

Neurotherapy and Biofeedback Consent Form

When it's hard to pay attention, you're feeling depressed or anxious, or someone can't stop thinking about something, is it psychological or a physiological? Training the brain using neurofeedback changes these problems. It helps improve alertness, attention, emotional regulation, behavior, cognitive function, and mental flexibility. Changing the brain clearly affects the mind. Brain training produces a measurable physiological effect on the brain. When a monitor displays your brain activity, you can quickly learn to change that also.

Biofeedback Therapy refers to a process, whereby through the use of biofeedback devices or equipment, you can become aware in real time of various bodily processes, that normally you have no awareness of, such as micro-changes in skin temperature / sweat gland activity (usually associated with stress), breathing, heart rate or changes in brain wave patterns, or muscle tension, and then through the biofeedback information, you can become able to gain a degree of control over those bodily processes.

Neurofeedback, which teaches the brain to change itself, helps attention, mood, behaviour, cognition, and more. Once these changes are practiced and learned, the effects tend to hold, for at least for many problems. As someone's brain learns to improve its own regulation, medication can often be reduced. Sometimes, it allows medications that weren't working well to work better.

Neurofeedback uses a brain/computer interface that detects brain activity. By using operant conditioning, you get rewarded when your brain makes more of certain types of brain activity. Your brain might get a beep when it's doing the right thing. By changing the EEG, changes occur in brain timing, and can create a more activated, alert, and stable brain. Or a more calm brain. Excessive fast or slow activity is associated with brain dysregulation, and a variety of clinical symptoms. Training that activity helps improve self-regulation. We usually place one or two electrodes on the scalp and one or more on the earlobes during neurotherapy training sessions. The trainee then watches a display on the computer screen and listens to audio tones, sometimes while doing a task such as reading. 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. At first, the changes in brainwave activity are brief and transitory. Soon, the new patterns become more firmly conditioned in frequency ranges associated with better performance. Once the patient has practiced enough to be skilled at focusing and has reconditioned their brainwave pattern, training is concluded.

Neurofeedback training may many times only require 20-30 sessions with anxiety or insomnia, but with other conditions such as ADD/ADHD or learning disabilities it will more often involve 40-60 sessions of about 40-45 minutes in length. In treating very complex conditions or when multiple disorders or diagnoses are present, a clinician cannot always stipulate in advance how many treatment sessions may ideally be needed.

Clinical Applications of Neurofeedback Research

- **ADD/ADHD & Learning Disabilities:** Since the late 1970's, neurofeedback has been researched, refined, and tested with ADD/ADHD and learning difficulties. Clinical work with attention-deficit/hyperactivity disorder and learning disorders by Lubar and his colleagues (1995; 2003; Lubar, Swartwood, Swartwood, & O'Donnell, 1995; Mann, Lubar, Zimmerman, Miller, & Muenchen, 1992; Rasey, Lubar, McIntyre, Zuffuto, & Abbott, 1996) and others (Fernandez et al., 2003; Fuchs et al., 2003; Kaiser & Othmer, 2000; Linden et al., 1996; Monastra et al., 2002; Othmer et al., 1999; Rossiter & La Vaque, 1995; Tansey, 1990) demonstrates that it is possible to recondition and retrain brainwave patterns. Neurotherapy teaches children and adults how to suppress slower or inappropriate brainwave activity while increasing more efficient brainwave activity. This neurofeedback research is quite strong in demonstrating its effectiveness in treating ADD/ADHD. Whereas the average stimulation medication study follow-up is only three weeks long and only two long-term follow-up medication studies went 14 months or longer with ADD/ADHD, Dr. Lubar at the University of Tennessee has published 10 year follow-ups on cases and has found that in up to 80% of cases this can substantially improve the symptoms of ADD and ADHD (Lubar, 1995, 2003). A comprehensive review of neurofeedback with ADD/ADHD estimated improvement in over 75% of patients (Monastra, Lynn, Linden, Lubar, Gruzelier, & LaVaque, 2005). A sophisticated recent study (Levesque, Beauregard, & Mensour, 2006) documented with functional MRI neuroimaging the positive changes in brain function in ADHD children after neurofeedback treatment. Rossiter and LaVaque (1995) found that 20 sessions of neurofeedback produced comparable improvements in attention to taking ritalin, and Fuchs et al (2003) and Rossiter (2005) likewise found that neurofeedback produced comparable improvements to ritalin. Monastra et al. (2002), in a one year follow-up, found neurofeedback produced superior improvements to ritalin, without needing to remain on drugs. Fernandez et al. (2003) demonstrated in a placebo-controlled study the effectiveness of neurofeedback with learning disabilities. Other papers have also been published on the value of neurofeedback with learning disabilities (Orlando & Rivera, 2004; Tansey, 1991; Thornton & Carmody, 2005). Neurofeedback training for ADD/ADHD is commonly found to be associated with decreased impulsiveness/hyperactivity, increased mood stability, improved sleep patterns, increased attention span and concentration, improved academic performance, and increased retention and memory. Fascinatingly, every ADD/ADHD or learning disability study that has evaluated IQ pre and post-treatment has found IQ increases following neurofeedback training. These improvements have ranged from an average of 9 IQ points improvement (Linden et al., 1996) in

one study, to an average 12 IQ point improvement in another study (Thompson & Thompson, 1998), to a mean of 19 IQ points (Tansey, 1990), and even up to an average increase of 23 IQ points in still another study (Othmer, Othmer & Kaiser, 1999).

- **Other Clinical Applications of EEG Biofeedback Training:** Neurofeedback has good research support for its effectiveness in treating **anxiety** (reviewed in Moore, 2000). It is also being used to work with other clinical problems such as **depression** (Baehr, Rosenfeld & Baehr, 2001; Hammond, 2001, 2005), **chronic fatigue syndrome** (Hammond, 2001), **fibromyalgia** (Donaldson et al., 1998; Meuller et al., 2001), **sleep disorders, Tourette's, obsessive compulsive disorder** (Hammond, 2003, 2004), **autism** (Jarusiuwicz, 2002), **Parkinson's tremors** (Thompson & Thompson, 2002), **tinnitus** (Gosepath et al., 2001; Schenk et al., 2005; Weiler et al., 2001), **swallowing or gagging, incontinence and physical balance** (Hammond, 2005), and **essential tremor**. Neurofeedback is being utilized in **peak performance training**, for instance in enhancing musical performance (Egner & Gruzelier, 2003), dance performance (Raymond et al., 2005), with athletes, business executives, for **cognitive and memory enhancement** in normal individuals (Hanslmayer et al., 2005; Rasey, Lubar, McIntyre, Zoffuto & Abbott, 1996; Vernon et al., 2003), and for "**brain brightening**" to counter effects of normal aging (Budzynski, 1996). However, these areas of application do not yet have strong research validation. Somewhat similar to treating ADD/ADHD, research has also been directed at learning to suppress theta brainwaves to enhance vigilance and signal detection (e.g., for air traffic controllers).

Delimitations & Potential Risks:

A mild side effect can sometimes occur during neurofeedback training. For example, occasionally someone may feel tired, spacey, "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 in a recent review (Monastra et al., 2005) of neurofeedback with ADD/ADHD, such mild side effects were estimated to only occur in 1-3% of patients treated by well trained clinicians. If you make your therapist aware of any such feelings if they should occur, he/she can alter training protocols and usually quickly eliminate such mild adverse effects. In doing alpha/theta training (which is primarily done with alcoholism or PTSD), some patients have reported the emergence of memories from the past which may potentially be distressing. It is important to recognize that there is no research on the reliability of such memories. Therefore, a client should not regard them as necessarily being accurate unless they can be independently corroborated.

Although believed to be relatively infrequent, it is possible with neurofeedback for a more significant negative effect to occur (Hammond et al., 2001; Hammond & Kirk, 2008) if training is not being supervised by a knowledgeable, certified professional where the training is individualized. A "one-size-fits-all" approach that is not tailored to the individual will undoubtedly pose a greater risk of either producing an adverse reaction or of simply being ineffective. There is heterogeneity in the brainwave activity within broad diagnostic categories (such as ADD/ADHD, head injuries, depression, autism, or

obsessive-compulsive disorder) that requires individualization of treatment. Thus we emphasize once again that everyone does not need the same thing and that if training is not tailored to the person, the risk is greater of it being ineffective, or very infrequently, even harmful.

Fee Policies:

Neurotherapy sessions will cost R370 per session for two sessions per week and R400 per session for one session per week.

Sessions that are **not cancelled 24 hours** in advance will be charged in full. This policy will be strictly adhered to.

All accounts will be emailed to you in the second last or last week of the month (depending on whether the therapy was completed or is still on-going in the next month). You will be required to pay your account in full by the last session or the end of the month depending on the therapeutic arrangement. An electronic invoice will also be forwarded to you timeously.

Accounts could be paid in cash, by cheque, electronically (EFT) or credit card. When paying by EFT please bring the proof of payment with on the last session or end of the month and hand it in to the office manager.

Banking details: Neuro-Logics cc

RMB (FNB)

Branch: Sandton

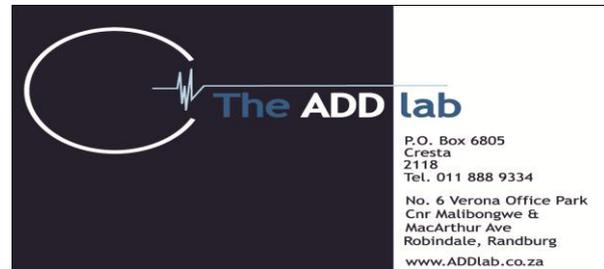
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Medication & Consultation with Your Physician

If you are taking medication (e.g., for migraines or headaches, seizures, emotions, hyperactivity, attention, perception, movement, spasticity) it is important to remain in close communication with your physician. It has been clinically observed that the need for some of these medications may decrease after numerous neurofeedback sessions, but they may remain in your system and some individuals may have negative side effects because of the decreased need of the body to rely on them. Some clients have a tendency to want to decrease medications without consulting with their physician. We strongly encourage that all changes of medication be done with the consultation of the prescribing physician, as decreasing or stopping some medications may be life threatening, cause withdrawal effects, or be detrimental to your health. Please, consult your physician. Also, realize that EEG biofeedback is not a substitute for effective standard medical treatment.

Consent for Neurotherapy



DETAILS OF CLIENT

INITIALS		SURNAME	
FIRST NAMES		DATE OF BIRTH (YYYY/MM/DD)	

PARENT/ GUARDIAN/CLIENTS DETAILS

INITIALS	
FIRST NAME	
SURNAME	
DATE OF BIRTH	
ID NUMBER	
LANGUAGE	
OCCUPATION	
HOME NUMBER:	
WORK CONTACT NUMBER	
CELL NUMBER	
E-MAIL ADDRESS	

I hereby authorise The ADD Lab to provide me / my child with Neurotherapy Training.

I understand that my therapist is registered with the NAA, which is an association with the following aims and objectives:

- ♦ To engender and promote standards of professional excellence in the qualification and practice of the members as laid out in the Code of Conduct, Ethics and Standards of Practice.
- ♦ To control and exercise authority in respect of matters relevant to or affecting the training requirements and appointment of such persons in Neurotherapy, with a view of achieving recognition of Neurotherapy as a beneficial therapy under law.
- ♦ To provide a forum for the continuity and development of knowledge and skills appropriate to the requirements of professional Neurotherapy practitioners.

- ♦ To keep a national registry of Neurotherapy practitioners which could be made available on request to the general public and other professional bodies.
- ♦ To make available information and data relating to the practice of Neurotherapy.

I understand that this training is used for a variety of conditions, which appear to be associated with irregular brain activity, including but not limited to ADHD, depression, anxiety, stroke and seizure disorders. Training is recommended on the basis of the results of the QEEG and empirical observation of improvement in clients with similar conditions.

I understand the Neurotherapy requires placement of surface electrodes on my/my child's scalp for the purpose of recording my /my child's EEG and the use of this signal to provide video displays and audio signals.

I understand that some individuals have reported that training may affect my/ my child's body's response to medications for my/ my child's condition and for unrelated conditions. I understand that I/ my child should not stop or alter any of my/ my child's medication without consulting my/ my child's physician / psychiatrist. I/ my child should continue ongoing therapies until otherwise advised by the physician. Should new symptoms develop, it is my/ my child's responsibility to inform my health care providers, including my Neurotherapist.

I understand that it is the client's own responsibility to monitor the subjective effects of training. Neurotherapy is based on the input of the client's report from day to day sessions, as well as from the initial evaluation and depends on the client's full participation, i.e. his / her feedback about the effects of the training. The research literature indicates that there are some individuals who are unaffected by training. Accordingly, the client is encouraged to evaluate progress after about 10 sessions to determine if further training is required. Discussion is invited at this point or any time during the training.

No representation is made that any individual client will improve from training. There is indication that some clients' improvement may fall off after cessation of training. These individuals would benefit from periodic follow-up or booster sessions. The training is non-invasive and is a harmless procedure as far as is know at present. No injuries are known or reported in the literature.

By signing this form, I _____ indicate my understanding of the principles that set forth here and waive any claim of damages due to training, including worsening of my/ my child's condition for which the training was undertaken, claimed side effects or the failure to improve with training.

By signing this form, I _____ hereby agree to the above mentioned terms and conditions and accept responsibility for the payment.

Date: _____ Signature: _____

Printed Name: _____

RELEASE OF INFORMAITON

I agree that _____ may consult with the client's primary care practitioner _____ or specialist _____ with regards to Neurotherapy training and obtained information.

I agree that _____ may consult with my child's teacher/school _____ with regards to Neurotherapy training and obtained information.

Date: _____ Signature: _____