

Biofeedback

Biofeedback is a term we're hearing about more and more in the medical and healthcare fields. Chances are that you've already used biofeedback without realizing it.

In effect, biofeedback is an extension of the normal way in which we learn. Learning is a process of getting "feedback" cues through our eyes, ears, nose, and hands and connecting this new information for doing this activity again in the future.

As an example, when you swing your tennis racket, you feel your arm move. . .your wrist tightens and your hand squeezes the grip. . .you watch as your racket connects with the tennis ball. . .and you feel your follow-through as you watch where the ball lands. These series of physical and visual cues all tie in together and instantaneously you know if you're happy with the result. If so, you'll try to follow the same process on your next stroke. If you had a bad swing, you try to envision a "mental printout" of what went wrong, and to correct it and get a better ball placement the next swing.

Now, what does all this have to do with getting relief from your back pain?

HOW BIOFEEDBACK WORKS

Over the past 15 years, more and more medical evidence is showing up to tell us that stress, depression, and other serious emotional upheaval can have a variety of effects on our body.

Based on what's presently known about the effects of unwanted stress on our internal workings, the explanation goes something like this: Stressful events produce strong emotions which arouse a certain physical chain-of-events. Many of these responses are controlled by the nervous system – the network of nerve tissues that helps the body to prepare automatically to meet emergencies.

Normally, most people calm down after the stressful event passes. But other people don't. Their body continues its "keyed-up" condition for a long time afterwards. With many of these people their physical responses become habitual in response to other situations where there isn't any stress. And because their body is repeatedly aroused, one or more bodily activities may become permanently overactive and actually cause damage to that organ or area – pain in the lower back, for example.

WHAT IS MEASURED:

Since it's almost impossible for you to consciously know what's going on inside your body, the biofeedback

electronic equipment can give you clear-cut answers with their different measuring gauges. Four common indicators are:

Galvanic Skin and Temperature Response: Electrodes are attached to the fingertips to monitor the skin's electrical activity and its temperature.

Electroencephalogram: Electrodes are attached to the scalp to measure the electrical activity in the brain's cortex.

None of this is either painful or uncomfortable. The machine simply translates these electrical signals into "beeps" or "flashing lights" which allows you to "hear" or "see" activity inside your body. You then actively try to relax those thoughts and those actions that cause you to tense the muscles that are related to your back pain. The bio-therapist acts as your coach, helping you set mental goals and physical limits on what you can do, and gives you suggestions on how to improve your responses and lower your stressful feelings.

In essence, the goal of biofeedback is to train you to hear and see what's going on inside your body, and to help you learn these "cues" automatically. Eventually you'll discontinue using the biofeedback machinery and you'll still be able to "sense" when you're building up the tension that causes your back pain.

WHO CAN BENEFIT:

To be a good candidate for this type of treatment, you must commit yourself to practicing biofeedback or relaxation exercises every day . . .to drop certain bad habits . . . and to accept much of the responsibility for maintaining your own good health.

Writing in the New York Times Magazine, Gay Luce and Erik Peper hail biofeedback's promise . . .to return us to a more holistic kind of medicine in which the patient will . . .no longer find himself treated as a defective organ, but as a person in a context with a lifestyle and habits that affect his own body."

PART OF THE BIG PICTURE:

Like so many other alternative healing methods, biofeedback is more effective as a means of disease prevention than as a means of disease treatment. Getting people to control tension and anxiety before it results in a problem and before patterns of malfunction are well established in the body is a major step in reducing the enormous incidence of back pain in our country.

SHOULD YOU TRY IT?

Is biofeedback a technique that you should consider? Be aware, a competent therapist should not treat you for your pain until you have had a physical examination by a qualified chiropractor.

If you have the desire to “look inside yourself”. . .the patience to change your ways of reacting to daily stress and tension. . .and the determination to follow a new set of physical and emotional guidelines, you have the basic qualities to be a good biofeedback candidate. And you might just be that person for whom biofeedback makes you an ex-pain sufferer.

THE BEGINNINGS OF BIOFEEDBACK

The biofeedback techniques used to treat patients were developed only recently. The word “biofeedback” is itself so new that it can’t be found in most dictionaries. It was coined in the late 1960s to describe laboratory procedures then being used to train experimental research subjects to alter brain activity, blood pressure, heart rate, and other bodily functions that normally are not controlled voluntarily.

At the time, many scientists look forward to the day when biofeedback would give us a major degree of control over our bodies. They thought, for instance, that we might be able to “will” ourselves to be more creative by changing the patterns of our brainwaves. Some believed that biofeedback would one day make it possible to do away with drug treatments that often cause uncomfortable side effects in patients with high blood pressure and other serious conditions.

Today most scientists agree that such high hopes were not realistic. Research has demonstrated that biofeedback can help in the treatment of many diseases and painful conditions. It has shown that we have more control over so-called involuntary bodily functions than we once thought possible. But it has also shown that nature limits the extent of such control. Scientists are now trying to determine just how much voluntary control we can exert.

HOW IS BIOFEEDBACK USED TODAY?

Clinical biofeedback techniques that grew out of the early laboratory procedures are now widely used to treat an ever-lengthening list of conditions. These include:

- ?? Migraine headaches, tension headaches, and many other types of pain.
- ?? Disorders of the digestive systems.
- ?? High blood pressure and its opposite, low blood pressure.
- ?? Cardiac arrhythmias (abnormalities, sometimes dangerous, in the rhythm of the heartbeat).
- ?? Raynaud’s disease (a circulatory disorder that causes uncomfortably cold hands)
- ?? Epilepsy

Specialists rely on many other techniques in addition to biofeedback. Patients usually are taught some form of relaxation exercise. Some learn to identify the circumstances that trigger their symptoms. They may also be taught how to avoid or cope with these stressful events.

Dr. Spresser refers patients out of the office for biofeedback as necessary.