muscle tension, skin temperature, and sweat glands
Length of Therapy Sessions	30 to 90 minutes
Number of Sessions Required	The number of sessions is determined by the condition being treated and how quickly you learn to control your bodily functions. You may see improvement for some conditions in eight to 10 sessions, while other conditions may take 20 sessions or more.
Average Cost of Sessions	\$35 to \$85

Potential Side Effects	Generally considered safe without side effects, but neurofeedback has been reported to cause mental fatigue, vivid dreams, nausea, dizziness, and light sensitivity.
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Contributions from many researchers and practitioners in 1908 and throughout the 1920s and 1930s have been cited as forerunners of biofeedback. However, the [birth of biofeedback](#) therapy came in 1969 when the Biofeedback Research Society, now known as the Association for Applied Psychophysiology and Biofeedback (AAPB), was founded. The fascination with biofeedback in the 1960s and 1970s evolved to mainstream medicine after years of scientific research demonstrated that the mind and body are connected and that, more importantly, individuals can be taught to use this connection to improve their health through [biofeedback therapy](#).

[National Institute of Complementary and Alternative Medicine](#) surveys showed that approximately 38% of adults and 12% of children used some form of complementary and alternative therapy that drew on principles of biofeedback training. Doctors at the Mayo Clinic, one of the top medical facilities in the country, use biofeedback techniques to help more than [2,000 people a year](#) with a variety of conditions.

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II. How Biofeedback Works

Biofeedback therapy is a non-drug treatment. Therapists attach electrodes to your skin, and those electrodes send information to a monitor. The therapist evaluates the measurements displayed to identify a range of mental activities and relaxation techniques to help you regulate bodily processes triggering your condition.

During monitoring, if you become stressed, your body's responses appear on the screen. Your heart rate and breathing increase, blood pressure rises, and muscles tighten, and you start to sweat. Feedback from these responses tells you when to try to reduce or eliminate these responses. Your therapist helps you by teaching you various [relaxation exercises and techniques](#), such as deep breathing, progressive muscle relaxation, mindfulness meditation, and guided imagery. As you strive to slow your heart rate and breathing, lower your blood pressure, ease your muscle tension, and stop sweating, you receive new feedback on the monitor showing your progress.

After a certain number of sessions, you learn how to control these bodily processes without being monitored. [Biofeedback sessions](#) usually last less than an hour but can last longer.

III. What Biofeedback Therapy Is Used For

Individuals may benefit from biofeedback therapy for a wide range of conditions and disorders. Certain uses have been extensively [studied for effectiveness](#). Some common [conditions that may be improved by biofeedback](#) include: attention-deficit/hyperactivity disorder (ADHD), alcoholism, anxiety, arthritis, asthma, cerebral palsy, chronic obstructive pulmonary disease (COPD), chronic pain, constipation, drug addiction, epilepsy/seizures, fibromyalgia, headaches/migraines, high blood pressure, incontinence (bowel or urinary), insomnia/sleep disorders, irritable bowel syndrome, leaky bowels, stress, stroke, substance abuse, traumatic brain injury, and TMJ/TMD.

Biofeedback therapy has also been successful in helping [relieve alcohol or drug withdrawal](#) symptoms. Because withdrawal often leads to physical stress and heightened involuntary responses, biofeedback may help with common symptoms such as anxiety, depression, chronic pain, insomnia, and restlessness. It may also help reduce drug cravings, control moods and emotions, reduce impulsive behaviors, manage stress, and minimize the likelihood of relapse.

IV. How Biofeedback Therapy Is Administered

Licensed psychiatrists, psychologists, marriage and family therapists, counselors, and clinical social workers may use biofeedback in their practices. State laws regulating training for biofeedback therapists vary, but, generally, there aren't

any specific regulations. Many biofeedback therapists pursue certification from the [Biofeedback Certification Institute of America](#) as proof of their professional education and experience in the field.

During a [biofeedback session](#), your therapist attaches electrodes or sensors to various parts of your body. These sensors monitor your breathing, heart rate, blood flow, brain waves, muscle tension, skin temperature, and sweat glands and provide feedback on a monitor. This feedback helps the therapist understand certain cues, so you can learn to change or control your body's reactions. These changes may include physical, mental, or emotional changes, depending on the condition being treated.

There are several [types of biofeedback](#) used to monitor different bodily functions. Some of these types include:

- Electrodermography measures sweat and may be used to help with anxiety and pain.
- Electromyography measures muscle activity and tension and may be used to help with headaches, back pain, anxiety, incontinence, and injuries.
- Heart rate variability feedback measures heart rate and may be used to help with asthma, COPD, anxiety, and irregular heartbeat.
- Neurofeedback measures brain waves and may be used to help with ADHD, alcohol and substance use disorders, and epilepsy and other seizure disorders.
- Pneumography measures force and velocity of chest movements during respiration and may be used to help with asthma, COPD, and other breathing disorders.
- Thermal feedback measures skin temperature and may be used to help with headaches, stress, and Raynaud's disease.

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V. Cost, Side Effects, and Other Considerations

Biofeedback therapy may or may not be covered by insurance, and, when it is covered, the insurance plans widely vary. The [cost for biofeedback](#) also varies considerably. These costs can range between \$35 and \$85 per session, with a varying number of sessions needed to successfully help with your condition. Costs may also vary based on the training,

experience, and other qualifications of your biofeedback therapist. Neurofeedback can be one of the costlier types of biofeedback therapies, with 30 sessions lasting 40 minutes each [costing \\$2,200](#).

Biofeedback is generally [considered safe](#) without any adverse side effects, but there have been negative [side effects associated with neurofeedback](#). Adverse effects included vivid dreams, mental fatigue, nausea, dizziness, and light sensitivity, especially in individuals who've experienced head trauma.

Biofeedback therapies are targeted to help with specific problem areas while [minimizing side effects](#) by eliminating the need to put dangerous substances into your body. However, it might not work for everyone. Biofeedback devices may also not work on individuals with certain medical conditions, especially some types of skin conditions and heart rhythm issues. Always discuss the pros and cons of biofeedback with your primary care physician to help determine whether it might work for your situation.

Biofeedback is meant to complement medical care, not take the place of it. Therefore, it's often used along with traditional medical care as part of an integrative treatment. When biofeedback works for you, it may help you control symptoms of your condition or help reduce the amount of medication you must take to control these symptoms. However, you should never stop medical treatment for your condition without consulting with your doctor first.

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VI. How to Get Help & Additional Resources

To learn more about some of the disorders that may be treatable with biofeedback, visit these pages on [generalized anxiety disorder](#), [attention-deficit/hyperactivity disorder](#), [insomnia](#), and [alcohol addiction](#).

- [Mayo Clinic](#) explains the types of biofeedback treatments available, how they work, and what to expect.
- [Association for Applied Psychophysiology and Biofeedback](#) offers detailed information about the effectiveness of biofeedback therapy on various disorders and conditions.
- [National Center for Biotechnology Information, U.S. National Library of Medicine](#), thoroughly covers biofeedback as a treatment for substance abuse disorders.
- [Association for Applied Psychophysiology and Biofeedback](#) offers a detailed background on the birth and evolution of biofeedback therapy and its efficacy in helping treat various disorders and conditions.

Disclaimer: The information contained in this guide is for informational purposes and only intended to educate the public on how this therapy is used. It is not recommending a specific treatment or giving medical advice. Always consult with your doctor or other qualified medical and addiction professionals before beginning any type of treatment.

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