



Neurofeedback/Neuromodulation Assessment & Training Informed Consent Form

NOTE TO PATIENT/CLIENT: Dr. Friesen requires your informed consent for the services he is to provide. This means that he would like you to understand the service he will provide and what he will do with the personal information he obtains about you. If you have any questions about any of this, please ask.

Neurofeedback/Biofeedback Training: In order for training to be more effective, Dr. Friesen will have to complete an assessment.

- *the purpose is to get a better understanding your background, psychological, health, and cognitive functioning.*
- *the assessment takes approximately 2 hours in person and approximately 20 to 60 minutes completed this form.*
- *you may undergo a brief clinical interview.*
- *you will be asked to complete a quantitative EEG (qEEG), cognitive testing, and questionnaires.*
- *you may terminate the assessment at any time.*

I understand that the recording of Electroencephalograph (EEG) requires the placement of a cap or surface sensors on my scalp for the purpose of recording my qEEG. While there are few risks associated with this procedure, there is a remote possibility of a mild headache from the qEEG cap in addition to mild skin irritation from the sensor gel/paste that is used to clean the surface of the scalp and attach sensors. It is a universally used procedure for the recording of the EEG, and a necessary tool for the evaluation of brain function in various contexts. I understand that the sensors can be removed at any time if I so desire. There is no risk of electric shock from this procedure. I acknowledge that I adhered to the qEEG instructions provided to me prior to my appointment.

Emerging Technology Treatment Procedures: Neurofeedback (“EEG-biofeedback”) and other neuromodulation modalities (e.g., Auditory-Visual Entrainment or AVE, Cranial Electrotherapy Stimulation or CES, Transcranial Direct Current Stimulation or tDCS, etc.) are comparatively new and emerging treatment modalities that are currently applied to a wide variety of disorders. Neurofeedback for Attention-Deficit/Hyperactivity Disorder (ADHD), epilepsy/seizure, depression, anxiety, Traumatic Brain Injury (TBI), insomnia, Posttraumatic Stress Disorder (PTSD), and substance abuse/addiction have a reasonably good research basis for clinical application. However, neurofeedback for these disorders and many others may be considered “experimental” by some insurance providers, health care practitioners, or others. By signing this consent form, you acknowledge your understanding that some applications of neurofeedback are still considered to be in the developmental, emerging, or experimental stages, and you consent to its use in whole or part of your treatment. To learn more about

neurofeedback/biofeedback and other neuromodulation modalities, visit: NiagaraNeuropsychology.com/category/neurofeedback

What is neurofeedback? Neurofeedback, also known as neurotherapy or EEG biofeedback, is a non-invasive treatment used to modify brain electrical activity (brain waves). Brainwaves occur at various frequencies. Some are fast and some are quite slow. For example, if we are exceptionally anxious and tense, excessive fast activity is often present. When a disproportionate amount of slow waves is present in the executive (frontal) parts of the brain, it can become difficult to control attention, behaviour, and/or emotions. In order to quantify the levels of these brainwaves a quantitative EEG (qEEG) will be done. The qEEG, sometimes referred to as brain mapping, is the measurement through digital technology of electrical patterns at the surface of the scalp which primarily reflect cortical electrical activity or brainwaves. A qEEG takes about 60 minutes. It consists of placing a snug cap, which contains small sensors on the head, to measure the electrical patterns coming from the brain. We gather information on the brainwave patterns, interactions between different parts of the brain, and the efficiency of communication between different parts of the brain. This is done while the client is resting quietly with his or her eyes closed and also with the eyes open. The qEEG human brain mapping procedure is highly advanced and can offer more information than the typical electroencephalogram (EEG). By having a qEEG done, your brain activity can be compared to a wide database of other "normal brains," helping to determine which, if any, of your brain functions is abnormal. qEEG can be helpful in determining whether a person's symptoms are associated with specific brain dysfunctions and can guide treatment planning to save time, money, and energy.

Repeated qEEG assessments can also be used to monitor treatment progress by showing changes in brain functioning as treatment progresses and symptoms change. This assessment procedure allows us to determine in a scientific, objective manner whether and how a patient's brainwave patterns are significantly different from normal in order to individualize the following neurofeedback treatment. It is important for you to understand that a qEEG is not the same as a "clinical EEG", which is used in medical diagnosis to evaluate epilepsy or to determine if there is serious brain pathology, such as a tumour or dementia. The quantitative EEG that we do evaluates the manner in which a particular person's brain functions. It is not designed and we do not try to diagnose tumours, epilepsy, or other medical conditions in a manner like an MRI or CAT scan.

What is biofeedback? Biofeedback is a non-invasive procedure considered to be generally safe. It measures heart rate, heart rate variability, breathing, skin temperature and conductance as well as muscle tension while you undergo different tasks, because it is believed that the body reflects certain mental states through these functions. Research has shown that biofeedback may be effective for anxiety, stress management, depression, hypertension, and pain management, including tension type headache and migraine as well as shoulder and back pain.

What can be expected of training? Neurofeedback and biofeedback are usually combined in one session. In training sessions, we provide some biofeedback training and then neurofeedback by placing sensors on the scalp. The trainee then watches a display on the computer screen and may listen to audio tones, sometimes while doing a task such as reading or relaxing. These training sessions are designed to teach the person to gradually retrain their brainwave patterns. With continuing feedback, coaching, and

practice, we can usually learn to produce the desired brainwave patterns. Some persons may need to learn to increase the speed or size of brainwaves in some parts of the brain. Other individuals need training to decrease the speed of brainwaves in certain areas of the brain.

Neurofeedback and biofeedback have been shown in some studies to have a lasting effect and can help lower or stop the use of medication, such as Ritalin or Concerta for ADHD, but any medications changes need to be done under the supervision of a physician. Neurofeedback and biofeedback training is also commonly found to be associated with:

- Decreased impulsiveness/hyperactivity
- Better stress management
- Increased mood stability
- Improved sleep patterns
- Increased attention span and concentration
- Improved academic performance
- Increased retention and memory.

Risks: Mild side effects can sometimes occur during neurofeedback training. For example, occasionally someone may feel tired, “wired”, anxious, experience a headache, have difficulty falling asleep, or feel irritable. Many of these feelings pass within a short time after a training session and such mild side effects are estimated to only occur in 1-3% of clients treated by well-trained clinicians. Please inform us of any such feelings if they should occur, as we can alter training protocols and usually quickly eliminate such mild adverse effects. Be aware that the training can be quite relaxing (depending on the training protocol used). Please exercise caution and good judgment regarding your ability to drive after your session. Although neurofeedback often produces very beneficial and lasting change, there are cases where brain functioning is such that remediation may not be possible, or there may be partial improvement.

What is involved with the Neurofeedback Training Program? The neurofeedback training requires the completion of the qEEG, cognitive testing, questionnaires, the attached background form, and possibly a clinical interview. After Dr. Friesen has interpreted the test results, he or his technician will go over the results with you and a training plan will be devised. Neurofeedback technicians provide neurofeedback services under the supervision of Dr. Friesen.

The Importance of Regular Attendance and Participation: Neurofeedback promotes self-regulation of one's own health and well-being. Participants in this training program learn methods to control their own physical, mental, and emotional states in order to reduce excess stress, anxiety, impulsivity, or other responses that contribute to symptoms. Since this form of training emphasizes the development of self-regulation skills, each participant must make a commitment to actively participate in their own treatment through consistent practice of activities or monitoring and recording of their symptoms, behaviours, and thoughts.

You will need to attend a minimum of 2 to 3 sessions per week for, on average, 20 to 50 neurofeedback sessions. Please note that while many people can complete neurofeedback treatment in 30 to 40

sessions, some patients require many more sessions to successfully complete treatment. As a general rule of thumb, neurofeedback treatment length increases as the severity of the cognitive, emotional, or behavioural disorder increases. Successful attainment of your treatment goals is highly dependent on consistent attendance at neurofeedback training sessions as well as daily practice of skills (if applicable). Before beginning this neurofeedback program, please be sure that you can commit to and have time for your treatment plan and can attend most or all scheduled sessions even when doing so may become inconvenient, uncomfortable, emotionally challenging, or even boring at times. In order to ensure the best chance of steady progress and prevent setbacks, it is advisable to schedule the start of this training program when you are sure you will not leave town for an extended period or have other distractions that would interfere with attendance. Neurofeedback seems to work just like exercise and dieting: you have to stick with it long enough for it to make changes.

Physician Consultation and Medication Monitoring: Neurofeedback can influence (as well as be affected by) certain types of medication and medication levels. The patient should immediately inform Dr. Friesen or the neurofeedback technician of any changes in medication (increases, decreases, implementation of new medications) that occur while in treatment. As neurofeedback training progresses, know that over-medication effects can occur. When this happens, a patient must also notify his/her physician that medication adjustments may be needed (often to decrease medication). This will help to ensure that neurofeedback is able to work and to avoid possible over-medication effects such as irritability, hyperactivity, and other potential changes in behaviour. Very occasionally, Dr. Friesen or his staff may see unusual brainwave activity during qEEG collection or during a neurofeedback session. As a safety precaution, Dr. Friesen will ask you to contact your treating physician for determination of the need to be evaluated by a neurologist.

LIMITS OF CONFIDENTIALITY: The assessment results and reports are confidential, which means that:

☐☐the information will be shared only with staff involved in your care.

☐☐The data collected during this assessment may be subject to anonymous analysis for research purposes (identifying information, such as your name, is removed). The data are analysed in the interests of quality control and to help improve our test normative database.

There are specific exceptions to confidentiality, primarily to prevent harm. The information must be released *with or without your consent* when:

☐☐Dr. Friesen believes you may be a danger to yourself.

☐☐Dr. Friesen believes you may be a danger to others.

☐☐Dr. Friesen has reason to believe physical or sexual abuse or neglect of a child is occurring; or there is risk for abuse.

☐☐Dr. Friesen believes you have been sexually abused by a health professional.

☐☐Your information has been subpoenaed by a court of law.

Authorization for Treatment: I hereby certify that I have read and that I fully and completely understand this Neurofeedback Assessment & Training Informed Consent Form, and I have signed this Informed Consent knowingly, freely, and voluntarily. I understand the policies, expectations, and experimental nature of this treatment as explained above. Moreover, I certify and state that I have received no promises, assurances, or guarantees from anyone as to the results that may be obtained by

any psychological or medical treatment or services. I understand that while my treatment is designed to be beneficial, we make no guarantees about the outcome of this treatment program. I am willing to make a personal commitment to participate to the best of my ability in all steps of the treatment program, though I understand that I am free to withdraw from this treatment at any time. I understand that my failure to comply with my recommended treatment program (such as assignments and regular participation in sessions) could prevent the treatment from working effectively.

Thanks for your time. If you have any questions, please ask the tech or contact Dr. Friesen directly at:

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Board Certified in Neurofeedback (EEG Biofeedback BCIA-BCN)

Director of Niagara Neuropsychology and Friesen Sport & Performance Psychology

Patient/Client Signature

Dr. Friesen

Print Your Name

Print Name

Today's Date

Today's Date

qEEG PREPARATION PROCEDURE

Hello,

If you are receiving this form, it means that you have been booked in for a qEEG assessment. This is an electroencephalogram (EEG) recording of baseline brain activity. It will last approximately 120 minutes. Before you come in, there are some things you should know.

This procedure is not painful!

- First, the technician will apply a special cleaning gel to your scalp and earlobes. Then, they will place an elastic mesh cap on you for the recording. It looks a little like a swimmer's cap with sensors sewn into it. Each sensor will need to be filled with conductive gel to help the sensors read the brain's electrical activity. There are 20 sites to set-up so the process may take some time. All of the gel used is easily rinsed out with water.

Important dos and don'ts the day of your appointment

- Take your regularly prescribed medications unless otherwise indicated by your physician. Please report any prescription medication to Dr. Friesen or the technician.
- Refrain from using over-the-counter (OTC) medications the day of the test.
- Do not use alcohol and/or marijuana 1-2 days before the test as these can affect the EEG readings.
 - If you use medical marijuana, **please continue to use it as prescribed** and report this to Dr. Friesen.
- Do not drink/consume any caffeine within 90 minutes of your appointment
- Please wash your hair the day of the test. However, do not use any hair conditioner and/or hair styling products (gels, oils, sprays, etc.). Shampoo is okay, but please rinse and dry your hair thoroughly.
- Please do not come hungry. Have something non-sugary to eat prior to coming for your appointment and bring some water to drink.
 - If you wear earrings, hair pieces, and/or braids/ponytails you will be asked to remove them for the assessment.

If you have any questions or concerns, please do not hesitate to contact us.

Thank you for your help with these matters.