

BIOFEEDBACK: Consumer Questions Answered

Donald Moss, Ph.D. (2002)

1. WHAT IS BIOFEEDBACK?

Biofeedback is a mind-body technique using electronic instruments to help individuals gain awareness and control over their body and mind. Biofeedback instruments measure muscle activity, skin temperature, electrodermal activity, respiration, heart rate, blood pressure, brain electrical activity, and brain blood flow. Biofeedback is useful in medical care, mental health treatment, physical and occupational therapy, dental care, and education.

2. WHEN IS BIOFEEDBACK APPROPRIATE? WHO SHOULD SEEK IT AND WHEN?

Biofeedback is a useful self-help tool that can benefit almost every living human being. Biofeedback is a pathway to learning important voluntary control skills that are useful throughout life. Biofeedback enables individuals to increase bodily awareness, acquire relaxation skills, and gain control over a variety of organ systems in the body. Many persons feel encouraged and "empowered" by biofeedback. After gaining control over their body they feel more capable of gaining control over their lives.

Anyone who is suffering from life stress and anxiety can benefit from biofeedback strategies for physical and mental relaxation. Anyone suffering from medical problems that are caused or aggravated by stress will benefit from biofeedback. In addition, individuals with many organic medical problems, such as spinal injury related motor control problems, may find that biofeedback helps them compensate for their medical condition and function better.

3. WHAT ARE SOME OF THE MOST COMMON USES FOR BIOFEEDBACK?

Research shows that biofeedback can benefit individuals with a broad range of mental health and medical problems, including:

Alcoholism and Addictions	Enuresis
Anxiety	Epilepsy
Asthma	Essential Hypertension
Attention Deficit Hyperactivity Disorder	Headache: Migraine
Closed Head Injury	Headache: Tension
Depression	Incontinence (Fecal and Urinary)
Diabetes Mellitus	Insomnia

Irritable Bowel Syndrome

Learning Disabilities

Motion Sickness

Neuromuscular Disorders (e.g., Bell's palsy, whiplash, muscle-tendon transfers, torticollis, Cerebral Palsy, peripheral nerve problems, spasm)

Pain: Myofascial

Pain: Rheumatoid Arthritis

Pain: Temporomandibular Dysfunction

Raynaud's Syndrome and Disease

Sleep Disorders

Stroke

4. HOW DOES IT WORK AND WHAT ARE THE BENEFITS?

Biofeedback teaches human beings to recognize the link between their bodies and minds. The biofeedback instrument monitors one bodily system (like a muscle) and gives the individual immediate feedback when the body changes. This increases personal awareness of the bodily process, which leads to control over the body.

The first level of benefit most people encounter is improved relaxation of the entire body--reversing the effects of stress on the body.

The second level of benefit is ongoing reduction in everyday tensions and anxieties.

The third level of benefit is relief from specific medical and mental health problems. There are biofeedback treatments for the emotional disorders, attention deficit, alcoholism, and a wide range of medical problems.

The fourth level of benefit is a growing sense of personal power and confidence, a feeling that "I can learn skills which make a difference in my life."

5. WHAT DO PEOPLE NEED TO KNOW ABOUT BIOFEEDBACK BEFORE PURSUING IT? WHAT INFORMATION DO THEY NEED?

It helps to learn about the idea of biofeedback, and to understand how it works, by reading a book chapter about biofeedback, such as those listed in the References list below. Then the individual should carefully identify a competent well-trained biofeedback professional (See item 7 below).

6. WHAT ARE SOME OF THE MISCONCEPTIONS THAT PEOPLE HAVE ABOUT BIOFEEDBACK THAT NEED TO BE CLEARED UP?

Some persons are afraid that biofeedback will do something harmful to them. Biofeedback is only a tool to enable the individual to gain control over his or her own body and mind. The instruments measure your bodily processes, and

provide feedback to you. The instruments do not actively do anything *to* your body.

The second myth is that biofeedback will replace all need for medical treatment or medication. Many medical problems are complex, and a combination of traditional medical care with biofeedback is often more effective than biofeedback alone. This is true for headaches and hypertension, for instance.

7. HOW SHOULD A PERSON SELECT A BIOFEEDBACK PRACTITIONER? WHAT CRITERIA SHOULD A PERSON USE IN THE SELECTION PROCESS?

I recommend asking the biofeedback practitioner several questions, before committing to the treatment process:

a) Are you certified by the Biofeedback Certification Institute of America? BCIA has excellent standards for the knowledge and skills a biofeedback practitioner should have. Therapists must accumulate educational credit, practical supervised experience, and pass an exam. Therapists should learn about biofeedback through college classes, approved training workshops, extensive reading, and supervised training and practice. The BCIA certification tells the patient that this therapist has done all of these things.

b) What state and national biofeedback organizations do you belong to, and what state and national conferences or biofeedback training workshops have you attended in the past two years? Competent professionals belong to professional societies and attend meetings in order to keep their skills and knowledge current.

c) What journals and newsmagazines do you subscribe to in order to keep up with progress in biofeedback treatment? Again, competent professionals keep their knowledge current by reading current reports.

d) Are you licensed or certified for independent practice as a health care provider in this state? Biofeedback professionals usually are also licensed within a profession, such as medicine, psychology, nursing, or physical therapy.

8. ONCE BIOFEEDBACK IS USED FOR THE CONTROL OF MIGRAINE HEADACHES OR SOME OTHER HEALTH PROBLEM DOES THE PERSON NEED MAINTENANCE SESSIONS OF ANY KIND, OR WILL THEY NEED TO REPEAT THE ENTIRE TREATMENT PROCESS AGAIN AND AGAIN?

Most patients learn skills that continue to work for them for a lifetime. That is the beauty of biofeedback. Medicines for psychiatric or medical problems often work only until you stop them. Biofeedback teaches self-control skills that one can use over and over for new problems that arise in life.

Some persons periodically return for additional biofeedback sessions to brush up their skills. Dr. Joel Lubar, who developed the biofeedback treatment for ADHD, reports that most of his patients function for years with improved attention, and only occasionally come back for a short refresher course. Some problems like migraine headache may require extensive additional treatment at various times in life.

9. IS BIOFEEDBACK SOMETHING PEOPLE CAN DO ON THEIR OWN? IF SO HOW IS IT BEST LEARNED?

It is easier to learn biofeedback through treatment with a qualified professional. There are many related self-help skills that one can learn on one's own, such as progressive muscle relaxation, autogenic training, and meditation. Relaxation and meditation classes and workbooks are inexpensive ways to gain these skills.

There are several new biofeedback systems being developed for patient self-education or for home training in between biofeedback therapy sessions. For example, the Heart Math company has a new "trainer" unit that patients can use to train themselves in cardio-vascular relaxation. The East 3 Company is working on a new home EEG trainer, for parents to use with children with attention problems.

10. WHAT IS A VISIT TO A BIOFEEDBACK PRACTITIONER LIKE? WHAT SHOULD A PERSON EXPECT AND SHOULD THEY DO ANYTHING TO PREPARE?

The treatment should begin with a clinical interview, in which the therapist learns all about the patient's life, family, work, sources of stress, coping skills, medical and emotional problems. Biofeedback is a "holistic" mind-body therapy, meaning that biofeedback practitioners see any illness or problem as involving the whole person. So one must begin by getting to know the person who has the illness.

Next the therapist will do a biofeedback evaluation (also called a "psychophysiological stress profile"), to identify the patient's unique stress response. The interview and biofeedback evaluation are used to design the treatment.

No preparation is necessary prior to the first interview, although it helps to prepare a written timeline showing the onset and progression of one's symptoms, along with important life events in the same time period.

11. HOW MANY SESSIONS ARE NEEDED AND GENERALLY WHAT IS THE COST?

The length of treatment varies depending on the presenting problem. For most mental health problems and many medical problems 8-12 sessions can provide excellent results. For some problems like epilepsy, alcoholism, or attention deficit, frequent and lengthy treatment is necessary: 2-3 sessions a week for 30-60 sessions.

Costs vary around the country, and are higher in urban areas. 1/2 hour training sessions can cost from 30-75 dollars. One-hour sessions range from 60 to 150 dollars.

12. HAS THERE BEEN ANY SCIENTIFIC RESEARCH TO SUPPORT THE USE OF BIOFEEDBACK AS A TREATMENT METHOD? IF SO, HOW CAN ONE FIND SUCH RESEARCH?

Yes, there is extensive scientific evidence proving the effectiveness of biofeedback. See the References list for books and book chapters reviewing research on biofeedback treatment. AAPB also publishes a booklet summarizing the research showing that biofeedback is effective for many disorders (Shellenberger, Amar, Schneider, & Turner, 1994).

References

Lawlis, G. F. (2001). Biofeedback (pp. 196-224). In L. W. Freeman, & G. F. Lawlis (2001). *Mosby's Complementary and alternative medicine: A research based approach*. St. Louis, MO: Mosby.

Moss, D. (2001). Biofeedback. In S. Shannon (Ed.), *Handbook of complementary medicine in mental health*. San Diego, CA: Academic Press.

Moss, D., Wickramasekera, I., McGrady, A., & Davies, T. (Eds.). (in press for 2002). *Handbook of mind-body medicine in primary care: Behavioral and physiological tools*. Thousand Oaks, CA: Sage Publications.

Schwartz, M., & Associates. (2nd edition, 1995). *Biofeedback: A practitioner's guide*. NY: Guilford.

Schwartz, M., & Andrasik, F. (3rd edition, in press). *Biofeedback: A practitioner's guide*. NY: Guilford.

Shellenberger, R., Amar, P., Schneider, P., & Turner, J. (1994). *Clinical efficacy and cost effectiveness of biofeedback therapy. Guidelines for third party reimbursement*. Wheat Ridge, Co.: Association for Applied Psychophysiology and Biofeedback. [revision in preparation]