

Neurofeedback Training Info Packet

What is Neurofeedback?

Neurofeedback is a therapeutic tool that allows you to train your brain to work more effectively and efficiently.

Neurofeedback is a form of biofeedback. To understand neurofeedback, it helps to understand how biofeedback works in general. Biofeedback uses technology to provide us feedback on the biological processes happening inside us, such as heart rate, blood pressure, and rate of our breathing. When we are made aware of, or receive feedback on these automatic processes, we can learn to control them and thus alter the way we think and feel. One example of biofeedback is a stethoscope – the tool a doctor uses to listen to your heartbeat. Using a stethoscope allows you to easily hear your own heart rhythms. By becoming aware of your heartbeats, you can learn to slow or speed your heart rate and thus better calm or energize yourself.

Neurofeedback uses technology to measure and provide feedback on your brainwaves. This allows you to train your brain to better operate. Neurofeedback systems use your brainwaves to control videogames where you and your therapist program the goals and parameters of the game. The games will only work if your brainwaves are just right. For example, if your goal is to reduce anxiety, the game will slow down and stop working if your high-frequency ‘anxious’ brainwaves are too high.

Neurofeedback is a fun and highly effective tool that has great potential for helping you become more flexible and balanced. Over a relatively short time, neurofeedback may be able to train your brain to reduce anxiety and depression, improve your sleep, better focus and concentrate, increase motivation, and countless other personal goals.

How does neurofeedback fit in with psychotherapy?

Research consistently shows that the combination of psychotherapy and psychopharmacology (psychiatric medications) provides the best therapeutic outcomes. Medications are often needed to help people feel better so that real change and growth can happen in therapy. However, many people are fearful or cautious of psychiatric medications – and for good reason. Psychiatric drugs are costly, often have harmful side effects, and can be addictive and potentially dangerous. Neurofeedback can help reduce or replace psychiatric medications by helping your brain better self-regulate.

Specifically, how does Neurofeedback Training work?

Neurofeedback systems, such as EEGer or BrainMaster, combine electroencephalogram (EEG) technology and computer gaming software. Your therapist will temporarily put a couple of very small sensors on your scalp that measure the brainwave frequencies at that

location. Computer software then filters out specific frequency bandwidths and shows you second-by-second readings of your brainwaves. You and your therapist then set up 'reward' or 'inhibit' parameters on these bandwidths that alter the 'game.' For instance, if you have excessive high-frequency brainwaves, associated with anxiousness, you would set inhibitory limits on that frequency bandwidth within the game. When your high-frequency brainwaves are beyond the limits, the game immediately slows down and stops. As your high-frequency brainwaves lessen, the game starts back up again. It is important to note that there is not much that you can consciously do to make the game work. It is your *desire* to make the game work, and your brain unconsciously learns how.

How long does Neurofeedback take?

Most people notice changes within the first 3-5 sessions. It's not uncommon to feel different after the first session.

Most common cases require between 10-30 sessions to stabilize emotional disorders. Of course, everyone's brain and specific challenges are different with the more difficult cases requiring more time.

How do I know if Neurofeedback is right for me?

Because neurofeedback allows you to directly train your brain to better function, its usefulness is nearly endless. Generally speaking, neurofeedback can help a wide range of disorders, including: emotional or mood disorders, attention and behavior problems, cognitive disorders, and other brain or central nervous system disorders.

However, Neurofeedback is too good to only be used by the unwell. Many professional athletes and corporate leaders utilize neurofeedback to assist with attention and focus, stress reduction, motivation, and obtaining deep, restful sleep.

Maryland Integrative Counseling Associates, LLC offers a free consultation to briefly discuss your individual goals and how neurofeedback may fit with your psychotherapy treatment. The initial and ongoing assessments are also essential to planning the most effective treatment for you.

What is a typical Neurofeedback treatment plan?

All effective treatments start with good assessments. Maryland Integrative Counseling Associates, LLC conducts a Psychosocial Assessment/Clinical Interview with all new psychotherapy clients. If neurofeedback training is indicated, an additional brief neuro-assessment can be used to obtain baseline measures, and to further direct training protocols. After the assessments, clients that are appropriate for neurofeedback ideally meet 2-3 times per week for 60-minute therapy sessions that include approximately 20-30 minutes of neurofeedback training. Neurofeedback sessions can be purchased either per session for \$155, or in 10-session bundles for \$1250.

The key to efficient neurofeedback training is ongoing assessment. We believe in spending adequate time discussing all emotional, behavioral, cognitive, social, and environmental changes happening as a result of neurofeedback in order to consistently assess its efficacy. We at Maryland Integrative Counseling Associates have found it best to utilize neurofeedback as a therapeutic tool within the framework of traditional psychotherapy, as opposed to an alternative, stand-alone treatment.

As clients feel better and otherwise benefit from neurofeedback, personal growth and change can most effectively occur within psychotherapy.

Additional Information:

Areas of Applicability: Neurofeedback has been successfully applied to central nervous system problems, such as symptoms of traumatic brain injury, stroke rehabilitation, fibromyalgia, depression and other mood and anxiety disorders, attention, hyperactivity, anger-management, and learning problems. MICA uses neurofeedback training with clients as part of their psychotherapeutic treatment.

Effects of Neurofeedback: Neurofeedback tends to make functioning clearer and easier. It has increased cognitive functioning (memory, concentration, attention, ability to learn and to read, organizing, and sequencing), motivation (initiating and completing activities), and motor skills (coordination, balance, grace, recovery from paralysis). It has elevated mood as an antidepressant. It has improved sleep at night and reduced sleepiness during the day. It has increased energy and stamina. It has reduced seizures, explosiveness, irritability, spasticity, and background anxiety. It has reduced migraine and fibromyalgia pain, as well as restless legs problems.

Treatment and Side Effects: Although no significant side effects have been observed with neurofeedback training, it may be possible to experience minor side effects. The treatment effects of neurofeedback can sometimes produce *temporary* increases of the symptoms you already have, or *temporary* exaggerations of desirable results – such as irritability or raised blood pressure when uptraining arousal. These negative treatment effects tend to reduce and disappear after a couple of hours. Your understanding and communication of all the effects of neurofeedback training will help your therapist make the necessary adjustments to provide successful treatment. This is done the same way medications are adjusted by a physician.

Medical Stability: **It is advised that all participants of neurofeedback training have up-to-date physical examinations by your primary care physician.** You must be medically stable to engage in this treatment. Please tell your therapist if you have any changes in medication as these changes may impact your central nervous system stability. At times, improved nervous system stability may require reducing your medications.



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This, however, should only be done in consultation with your prescribing physician. **Do not make medication changes without the advice and consent of your prescribing physician.**

Other Treatments: Other forms of neurofeedback treatment can have roughly the same effects and side effects. No comparative studies have been conducted to permit objective evaluation of which is better and under what conditions. It is also important to note that no two brains function exactly alike and individuals differ in their responses to almost any form of treatment, including medication. There are many therapeutic techniques available to you in addition to or instead of neurofeedback training that may be helpful and effective. Please keep your therapist informed of your questions and concerns regarding other options for psychotherapeutic treatment.

Discontinuing Treatment: MICA utilizes neurofeedback training as a therapeutic technique and integrates it into your overall psychotherapy. Therefore, if you wish, you may discontinue neurofeedback training at any time for any reason and still remain a psychotherapy client of MICA.

Privacy: Services provided by MICA are confidential. No information will be shared with others unless you sign a release form. **Confidentiality is limited by state law, requiring the reporting of child or elder abuse, or suicidal or homicidal intentions.**

Because individual differences exist, success with neurofeedback is best predicted with a complete evaluation and the development of a treatment plan. The evaluation allows for better prediction of which symptoms will respond, and which may respond first. And, as with any treatment, there can be no guarantee of success. Before you give your consent to be treated with neurofeedback training, please ask as many questions as are necessary for you to understand the process. Please continue to express your questions, observations, and concerns at any time during your training.

Preparing for Neurofeedback

As you consider and prepare for your Neurofeedback Training (NFT), remember the following:

Relax. The first and most important thing to remember when preparing for NFT is to *relax*. Remember, there is nothing that you can do that will make the games work better – your brain will figure it out automatically. However, there is a lot you can do to make the games not work. Every movement that you make, as well as muscle tension in you neck or shoulders is likely to be picked up by the sensors. Too much movement can also cause the sensors to move or even fall off of your head. The more you can relax your mind and body, the better.

There are no *Bad* Brainwaves. And there are no *good* brainwaves either. Our brains produce all speeds of brainwaves all the time in order to do lots of things all at the same time. Problems happen when our brains get ‘stuck’ producing too many slow or fast brainwaves when they are not required.

What are my Goals? Neurofeedback training requires your intentions. Whether your intentions are to better relax, focus, or sleep, reminding yourself of what your goals are will help NFT be successful. Also, try to frame your goals as positives: “I want to better relax,” as opposed to “I want to not be so anxious.”

How can I best Monitor my Progress? It is likely that you will see many changes within the first few sessions of NFT. Sleep, energy, and focus are usually the first changes that you will notice. It is important to remember that you may experience some negative changes in these or other aspects to your personality, such as irritability. Your ability to accurately measure the changes you experience will help your therapist alter your individual training protocol to achieve your desired results – much like a personal trainer would.

Each neurofeedback training session will begin with a review of your progress. Sometimes even small adjustments to your training protocol can result in positive changes. Be sure to document and discuss all changes that you experience with your therapist



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Consent to Neurofeedback Training:

I have been informed of the potential effects, side effects, benefits, and risks of this therapeutic technique and give my voluntary consent to participate in:

(Initial)

_____ Neurofeedback Training Session: 60min; \$155/session or \$1250/10 sessions

I also acknowledge that Neurofeedback, like all therapeutic interventions, has no guarantee of success. By signing this Consent, I agree to not hold Maryland Integrative Counseling Associates, LLC liable for lack of positive changes in mood or behavior.

Client Signature

Date

Parent or Guardian Signature

Date

MICA Therapist

Date