

WTX Neurosolutions qEEG and Neurofeedback Program Guidelines

What is a qEEG? What is a brain map?

A **Quantitative EEG (QEEG)**, also referred to as a **brain map**, functions as a road map for the neurofeedback practitioner. 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.”

We first make a recording of brainwave activity. An elastic cap with 19 sensors is placed on the head. Electrical activity is recorded simultaneously at all 19 sites, 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 those produced by muscle twitches, muscle tension, eye blinks, coughs, etc.). The data is then subjected to various quantitative analyses using sophisticated software 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.

Brain mapping is performed in the morning hours at WTX Neurosolutions and takes approximately 30-45 minutes. If you are on any stimulant medications (Adderall, Vyvanse, Ritalin, etc.) please refrain from taking your medication for a **minimum of 48** hours prior to mapping. Please do not consume any **caffeine** (including chocolate) **after 1pm the day BEFORE your qEEG**. Please no hair product (gel, hair spray, mousse, etc.) the morning of the map. If on any other medications for mental health (antidepressants, benzodiazepines, or migraine medication) please skip the dose morning of map. Please refrain from alcohol consumption (if possible) evening before mapping.

Does neurofeedback improve I.Q.?

Studies have shown that I.Q. scores generally raise 10 to 20 points after training. This is not because neurofeedback makes people smarter; it simply helps their brains become more efficient and flexible.

Are personalities changed by the training?

Neurofeedback training does not change underlying personality. It may be seen, however, that when some adverse behavior problems are remediated, the intrinsic innate personality will be more in evidence. For example, in the beginning it may be difficult to dissociate irritability, hot-headedness, or cruelty from a child's personality. After that behavior disappears, it is easy to understand that it was never a part of the child's intrinsic personality.

Has neurofeedback been used to treat alzheimer's or dementia?

When neurofeedback is used for those suffering from Alzheimer's or dementia, it is called "brain brightening." Neurofeedback cannot improve the physical degeneration of the brain. What it can do is help the brain access areas of itself that have not yet been affected by the condition, which can slow symptom progression and thereby improve quality of life.

Why does neurofeedback work?

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 (EEG) show particular patterns. We challenge 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.

What conditions are helped by neurofeedback training?

Successful outcomes, not limited to those listed below, have been reported by Neurofeedback Practitioners for:

- ADD/ADHD -typically 4 month program.
- Addictions – 4-6 month program
- Alzheimer’s/Dementia- 6-9 month program
- Anger – 3-4 month program
- Anxiety – 3-4 month program
- Autism – 6-9 month program
- Bulimia- 3-4 month program
- Chronic Fatigue Syndrome – 3-6 month program
- Chronic pain – 3-6 month program
- Closed head injuries – 3-6 month program
- Concentration- 3-4 month program
- Depression – 3-6 month program
- Fetal Alcohol Syndrome/Effect- 3-4 month program
- Headaches and Migraines – 3-4 month program
- Learning Disorders -3-6 month program
- Obsessive Compulsive Disorder (OCD) – 3-6 month program
- Oppositional Defiant Disorder (ODD) – 3-6 month program
- Pain management – 3-4 month program
- Premenstrual Syndrome (PMS) – 3-4 month program
- Reactive Attachment Disorder – 3-6 month program
- Reading skills – 3-4 month program
- Seizure Disorders – 3-4 month program
- Sleep Disorders- 3 to 4 month program
- Stroke- 3-6 month program

- Tourette Syndrome- 3-4 month program
- Bipolar disorder – 3-6 month program
- Psychotic disorders (hallucinations, paranoia) 6-9 month program
- Traumatic Brain Injury – 3-6 month program

Neurofeedback has also proven effective when used for Peak Performance Training, such as developing memory skills, focusing abilities, and increasing concentration. Many of our clients do Peak Performance training once they have finished 3-4 months of the program.

If an individual is taking benzodiazepines or THC (smoking or eating marijuana) training takes longer than the above estimations of training programs.

How long do neurofeedback sessions take?

Each session takes between 45 and 60 minutes. The actual training period lasts a maximum of 30 minutes. Additional time is needed beforehand for sensor placement and adjustment. We also speak with our clients briefly before and after each training session to monitor how things are progressing. We reserve 60 minutes for each client to ensure that no one is rushed and that there will be time to discuss the results you are experiencing.

How frequent should the training sessions be?

When starting neurofeedback training, it is optimal that sessions be regular and frequent at three (or more) sessions per week. The first week the individual can do up to 4 sessions with a 1-day break between session 3 and 4. Some individuals train 3 times per week back to back (Friday, Saturday and Sunday) whereas other take a day break in between sessions (Monday, Wednesday and Friday).

We also have a program that gives individuals the flexibility to train if they are unable to commit to the traditional program frequency. This program involves individuals training

4 times the first week, 3 times the second week and then a 2-week break. For example, the individual may train Monday, Wednesday, Friday and Saturday the first week and then either Monday, Wednesday and Friday the second week or Friday, Saturday and Sunday the second week. They then have a 2-week break and then come back and start training again for another 2 weeks.

Do I have to stop taking my medication while doing neurofeedback training?

There may be a time when we might suggest—with your physician's approval—that you temporarily not take some types of medication. This generally occurs before we administer an attention/cognition test (so we can get a baseline score) or before a brain map is done. We never suggest that a person stop any medication taken for physical conditions such as heart problems, seizure disorders, or blood pressure. Any changes in your medical regime must be made under your medical doctor's supervision.

Will I be able to stop taking my medications?

Initially, neurofeedback usually supports medication dosages and clients tend to feel better while on their current doses. As training progresses and brain function improves, some clients may actually begin to experience symptoms of overmedication. At this point the client is referred to their physician, who would oversee any medication changes. Many of our clients have reported either that they no longer need their medications or that they are able to reduce the amounts needed after completion of neurofeedback training. However, if the goal is to stop taking medications, you should plan on a larger number of neurofeedback sessions.

I, _____, have thoroughly read and understand the: WTX Neurosolutions qEEG and Neurofeedback Program Guidelines and give my consent to enter the program and do not hold WTX Neurosolutions LLC liable or responsible for any adverse or harmful effects of treatment.

X _____ Date: _____