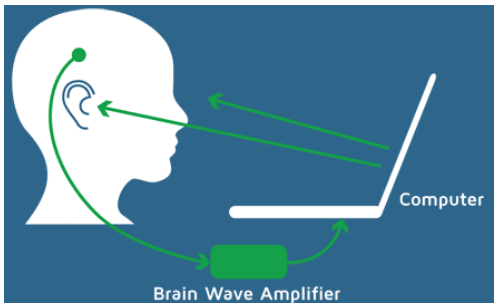
## WHAT IS NEUROFEEBACK?

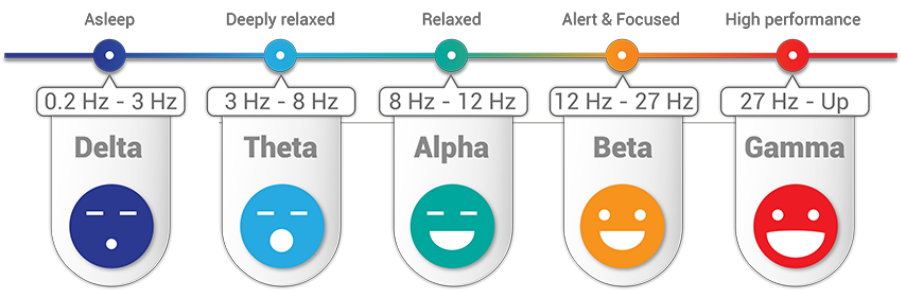
Neurofeedback, also referred to as EEG Biofeedback is employed to modify the electrical activity of the CNS (Central Nervous System) including: EEG, event related potentials, slow cortical potentials, and other electrical activity either of subcortical or cortical origin. Neurofeedback is a specialised application of biofeedback of brainwave data in an operant conditioning paradigm. It is a learning modality, drugless, painless with no side-effects. It teaches the brain to use the correct brain waves at the appropriate time.

## HOW DOES IT WORK?

EEG was first discovered in 1875 and the first record EEG from the scalp of a human subject was done in 1924 by Berger. Neurofeedback is a non-invasive process that utilises information about your brain waves to facilitate better mental performance, mental health, and overall well-being.




The electrodes are placed on the scalp using a medical grade EEG.The EEG is connected to a computer thereby allowing the technology to monitor the brainwave activity. Feedback on the screen signals to the client that the brainwaves are becoming more ordered (see figure above).
If you suffer from stress, have difficulty remembering things, are anxious or find it difficult to concentrate, Neurofeedback can help.




## WHO IS IT FOR?

Neurofeedback is ideal for individuals who want to improve their memory, enjoy increased focus and concentration, decrease anxiety, and improve mood and overall performance. The brain has a tremendous impact on behaviour, emotions, processing speed, attention, sleep, frustration, tolerance and more. Neurofeedback can help clients overcome these challenges by helping them balance their nervous system and brain.

## WHAT IS THE AIM?

The aim of Neurofeedback is to create normalised brain wave patterns. Neurofeedback's benefits are numerous and include:

- Stress relief
- Improved cognition
- Reduced behavioural problems
- Decreased pain
- Increased sleep quality
- Improved memory
- Recovery from anxiety/ trauma

Neurofeedback training is for specific brain-related conditions:

- ADD/ADHD
- Addiction
- Age-related cognitive decline
- Agressions
- Anxiety disorders
- Depression
- Fibromyalgia
- Trauma
- PTSD
- Epilepsy

**How many sessions are required and what is the duration of each session?**

The number of sessions vary from person to person. We have found that a minimum of 15, but on average 30 sessions are effective. Each session is 1 hour in duration. Regularity of sessions are daily or a minimum of 2-3 times a week depending on required training.

# 3 steps

- **Contact us**
- **Complete the relevant form**
- **Start the training**

**Are the results permanent?**

Yes, as long as the individual continues to practise what they learned through Neurofeedback training. Research has shown that the results of Neurofeedback training remains long after the sessions are completed.


**Dr. Charlene Heyns-Nell**

info@drcharlene.co.za

Suite E5A I Century Square I 7 Heron Crescent I Century City I SOUTH AFRICA

**Before the sessions**

Refrain from taking any refined sugars (including artificial sugars), caffeine, alcohol and recreational drugs. The nature of the effects of the above could interfere with the functioning of the brain waves and will give skewed readings for the assessment
From the day training starts, until three weeks after the last day, clients will also need to avoid any refined sugars (including artificial sugars), caffeine, alcohol and recreational drugs.

Use natural sugars like Agave, honey, fruit juice, stevia or xylitol.

**During training**

- Clients on prescribed medication must keep taking their medicine as prescribed
- Clients must reschedule their appointment if they are ill, for the sake of good data
- Clients to ensure that they drink lots of water and eat lots of protein rich foods during training and for three weeks afterwards

**What happens at an assessment?**

- The practitioner will first do a brain map which includes putting an electro cap on the clients head
- Once the brain map has been completed, the practitioner will place some electrodes on the client's head using some water-soluble conductive paste to attach them
- These electrodes are used to measure brain wave activity during a number of different states and scenarios
- The electrodes are connected to a computer, which records the activity of the brain waves
- The objective is to determine what imbalances are occurring and where they are occurring
- The practitioner will ask the client to do various exercises with their eyes closed, eyes partially open and eyes fully open
- These exercises are used to gather the data of how the brainwaves are functioning
- Between each exercise, the practitioner will move the electrodes to different places on the client's head
- Once the data is processed the practitioner will explain what the assessment has shown with regard to the functioning of the brain waves
- From this assessment, the practitioner will plan an individualised training plan

# IMPROVE THE QUALITY OF YOUR LIFE