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## **INFORMATION AND INSTRUCTIONS REGARDING THE EEG / QUANTITATIVE EEG PROCESS**

### **General information about the QEEG process**

A QEEG is a non-invasive, scientific, evidence-based assessment tool that is used to identify areas of dysregulation in a person's brain that are likely causing symptoms, such as sleep disturbance, emotional or behavioural difficulties, or learning problems. A QEEG analysis compares the person's brainwave profile (EEG data) to the norm for his or her age and gender. As with any other investigation, I cannot assure you that anything significant will be indicated on the QEEG that will explain your symptoms or behaviour. However, because the brain controls learning, behaviour, mood and general functioning, the brainwave profile correlates extremely well with the symptoms. Various factors are investigated (such as the power of each frequency, the communication between brain areas, and symmetry), which comprehensively contribute to greater understanding of the cause of the symptoms and an effective plan for remediation.

A QEEG measures the electrical functioning of the brain and not the structure.

This tool is not intended to be diagnostic in itself when used in isolation, or to replace the medical opinion of a physician, neurologist or other professional, but rather as part of a comprehensive assessment of functioning.

The EEG recording will take approximately 45 minutes - one hour. It involves putting 20 electrodes on the head, one on each ear and one on each wrist fixed to the skin with paste. Each area will first be cleaned with abrasive gel and an eardbud. It is a painless process. No electric current is passed into the head.

During the recording itself, it is necessary to sit very still and relax for an accurate recording. If necessary, it is possible to stop the recording to allow the patient to move around before continuing again. Some of the recording will be done with the patient's eyes open and some with the patient's eyes closed. During one part of the eyes closed recording, a light will flash for a short while (photic stimulation) and thereafter the patient will be asked to breathe deeply and rapidly (hyperventilation) to record changes, if any, in the patient's EEG as a result of these. Once enough EEG has been recorded (usually 22 minutes), the electrodes will be removed. Some paste will still remain in the hair, so it is a good idea to have enough time to wash your hair after the EEG recording.

If the patient takes medication that may alter the results of the QEEG, it is advisable to skip a few doses so it can be completely out of the system before the QEEG is done. Stimulants, such as Ritalin and Concerta, should

not be taken for at least 48 hours before the test. Do not use a sleep aid (sleeping tablet or herbal remedy) on the night before the investigation. As far as possible, the QEEG results should represent a drug-free brain. **This should not be done without the knowledge and guidance of the prescribing physician.** Please let me know which drugs you have taken in the past 7 days (prescription drugs, recreational drugs, herbal remedies, over-the-counter medication) on the day of the QEEG as these may have an effect on the results of the QEEG.

The complete EEG data set collected is sent to Irene Masters, neurophysiologist, to analyse, exclude abnormality, and report on her findings. Some of the data is passed through the Neuro Guide QEEG database and reports are generated. A summary report of the QEEG findings will be compiled. Based on the conclusions of the two reports (i.e. routine EEG and QEEG), further recommendations to other professionals might be made. The usual timeframe to receive feedback after the initial consultation of the EEG recording is approximately 7 days.

### **Cost**

The cost of the standard EEG and QEEG is R5000.00, payable in cash, by credit card or by EFT made BEFORE the appointment. If you make a cash deposit into my account, you will be liable for the bank charges related to the cash deposit (approximately R100). The cost includes:

- the initial consultation of approximately 45 minutes - one hour to acquire the EEG data
- a standard EEG and a report of the findings
- QEEG analysis and a summary report of the findings
- 45 minute feedback session to discuss the results and further recommendations for intervention if necessary.

Please note that we work on a 24 hour cancellation policy. If you need to reschedule your initial consultation or feedback session, please do so more than 24 hours in advance. If you cancel either appointment less than 24 hours before the scheduled time, or do not arrive for the appointment, you will be charged an additional R1270 over and above the fee as outlined above. The full appointment duration is needed for the initial recording. Please ensure that you arrive on time. If you arrive late, the appointment will need to be rescheduled and an amount of R1270 will be charged in lieu of the time wasted. If we are unable to do the recording due to you not having followed the instructions in this document (for example, if you took stimulant medication, did not wash your hair as guided in this document, or had coffee in the morning before the recording), the appointment will need to be rescheduled and R1270 will be billed due to wasted time. Please note that if your appointment falls on a Monday and needs to be cancelled, this will need to be cancelled by 12pm on the Friday prior to the appointment.

Both parents should be present at the feedback where possible. Please do not bring your child along for the feedback. If only one parent is able to attend, the other parent is welcome to schedule a separate consultation for feedback which will be charged at R1000 for 45 minutes.

You are welcome to make notes during the feedback so please bring along paper and a pen. No video or audio recording of the feedback session will be permitted under any circumstances.

Please note that, if it is a child who will be having the EEG recording, parents will be required to wait in the reception area.

**Banking details for EFTs are as follows:**

Justine Loewenthal EEG Services  
Standard Bank  
Branch: Rivonia 001255  
Current account no 220020043  
Reference: full name and surname

Please submit the statements you will receive to your medical aid as they should reimburse a portion depending on the funds available.

**Preparation for the QEEG**

Please adhere to the instructions below as far as possible. We would like to ensure that every measure is taken to obtain the most accurate and reliable data to yield the most beneficial information.

- On the day of the investigation or the night before, please shampoo your hair and scalp twice thoroughly. Do not use conditioner, styling gels, hair spray, mousse or the like.
- Please make sure that your hair is dry when you arrive for your appointment.
- Do not braid your hair, and, where possible, please remove dreadlocks.
- Ensure you are well rested and not ill on the day of the investigation.
- If a child is having a QEEG, please prepare him / her well, as he / she will need to sit very still.
- Have a healthy, low GI breakfast in the morning. Do not have stimulants of any kind (e.g. tea, coffee, sugar, colourants, caffeinated soft drinks, chocolate etc.) or depressants (e.g. alcohol)
- Follow the guidelines with regard to medication as previously mentioned but **ONLY WITH THE KNOWLEDGE AND GUIDANCE OF THE PRESCRIBING DOCTOR.**
- Drink plenty of water for 24 hours before the QEEG to ensure that your body is hydrated.
- Please remove all earrings, bracelets and watches.

**MOXO d-CPT**

A computerised continuous performance test used to measure attention, impulsivity, timeliness and hyper-reactivity is often added to provide an additional, valuable piece of the puzzle. This test can be done at home or in our offices. The additional cost for the test, if done at home, is R600 and, if done at our offices, is R1600. No special equipment is necessary if it is done at home, only a computer and an internet connection. A link will be sent to you to access the test and Justine will download the report thereafter. This must be done at least 2 days before the QEEG feedback meeting so all the data can be collated.

Comparing results on subsequent MOXO tests is a good way of monitoring efficacy of interventions over time.

For more information about the MOXO d-CPT test, please visit <https://moxo.neurotech-solutions.com/>

If you feel unsure about any aspect of this document, or if you would like further clarity on the QEEG itself, please feel free to contact me.

If you would like access to articles on QEEG, such as the construction of the Neuro Guide QEEG normative database, reliability and validity of QEEG, and other research into QEEG, please have a look on our website: <https://www.bonadeacentre.co.za/qeeg-articles.html>.

Kind regards

Justine Loewenthal