

The Neurofeedback Learning Process

All biofeedback, including neurofeedback, is a learning process. It involves physical learning and mental skills. It is a process of learning how to change your body by listening to its functioning. Soon the patient learns control and can change mental states. Like any other learning process, the more one learns, the more confidence one develops. So not only does the client learn the neurofeedback skill, but her self-confidence improves.

Neurofeedback is not complicated. In our office practice we have four, five-, six-year-olds learn to change their brainwave patterns. Anyone can learn self-regulation, so neurofeedback is not just for the elite. It is for all humans who want self-control and self-determination. Although patients cannot explain what they have learned, they know they have changed. In neurofeedback, the brain learns what it needs to do to accomplish the task. You want it, you tell the brain to do it and it does it, leaving you never knowing exactly what you've learned. Truly, if there is any magic left in the world, it is the magic inside each of us.

Some biofeedback processes, like temperature training, may only take a few training sessions to achieve. The more complex the system, the longer training takes. Brainwave training takes longer than temperature training because you are dealing with a more complex system. In brainwave biofeedback, the client learns the “feel” of a particular brainwave. The more training the patient has, the more easily he perfects the skill of producing a particular rhythmic state in the brain. Learning to modify brainwave state in the direction of a desired mental state is a “discovery” process – a process of gaining more and more control over your thoughts, feelings, and behavior.

Because of the wide variety of disorders that have been helped with neurofeedback, the idea of a global dysregulation effect is emerging. This is a simple concept that means if the brain is dysregulated, it can have a global or body-wide effect. Seldom does a patient present to a health professional with a single symptom; usually the symptoms involve more than one body system.

For example, a client may present with the chief complaint of depression, but after a thorough intake evaluation, they acknowledge trouble sleeping, poor attention span, irritable bowel-type problems, low- back pain, sugar cravings, weight gain, alcohol use, irritability, and chronic anxiety. So the symptoms are not just in one system, they tend to be global or body-wide. Once neurofeedback treatment begins, symptoms from several systems begin to respond, and the response generally has lasting benefits.

It appears that once the brain becomes dysregulated, it may have a global effect on the body. After all, the rhythmic activity of the brain affects all functional systems of the body, and this rhythmic activity is central to all other systems. Therefore, to regulate the central rhythmic activity of the brain improves body-wide functioning. It appears that neurofeedback not only affects such problems as attention and concentration, but has a systemic effect. When we treat people for ADD with neurofeedback, other systems begin to improve because the brainwaves become regulated. For example, in treating ADD, not only does attention improve, but oppositional behavior, sleep, irritability, depression, anxiety, antisocial behavior, tics, and many other problems also improve.

Neurofeedback seems to have the ability to reduce or correct global dysregulation. The future implications of this are exciting; if such turns out to be the case, it could preclude taking multiple medications for different problems, or seeing several different specialists, each treating a different problem. Neurofeedback treats problems at the core – the brain – and when the functioning of the brain improves, it appears to produce body-wide changes.