

A grayscale image of a human brain with a grid overlay and binary code (0s and 1s) scattered around it, serving as a background for the main text.

# What Is Neurofeedback

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## What Is Neurofeedback ?

**Neurofeedback is a type of biofeedback** and incorporates the **study and training of the brain**. More specifically, Neurofeedback teaches self-control of brain functions by **measuring brain waves** and **providing a feedback signal**.

Neurofeedback (referred to as NF) is not a new concept. It has been studied by researchers for several decades. **Neurofeedback is a method that assists subjects in controlling their brain waves consciously.**

In a Neurofeedback session, participants enjoy audio and/or video feedback during “eyes-open” and “eyes-closed” sessions. In contrast, positive or negative feedback is produced for desirable or undesirable brain activities.

# Myneurva – Passionate About Neurofeedback

The health professionals at [Myneurva](#) are **pioneers in Neurofeedback** and are led by neuroscientist and medical doctor, Fred Starr M.D., one of the few psychiatrists who practice Neurofeedback exclusively.

Dr Starr's team of professionals have been trained to use neurofeedback equipment and programs providing neurofeedback services remotely around the world.

Also, **Dr Starr holds the US patent** for QEEG and AI software that interprets brain maps in a revolutionary manner and assists with determining what is wrong with the brain.

Dr Starr and his team at Myneurva are pioneering the use of comparative analysis within the field of Remoted Guided QEEG Neurofeedback. Myneurva operates in more than 25 countries via cloud operations and their Patented A.N.N.A. AI interface.

**Myneurva is the global provider of direct-to-client bespoke remote neurofeedback and brain mapping.**

## What Are the Benefits of Neurofeedback ?

During a Neurofeedback training session, sensors are placed on your head. The sensors pick up information on your brain's activity at specific locations. No electricity enters your brain. The sensors merely read information from the brain and relay it to the Practitioner's computer.

Then you relax as you watch a computer monitor that **displays a computer game, a movie, a bar graph, or simply colours that change** as your brainwaves change. The Practitioner monitors your brainwaves and sets training parameters or protocols which are based upon information obtained during your comprehensive intake process.

The most common method used by Myneurva of receiving feedback is by using a dimmer on the monitor display. At the same time, you watch a movie – usually **your favourite Netflix show**. When your brain produces favourable brainwaves, musical

tones will sound, and the screen will become brighter. And, when your brain produces unfavourable brainwave patterns, the monitor will dim or disappear.

This process gives your brain instantaneous feedback about its performance during the training session. On a subconscious level, **your brain begins to learn what it needs to do to make your computer screen bright** and to see the video being displayed. Then it begins to produce more of the helpful type of brainwave patterns and less of those that are related to the symptoms you are addressing. With practice, your brain adapts new patterns.

Desirable **neuronal pathways are strengthened**, and **new pathways are created**. As your brain learns what it needs to do to make your computer screen active and see the video displayed, the Practitioner gradually makes the goals a bit more challenging – to **challenge your brain to do even better**.

This is similar to sports or weight training workouts we discussed previously – as your muscles become accustomed to one weight, a little more weight is added until you build new muscle, form, and ability. With neurofeedback training, **your brain learns how to work at a more optimal level** over time.

When starting neurofeedback training, the Myneurva team recommends that sessions are regular and frequent at two or three (or more) sessions per week. It is possible to do more than one session per day or to have sessions on two or three consecutive days.

As learning begins to happen with predictability, the number of sessions can be reduced. If it is not possible to accommodate two or three sessions per week, neurofeedback will still be beneficial. However, it may take a longer period of time before long-lasting improvement is achieved.

For most conditions treated by Myneurva, there are **no adverse side effects** due to the neurofeedback training as **all sessions are conducted by a competent professional**. If an occasional negative reaction to training does occur, it tends to wear off quickly, or it can be trained-away by the clinician or both.

Interestingly, Myneurva's clients often note positive side effects. **Someone undergoing training to treat migraines, for example, may report improved sleep, concentration, or mood.**

## Is Neurofeedback Evidence Based ?

The success of **Neurofeedback is evidence-based**. For example, according to the [National Institute of Health](https://www.ncbi.nlm.nih.gov/) (<https://www.ncbi.nlm.nih.gov/>), insomnia is known as an epidemic disorder. The first change observed in patients, who are treated with neurofeedback training is the change and improvement in their sleep pattern.

Neurofeedback training is used in the treatment of sleep disorders; moreover, using neurofeedback helps people who normally take about an hour to prepare their body and mind for sleep, go to sleep faster.

Furthermore, **Neurofeedback has created a big change in the treatment of learning disabilities, dyslexia, and dyscalculia disorders**. These disorders are more common for school-age children. Patients with dyslexia have trouble reading and spelling the characters; people having dyscalculia are unable to understand and solve math problems. These disorders are treated with increased alpha wave activity using neurofeedback with evidence-based positive results.

Studies have also shown that **neurofeedback training is a good way to quit drug addiction**. In contrast, long-term use of the drug has a profound effect on the individual's EEG. Temptation and craving of drugs could be reduced by neurofeedback in patients addicted to cocaine, treat alcoholism, and addiction to computer games.

Neurofeedback does not only solve problems, issues, and concerns with the brain. Studies have shown that **professional athletes have different patterns of brain activity** compared to those of the beginners. Recognition of the status of the professional athlete's QEEG before and during performance provides a rationale for the use of neurofeedback training to create these patterns and to improve the performance of unprofessional individuals. In fact, the purpose of neurofeedback on athletes is **improving the athlete's psychomotor and self-regulation ability, their confidence, and subsequent performance in important competitions of the year.**

## What can Neurofeedback Be Used as a Treatment For ?

Neurofeedback does not treat or cure any disorder. Neurofeedback can allow for improved functioning of persons who report maladaptive symptoms and are diagnosed with disorders such as ADD/ADHD, Addictive disorders, Anxiety, Autism & Asperger's, Chronic Fatigue, Depression, Dissociative Disorders, Epilepsy, Obsessive Compulsive Disorder, Post Traumatic Stress Disorder, Headache, Schizophrenia, Sleep Disorders, Traumatic Brain Injury, encephalopathy, Neuro-Lyme's Disease, Chronic Fatigue Syndrome, multiple sclerosis, Parkinson's, Tinnitus, Migraine, "Chemo-brain", Alcoholism and much more.

Neurofeedback is also delivered to **improve Peak Performance traits, improve sports performance, and for Cognitive Enhancement and improvement on IQ scores.**

## What Equipment is Used For Neurofeedback ?

The first step of NF includes an initial brain scan – a QEEG (quantitative electroencephalogram) or Brain Map. To get a Brain Map, you wear an electro cap – similar to a swim cap but with electrodes attached – and connect remotely with a Brain Tuner. Think of the Brain Tuner as your sports coach or trainer. You put your gear on and go to practice.

As one practitioner said, "If you need to fix your car, it's kind of nice to look under the hood first." A brain map helps neurofeedback providers "look under your hood." With NF, your gear includes the electro cap with 19 sensors, laptop, gel and applicators, and an amplifier. You put on your electro cap which needs gel to secure the connection between the cap and your brain (just like after practice or a workout, you will need to hit the shower afterwards to wash your hair), connect the cap to the amplifier and computer, and then meet online with your Brain Tuner to make the first recording of your brainwave activity.

The trained NF professionals at Myneurva have completed a rigorous course of instruction and gather your first QEEG as your baseline. A clinician and our AI System analyze these results. Then, together with your clinician, you make a brain training plan. Electrical activity is recorded simultaneously at all 19 sensors on your cap, first with

eyes closed and then with eyes open. After this, the recorded raw data is carefully edited to remove artifacts, which are signals not generated by actual brainwaves (such as muscle twitches, muscle tension, eye blinks, coughs, etc.).

The data is then subjected to various quantitative analyses using sophisticated software and AI dedicated to this purpose and compared to a database of age-matched high-functioning individuals free of difficulties, injury, and disease. The result is a map of how the client's brain function differs from this high-functioning population.

## How Long Does Neurofeedback Take ?

It may go without saying that everyone is different. Depending on the nature of the symptoms reported and the brain analysis that is delivered by and reviewed by a skilled clinician, a client will receive a protocol that may range anywhere from 20 sessions, to 40 sessions, or possibly more.

For instance, a person with moderate symptoms – someone who wishes to improve their sleep quality – will probably receive a 20 session recommendation. Whereas someone wishing to improve a more severe set of symptoms, for example, post-traumatic stress disorder, will receive more. Essentially, it is all about severity, length of symptoms and time under the cap.

## What is a QEEG Assessment ?

A QEEG is a brain map analysis that shows a visual representation of your brain activity, compared to a normative database. Myneurva uses several commercial databases to compare with our in-house proprietary database. The maps show the standard deviation from the mean of the client, compared with the database of healthy brains.

In short, a QEEG assessment allows a clinician to recognize what parts of the brain are not firing the way that someone with the same age and normal symptoms would fire. Then, the trained clinician incorporates that information to write a protocol in which the NF training will work – highlighting affected areas to improve the quality of brain wave functioning.

## What Type Of Results Can You Achieve With Neurofeedback ?

The brain is amazingly adaptable. It is capable of making adjustments to improve its own performance if given cues about what to change. When the brain is regulating itself well and is alert and attentive, brainwaves (QEEG) show particular patterns.

During NF sessions, you are challenging the brain to maintain this high-performance alert and active state. Gradually, after 20 or more training sessions, the brain learns to stay at this high-performance state for longer periods of time and to retain these new skills.

## Will A Followup Treatment Be Required ?

In most instances, when the brain has learned how to perform at its optimum level, it retains this functioning. Think about learning to ride a bicycle. Remember how difficult it was in the beginning? Remember falling and falling? Yet, after a while, you did not have to think about balancing anymore. At a subconscious level, your brain was sending messages to your muscles to do what they needed to do to keep you upright – muscle memory was formed.

What's even more impressive is if you haven't ridden a bicycle in years, if you (typically) can get on one your brain would remember what it is supposed to do to help you remain balanced. This is what happens through neurofeedback training with Myneurva. We train your brain to work in a way that will help keep you balanced. Your brain will function the way it needs to, for you to be comfortable.

There are instances when we have observed that several booster sessions may be needed:

- Clients who have been involved in long-term traumatic situations
- Clients who have undergone long-term medical help
- Clients who have experienced head trauma after training is completed
- Clients presenting depression. Often people who receive neurofeedback for depression will benefit from one to three booster sessions a few times per year.
- Clients who are still growing. Young children will often have to return for booster sessions as their brain and body develop.



- Chronic Conditions
- Degenerative Conditions
- Re-Injury to the brain

## Can Neurofeedback Be Harmful ?

Neurofeedback is safe and effective for people of all ages. Children, adolescents, and adults with seizure conditions, behavior disorders, attention deficits, autism, ongoing developmental delays, acquired brain injuries, birth trauma, anxiety, depression, post-traumatic stress disorder, stress-related problems, and insomnia or interrupted sleep patterns, as well as those with age-related cognitive loss, may find neurofeedback helpful.

## Can Neurofeedback Cause Headaches ?

Quite the contrary, NF can aid in eliminating headaches and migraines. In rare instances, head fullness might be experienced during the training. This typically subsides within minutes of the end of a session and only happens on the first to a second session.

## Reach Your Peak Potential With Myneurva

Neurofeedback helps you to reach your peak potential. You will see first hand how your brain responds with every session.