Information and Guidelines for Participating in Neurofeedback

FAQs

What is Neurofeedback?

Neurofeedback, also called EEG biofeedback, is an advanced treatment technique that presents the patient with real-time feedback on brainwave activity, as measured by sensors on the scalp, typically in the form of a video display, and sound. When brain activity changes in the direction desired by the neurofeedback protocol, a positive "reward" feedback is given to the patient. Rewards/reinforcements can be as simple as a change in pitch of a tone, or as complex as a certain type of movement of a character in a video game. Most of our neurofeedback methods train brain waves to optimize neuro- electrical self-regulation. More efficient and effective brain waves patterns make life less problematic and more fun.

Most clients complete approximately 40 sessions in order to establish the changes neurofeedback makes in the brain. Neurofeedback works the client's brain in the process of training up or down certain brainwave frequencies. Over time (and usually after 5-6 sessions), clients may begin to notice and feel differences in how they think, feel, and behave. For example, clients may feel more energy, more relaxed, calm, sleep better, rested, changes in appetite, improved concentration, mental performance and more. Each week, the client will be asked to fill out a form that tracks these and other areas that may be affected by participating in neurofeedback. In addition, the lifestyle the client leads will help the benefits of neurofeedback take effect faster, or in the absence of following the advice given below, it may take patients longer to begin feeling the benefits of participating in neurofeedback. If clients do not work on maintaining healthy lifestyles, the benefits of neurofeedback will be lessened and in some cases, minimal benefits will occur. Clients participating in neurofeedback will receive maximum benefits if they understand the information and follow the basic instructions that follow.

What is the Success Rate of Neurofeedback?

Everyone is different, and one's lifestyle and commitment to treatment are important. Generally, the success with neurofeedback is over 90%. Some patients are fast responders and others have more difficulty. A few clients just do not seem to respond to neurofeedback training, and we do not always know why. By following the guidelines below you will insure having the best chance at benefiting from neurofeedback. I would ask that you give us 10 sessions to see the kind of changes you can expect to experience. We suggest 10 sessions because most people see improvements earlier, but as noted above, some are late responders. It is reasonable to expect a 50% decrease in your most troubling problems with a full course of sessions.

What to expect after the first few sessions.

Generally, clients do not experience major changes. You may not experience anything after the first session or two; however, you may experience feeling more calm, more focused, more productive, less foggy, and better sleep that night. Having a new kind of improvement occur in your functioning is different than noticing it. In other words, you may sleep better, but not be able to really tell a difference. This will dissipate at first, but as you progress in neurofeedback, you will notice that the benefits last for more than one or two days. After twenty or more sessions, you might begin to experience the benefits lasting up to one week.

Adverse effects are rare, minor and short-term. The least likely response after a session is feeling fatigue, or the opposite, over-energized. Sometimes there can be a headache or some moodiness. This should dissipate within a few hours. On occasion, a very sensitive person will experience fatigue or sadness lasting into a second day, but this is not common.

What to expect from further sessions?

The most common report is feeling calmer all the time and improved sleep. In general, symptoms become less intense, less frequent, and are of shorter duration. Emotional calm comes first and then mental focus tends to improve later. Ideally, we will see steady progress. Improvements can come to any realm in your life where the brain plays a role.

How often do I need to come?

There is a slight preference for 2 times a week, but people have complex lives and weekly sessions are most common. Clients should make their neurofeedback session appointments every week as established. Neurofeedback is cumulative and each session builds on the previous session. Skipping sessions slows down the overall treatment process.

How long does treatment last?

A normal course of neurofeedback is approximately 40 sessions, in some cases when patients practice optimum self-care and holistic health; neurofeedback may be successful in 25-30 sessions. Some conditions are more severe and require in excess of 40 sessions. It is harder to overcome a genetic condition. It is easier to restore high functioning. The effects of neurofeedback are cumulative.

Other remedies and medications.

Neurofeedback tends to make all other healing methods work better. Check with us if you are concerned about medications you are taking. Consult with your prescriber for medication management. Psychoactive pharmaceuticals tend to slow the neurofeedback process down slightly. Neurofeedback tends to make medications work better at first. As you progress and heal the underlying

disorder, the same dosage may become too high.

Neurofeedback is an effective and cutting edge treatment for a variety of disorders; however, to maximize the benefits of participating in neurofeedback, I strongly encourage you to follow the guidelines below:

1) Sleep: Most Americans do not get enough sleep! In general, children need between 8-10 hours of sleep per night and most adults need 7-8 hours of sleep at night. College students, like adults also need 7-8 hours of sleep per night. Try to practice good sleep hygiene. Good sleep hygiene includes using the bedroom primarily as a place to sleep. Maintain a regular hour for going to bed. Use only incandescent lighting, as all other forms of indoor lighting negatively affect the brain's bio-regulatory capacities. This pertains to daytime indoor lighting as well. Three hours before retiring dim all the lights in your environment. Use as few light sources as possible. Try to avoid watching TV when you are going to sleep. Do NOT use the computer. Read a book or listen to soothing music. You can read before going to bed, but try to turn off the light and put the book down when you feel tired before going to sleep. Practice deep breathing to relax before you go to sleep. Keep the room dark whenever possible. The bedroom should be absolutely dark and devoid of any light whatsoever so that the brain can correctly interpret sleep cues throughout the night.

2) Diet: A healthy diet makes neurofeedback more effective. Try to minimize sugars, fat, and salt in your diet (these directly affect the brain and create urges and desires for these items in your diet), and try to reduce or eliminate the use of stimulant beverages (coffee, coke and other caffeinated soft drinks), and reduce or eliminate the use of alcoholic beverages. Whenever possible, eliminate all food dyes and food preservatives from the diet. It is recommended to eliminate all hydrogenated fats/oils, including "palm oil", which is a misleading term for a hydrogenation process.

Refined carbohydrates in particular should be eliminated from the diet of most individuals and overuse of sweeteners in general in particular for those who suffer from mood swings or depression (not to mention hyperactivity or hypoglycemia). However, individuals who suffer from sleep deprivation may do better by eating pasta or rice (carbs increase serotonin production) and chicken (for its' tryptophan) in the evenings. Those same individuals benefit from eating more proteins during the day.

A well balanced diet of fruits, nuts, vegetables, whole grains, fish and lean meat proteins are important. Try to avoid eating after 8:00pm at night.

1) According to Daniel Amen, M.D., an author and leading authority on the human brain, the top 12 brain foods include:

● Avocado ● Oatmeal ● Spinach

● Blueberries ● Oranges ● Tuna

● Broccoli ● Red Peppers ● Turkey

● Green tea ● Salmon ● Walnuts

Mary Franz of Harvard recommends the following additional foods and spices:

● Parsley ● Oregano ● Citrus

● Celery ● Berries ● Peppers

● Sage ● Grapes ● Onions

● Strawberries ● Dark Chocolate (70% + cocoa) ● Thyme

2) Supplements: Most people take supplements that they do not need or that do not do them much good. Many supplements are not regulated by the FDA and there is no guarantee as to quality or dosage. Before taking supplements check with your doctor or have a consult with a nutritionist. Good quality and proper dosage are important if you are going to use them, i.e., not all fish oils/omega threes are the same. We encourage all of our patients to take a multi vitamin/mineral supplement, Omega 3 Fish oils, flax seed oils, or hempseed oil, CQ-10, and a good digestive enzyme. Patients should always check with their physician first before taking any supplements.

3) Exercise: It is important to exercise 5-6 days per week. It is recommended that children and adults get the equivalent of 45 minutes of cardiovascular workout each day. If you have a sedentary job, (i.e., desk job), get up and walk around whenever possible. It is recommended, that persons with sedentary lifestyles try to walk 5000 steps per day.

4) Environment: Stressful environments create, maintain, and/or increase/worsen anxiety. Try to avoid stressful situations at work and at home whenever possible. Work to find solutions to problems that minimize stress and anxiety. Often, children easily notice stress and tension in the home.

5) Technology: We live in an age of technology. Many of us are using it all day long. The average child ages 7-18 spends an average of 10 hours per day using electronics; i.e., TV, radio, computers, electronic games, cell phones, MP3 players, etc. For children under age 7 it is recommended that they no spend more than 2 hours per day in front of a screen, i.e., computer TV, games, cell phones, etc. Excessive time on electronics is not advised for youth with ADD and ADHD.

6) Electromagnetic waves: Some people are sensitive to electromagnetic fields and it can affect the quality of their sleep. In some cases, it can cause insomnia.

Examples are electronics with remote controls, Wi-Fi computers, cellular phones etc. If you believe you are sensitive to these waves turn everything off (unplug them) in your house before you go to sleep.

7) Routine Lifestyle: Patients should establish a routine in their lives. Regular bedtimes, wake up times, meal times, etc., are good for both mind and body. Clients should try to avoid situations that are known stressors whenever possible. When faced with stressful situations, work towards resolution and try not to ruminate or get stuck in negative and/or destructive and nonproductive though patterns, emotions, and destructive behaviors. When negative thoughts and emotions come up, patients should talk with their therapist or a trusted person. Clients should not try to keep feelings in or ignore them. Clients should try to maintain a supportive environment at home, work, and/or school as well as a supportive peer group.

8) Other suggestions:

a) Keep a journal. Journaling helps clients track changes in the way they think, feel, and behave.

b) Avoid the use of illicit drugs (for many reasons). Clients should take medications as prescribed by their doctor. In addition, clients should review medication levels/dosages and continued use of medications (especially those designed to treat ADD/ADHD, anxiety, depression and insomnia), as they progress through neurofeedback. In some cases, medication use can be significantly reduced and/or eliminated; but this must be done under your physician's supervision.