

Neurofeedback Case Studies

8-year-old boy	3
6-year-old boy	6
Sam, 8 years old	10
43-year-old female	12
What Is Neurofeedback?	13
How to Explain Neurofeedback.....	14

Rhiann Marchant, Founder of Sensational Minds Ltd, Mersea Island

Neurodevelopmental Assessment & Post-Diagnostic Support

My thoughts and observations on Neurofeedback

My background is a fully qualified teacher, SENCO, Specialist educator for autism and ADHD with a master's degree in Autism. I completed my clinical training for ADOS-2/3DI and ACIA and have worked within MDT settings for clinical diagnostics for the past 7 years. I am the founder of Sensational Minds Ltd, a neurodevelopmental assessment service and post diagnostic support service for children, young people and adults. When I was first introduced to neurofeedback therapy, I was openly sceptical. My background is in education with strong alignment to clinical practice and my work has always focused on robust diagnostics and evidence informed post diagnostic support for neurodivergent children and young people. I was cautious about interventions that sit outside formal UK clinical guidelines.

I chose however to approach this with curiosity rather than dismissal. I spent time reviewing the available research and case studies and engaged in detailed discussions with Zoe to better understand both the theoretical basis and practical application of neurofeedback. I wanted to explore whether this approach could offer meaningful support for families alongside established strategies.

Through direct observation, I have since witnessed significant and sustained changes in two young people who engaged in twenty neurofeedback sessions. One child, in particular, I would like to reference, who previously presented with persistent echolalia, repeated questioning, attention regulation difficulties, nocturnal enuresis and a high level of adult dependence has shown marked progress. After ten sessions he was able to listen to others' responses, initiate greetings, independently engage in shared play with clear enjoyment and showed no sign of bedwetting after session 10 and has not done so again since completing the sessions. These changes were meaningful and clearly observable and sustained.

Equally, significant has been the impact on the family system. A parent who I know well, moved from a position of understandable hypervigilance, to feeling confident enough for her child to attend playdates and eat meals with peers. That shift in parental wellbeing and trust is profound. Whilst it is also important to consider that this child has also benefited from an EHCP and a highly supportive family network with good academic support and intervention, I believe neurofeedback has played a substantial role when used collaboratively with other supports.

I do not claim to fully understand every aspect of neurofeedback therapy. What I do know is that I have reviewed credible literature including studies relating to Tourette's trauma and PTSD and I have now witnessed meaningful change firsthand for children who have either diagnosed or undiagnosed neurodivergent needs. Observing a child begin to communicate in more purposeful connected ways and seeing a parent feel calm and supported within a group setting has been genuinely powerful.

It is my firm position that clinical understanding, neurodivergent informed practice and high-quality post diagnostic support remain essential. At the same time, I believe we have a responsibility to remain open to approaches that may enhance outcomes even where they are not yet formally embedded within UK guidance. There is extensive research emerging internationally particularly in the United States and this observational journey has significantly broadened my own perspective.

I view neurofeedback not as a replacement but as a potential complementary intervention and I respect the care integrity and reflective practice that Zoe brings to this work. Ultimately, if an approach supports a child to thrive and a family to feel more secure it deserves thoughtful consideration.

📞 P: 01206 586 027

✉ E: rhiann@sensationalminds.co.uk 🌐 W: www.sensationalminds.co.uk

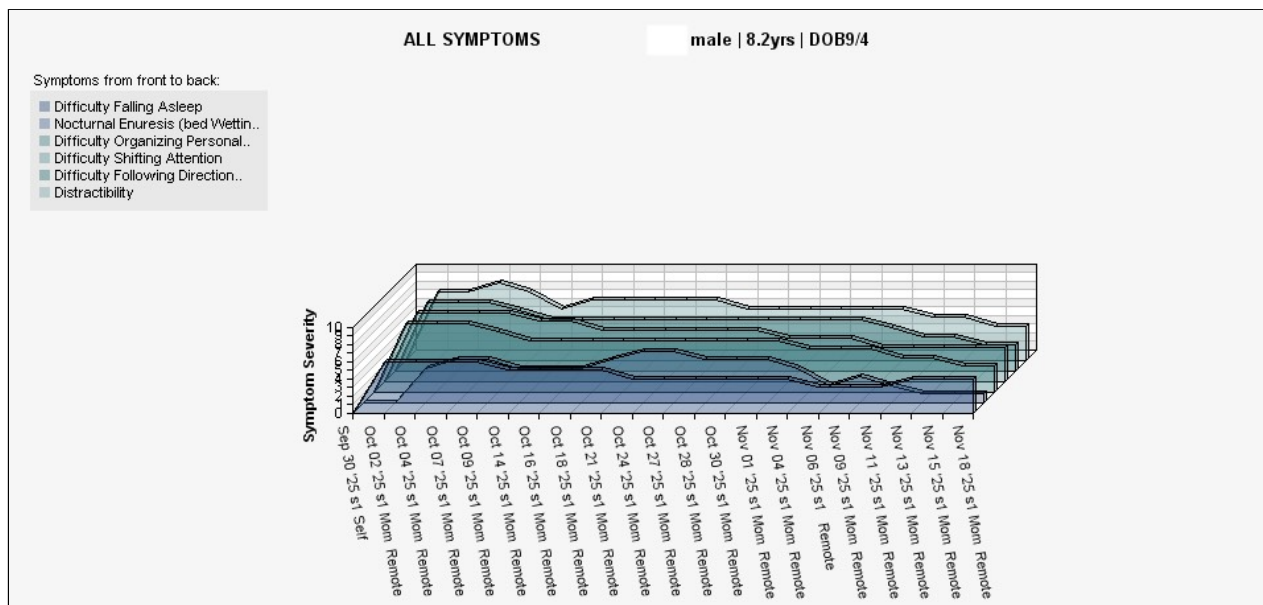
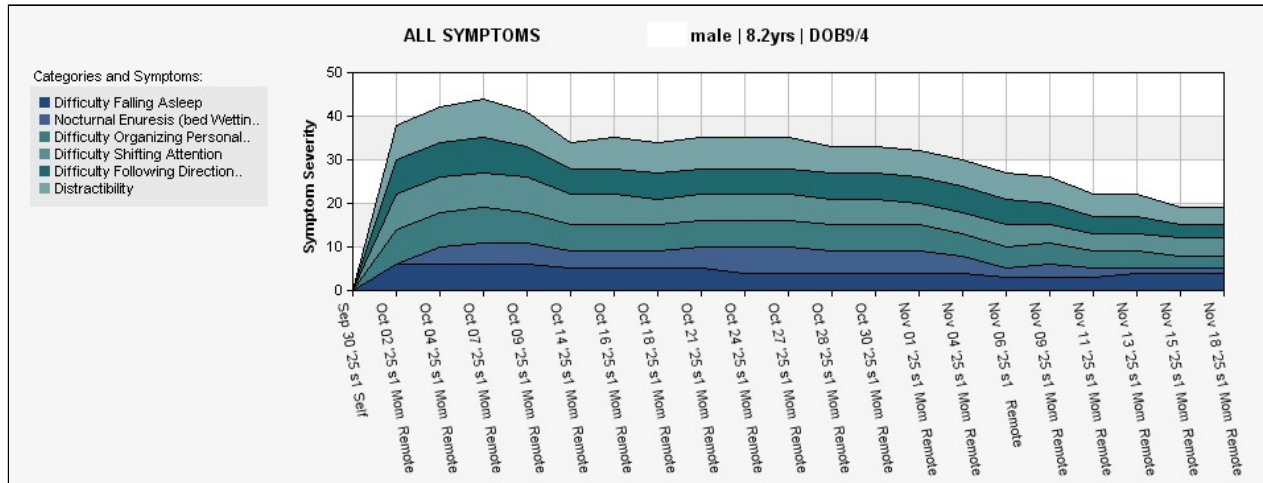


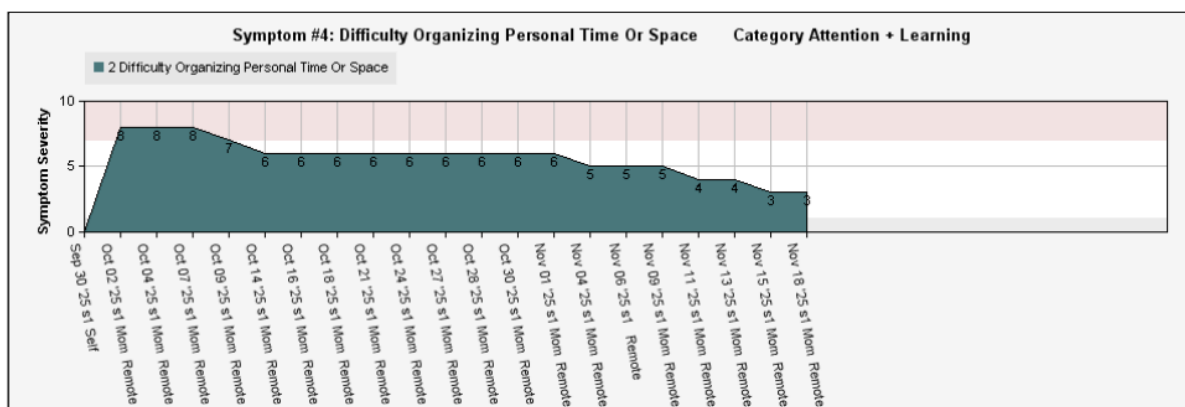
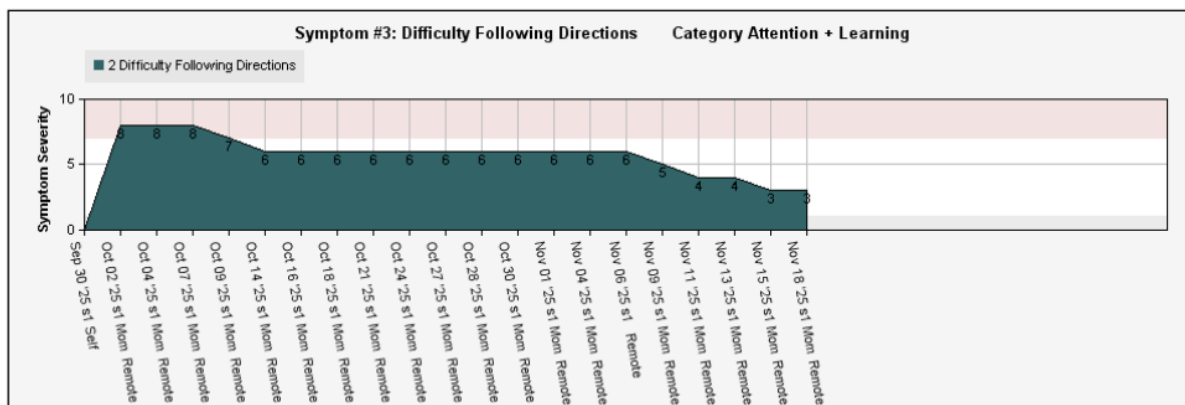
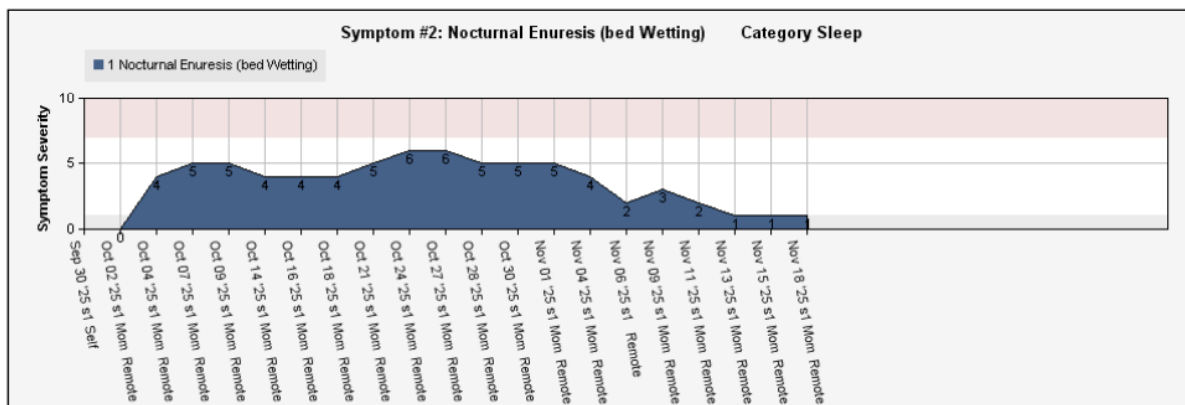
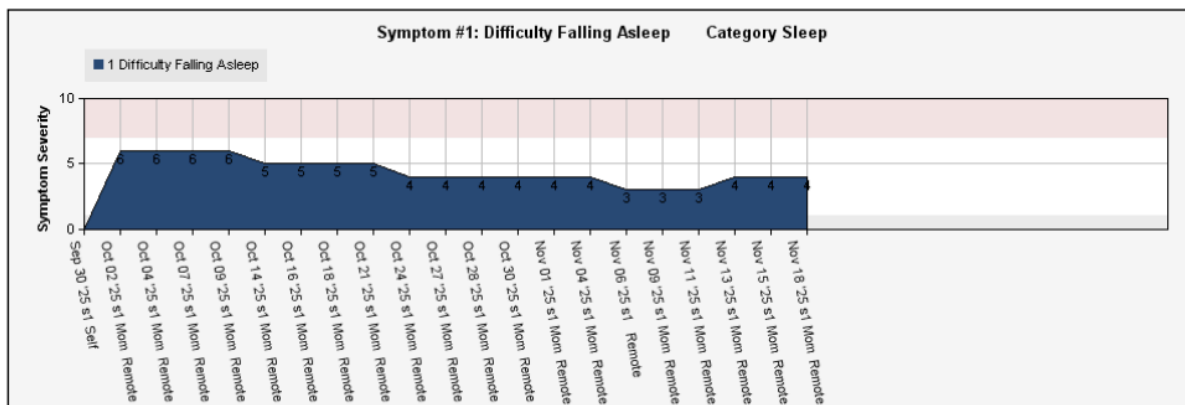
BrainTrainUK is a trading name of Applied Neuroscience Solutions Ltd.

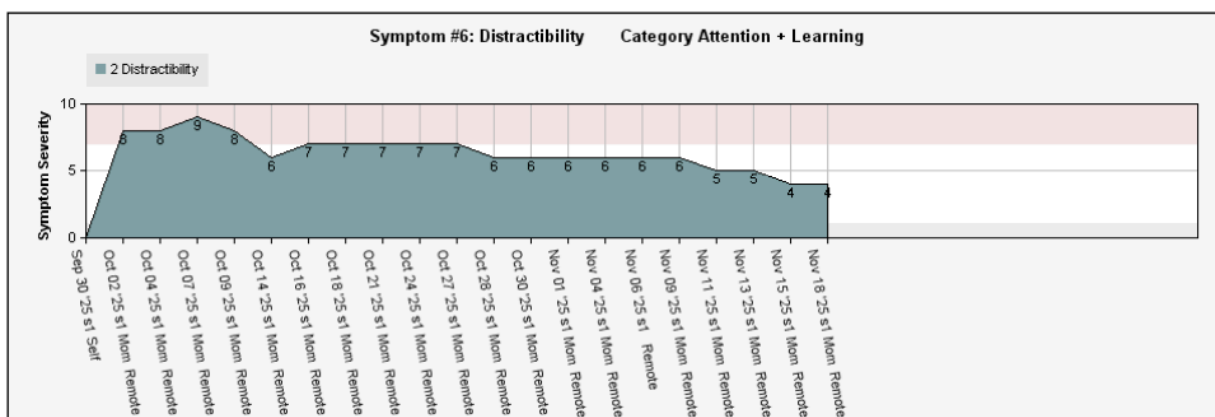
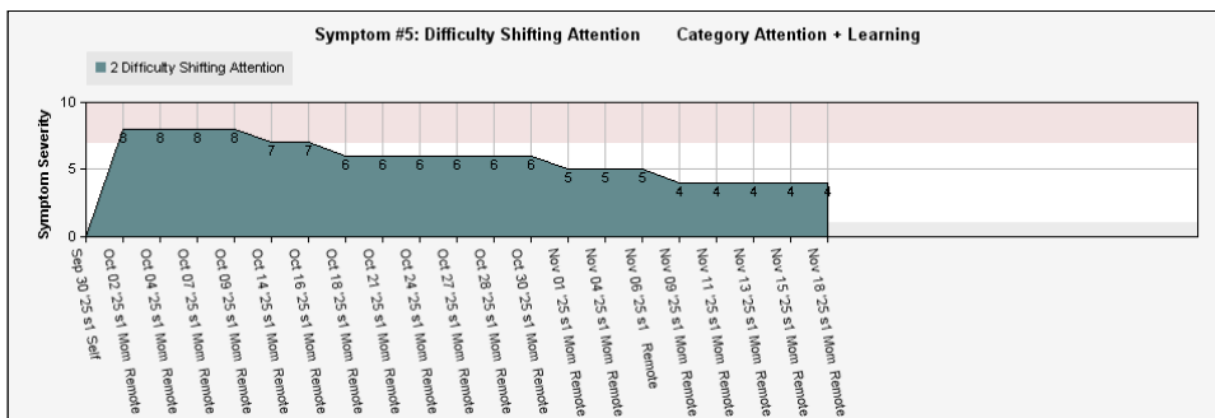
8-year-old boy

This 8-year-old boy presented with bedwetting and inattention, no formal diagnosis, and after 10 sessions he was dry at night and has improved in all areas the parents wished to track during this period. He has remained dry at night for over 4 months.

His parent-rated symptom assessment showed an overall reduction in severity of 55%:







“

Life Changing



Our son recently completed a series of neurofeedback sessions, and the changes we've seen in him have been remarkable. We first sought help because he was struggling with bedwetting, shifting his attention, managing his personal time and space, and coping with emotional ups and downs.

Since finishing the sessions, he has been consistently dry through the night, and we've noticed a real improvement in how easily he can redirect his attention when needed. He's become much more capable of organising himself and respecting his own space and routines. Most noticeably, he just seems calmer, more grounded, and able to function at a much better level day to day.

Zoe was so kind and caring throughout the process, her communication was excellent and we are eternally grateful for her support.

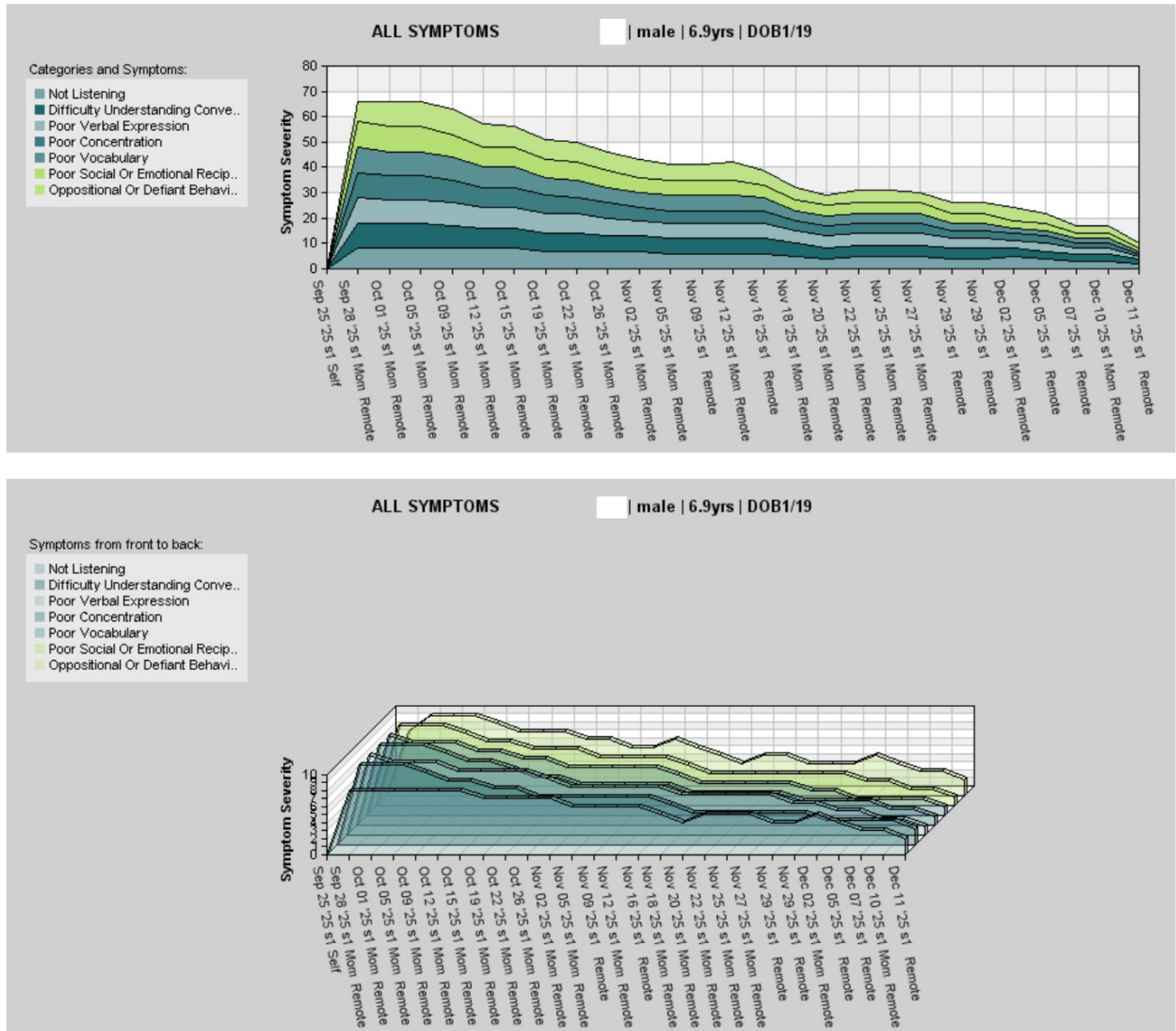
”

Watching him gain confidence and steadiness in these areas is priceless.

6-year-old boy

This 6-year-old boy below presented has no formal diagnosis but suspected AuDHD, and after 10 sessions stopped wetting the bed (although this is not what they asked us to track) and he has improved in all areas the parents requested to track during this period. He has 20 sessions in total and his improvements are sustained and even improved as we continued to track them after the sessions ended on the 5th of November 2025.

His parent-rated symptom assessment showed an overall reduction in severity of 85%:



“

Amazing, Our son has now had 20 sessions and is showing ... ★★★★★

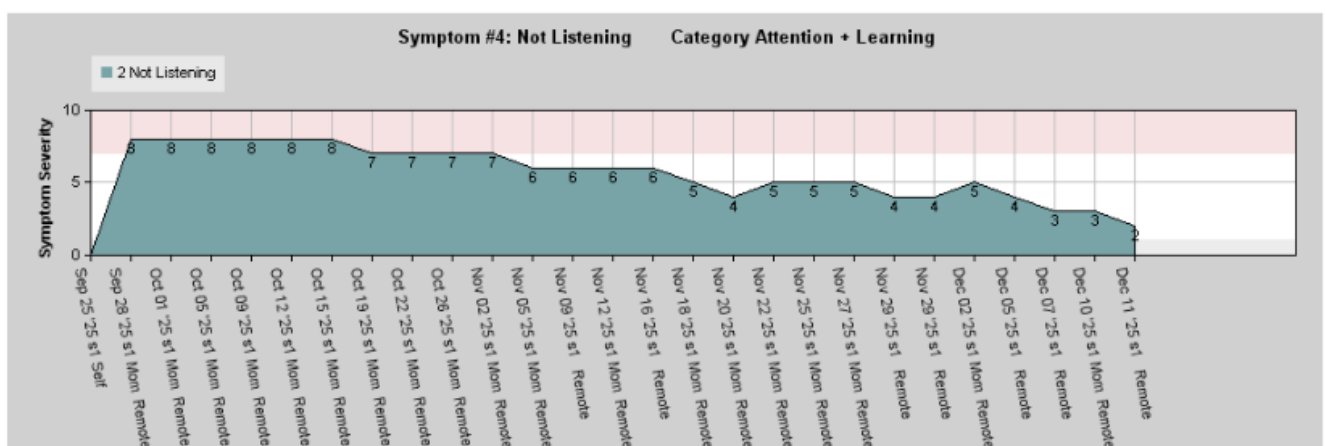
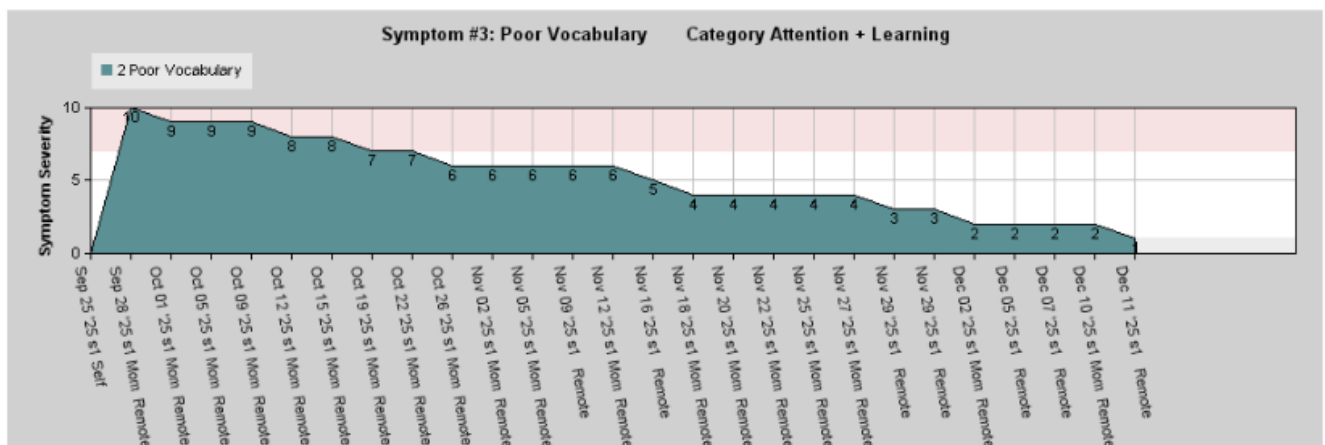
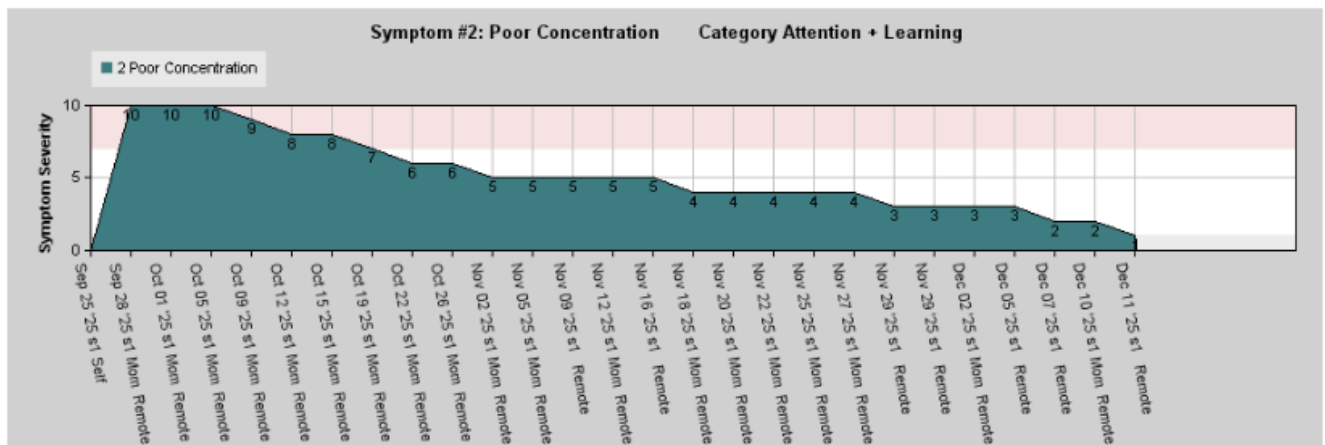
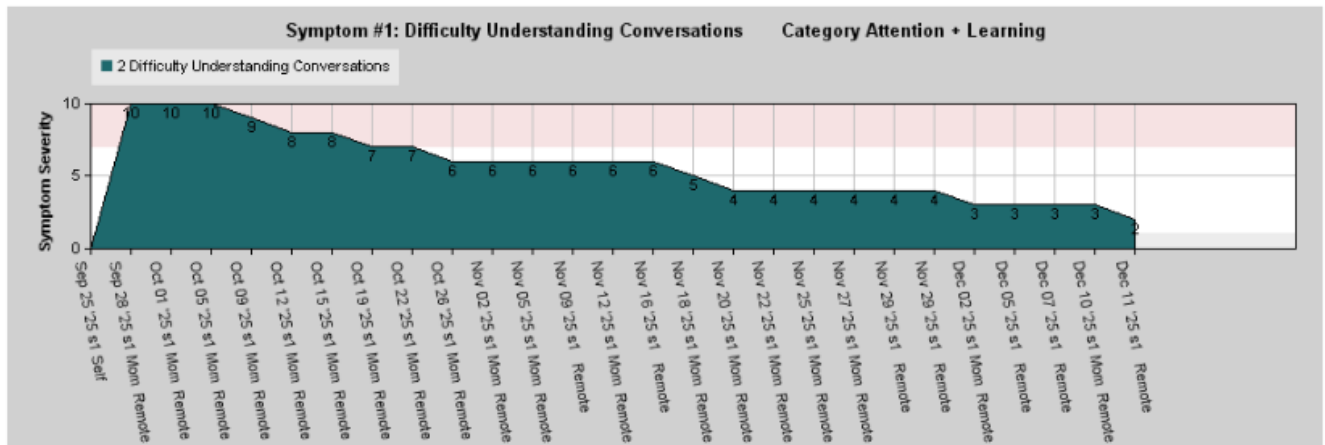
Our son has now had 20 sessions and is showing noticeable improvements in all of the key areas we had asked to focus on.

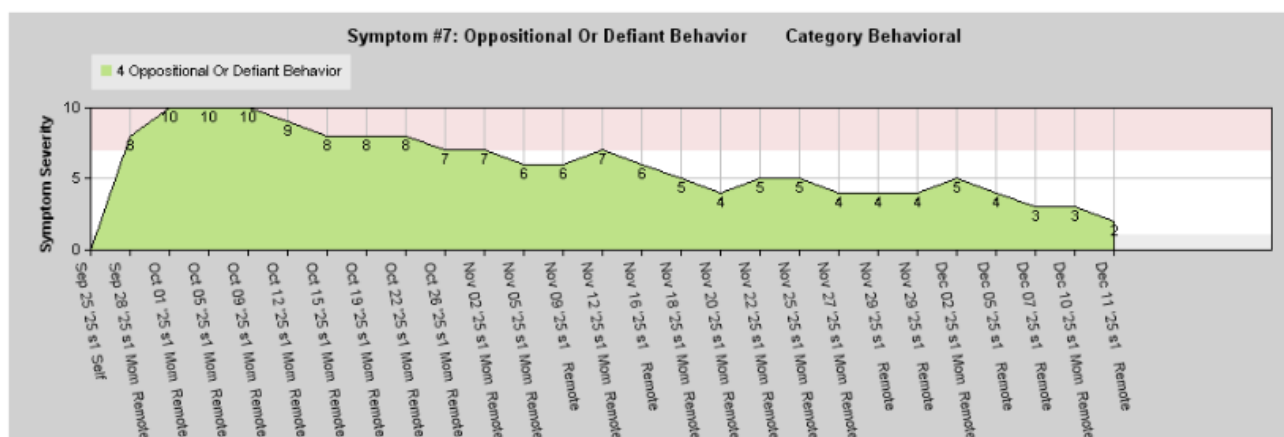
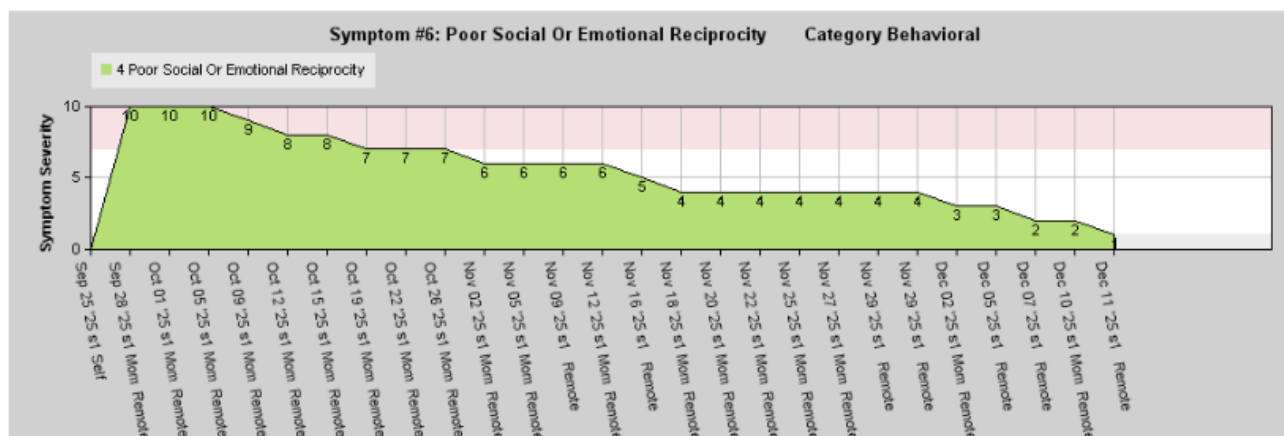
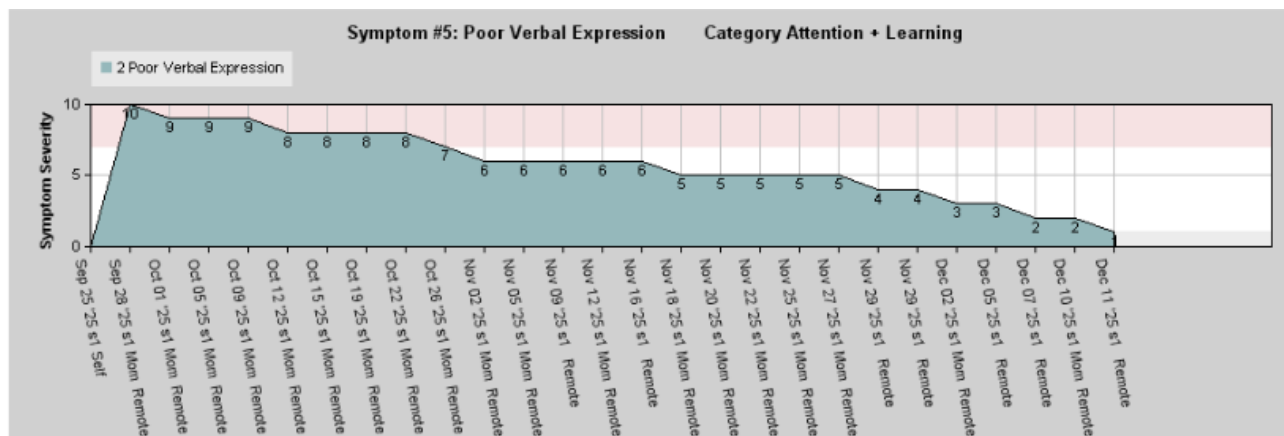
These improvements are recognised by us and our family but also by people who do not know us as well which really demonstrates how brilliant this therapy is.

Our son is now also dry through the night which I thought would be a struggle for us for years to come. I'm forever grateful that we have been on this journey with Zoe, she's a real gem of a person and guides you through everything with such patience and generosity of spirit.

”

From of my heart, thank you.

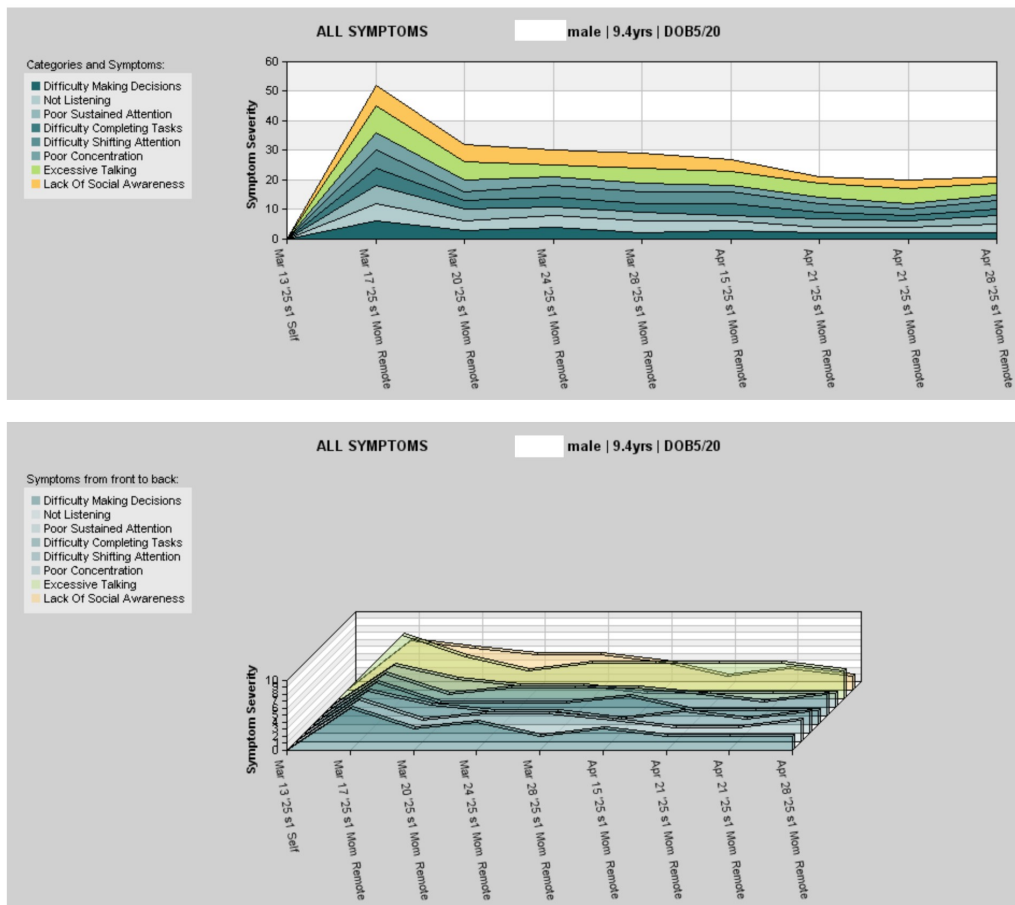




8 years old boy

He has an EHCP and is diagnosed with ADHD but has suspected Autism. He was several years behind at school and was still wetting the bed at 8 years old. He has now been dry at night since session 10 and not wet the bed since finishing the 20 sessions and these additional improvements have been sustained.

His parent-rated symptom assessment showed an overall reduction in severity of 60%:



“**How Neurofeedback helped Sam** ★★★★★

From Sam's first lesson I could see how challenging it was for him to sit still. He struggled to listen and found following instructions very difficult. All of this resulted in him not being able to stay engaged and impacted his learning greatly, being tutored, as well as I'm imagining, during class time too. Sam would always need to know before any learning started when he would be able to stop for a brain break - this was a term I wasn't familiar with until I started working with Sam.

He knew he was behind so many of his peers in class in reading, writing and arithmetic and this I believe had a big impact on Sam and how he saw himself as a learner.

While Sam was making some progress in reading and number work here, his working memory was poor, and he was finding non-contextual information almost impossible to remember. When professionally tested, last year, this struggle was hugely highlighted- it was insanely low.

In February this year (2025), Sam started having Neurofeedback sessions twice a week (20 sessions during Feb to April 2025). I started to find a difference in his working memory from the start.

Fast forward 9+ months, Sam doesn't even identify as the same child. I believe the work he has done has enabled him to retain information that he was struggling with, prior to his neurofeedback sessions. In September Sam participated in my Master Multiplication at Lightning Speed 3-Step, Song-Based Program.

He was able to learn and retain all his times tables in 6 weeks. Being able to sing the times tables, I believe played an important part in Sam being able to retain them in such a short period of time. Achieving learning times tables at this speed, is almost unheard of, even for an average- learning child.

Every week, Sam goes from strength to strength and the child in class who was behind is keeping up and his speed in learning new concepts just keeps getting better and better. Sam is confident, believes in himself as a learner and is a child who continues to love to learn. That has been my goal for Sam from the start.

”

Trudy Keating (Tutor, 35+ years experience)



5E, Class

Well done Sam!

To: Zoe O'Sullivan, Sam O'Sullivan (dad)

Yesterday at 11:57

Good morning,

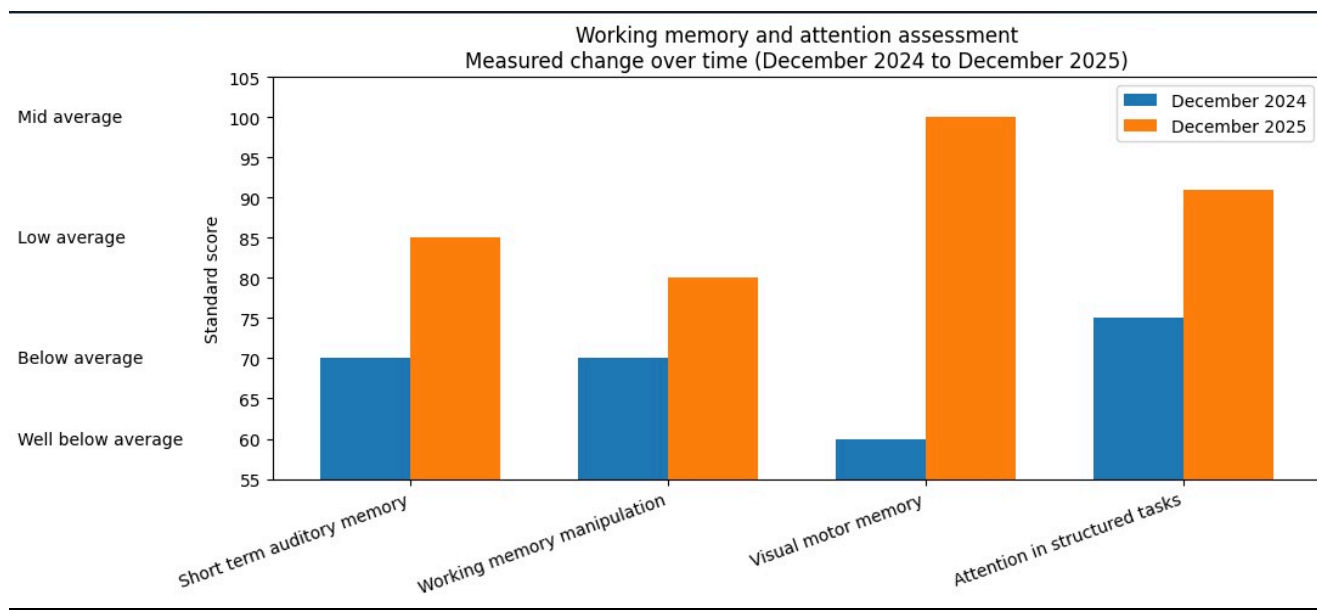
Miss Morgan and I are feeling ever so proud of Sam and we wanted to share it with you. Today, he completed his common exception spellings (year 4) and scored 10 out of 12! A super effort, he has practised these continuously throughout the term and we have retrieved prior learning and we are delighted with his achievement. He is feeling really proud too and so he should. In maths, he completed his 6,7,9 times table. No timings given but he answered 46 out of 60 correct. Honestly, it was incredible to see how happy he was.

Many thanks,
Mr Elmer

This email and any attachment(s) to it are confidential. Unless you are the intended recipient, you may not use, copy or disclose either the message or any information contained in the message. If you are not the intended recipient, you should delete this email and notify the sender immediately.

Any views or opinions expressed in this email are those of the sender only, unless otherwise stated. All copyright in any material in this email is reserved.

Improvements of Working Memory after 20 Neurofeedback Sessions

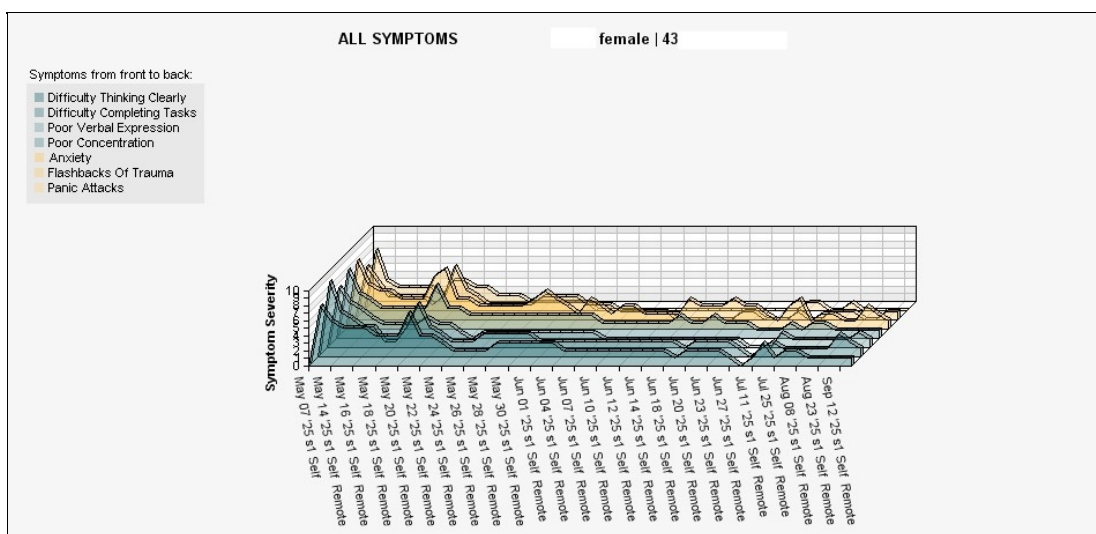
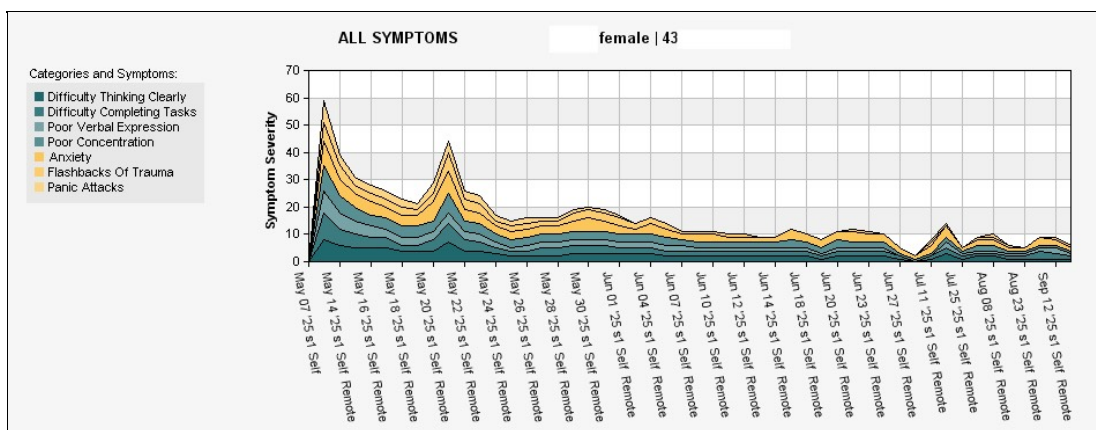


43-year-old female

This female client, in her 40s, presented with PTSD, anxiety and stress related symptoms, as the result of systematic stalking and domestic abuse.

She was prescribed medication for depression however she did not want to take these and subsequently has not needed to take them. She had been signed off work prior to her 20 sessions and has now returned to full time work. The spike early on in the symptom-tracking data was due to her overhearing a very serious domestic abuse incident in a neighbouring property. However, she reported being able to regulate back to a calm state almost straight after session, held the day after the incident. Here outcomes continue to be sustained.

Her self-reported symptom assessment showed an overall reduction in severity of 89%:



“

Wow. Got me out of mental burnout. ★★★★★

I have had 20 + sessions of neurofeedback with Zoe. Following an accumulation of stress & PTSD. My body & mind kind of shutdown, and froze.

Neurofeedback has stabilised and balanced in the first instance, within a few sessions I felt much calmer. I have noticed significant differences in reactions and responses since neurofeedback sessions.

I feel much more grounded and clearer in mind.

”

I am extremely grateful for the sessions & would highly recommend.



BrainTrainUK is a trading name of Applied Neuroscience Solutions Ltd.

What Is Neurofeedback?

ILF Neurofeedback (Infra-Low Frequency Neurofeedback) is a type of brain training that uses real-time feedback to help the brain regulate itself better, especially at very slow brainwave frequencies. It's part of the broader field of Neurofeedback, which is a branch of biofeedback that works specifically with brain activity.

ILF Neurofeedback is a gentle brain training method that helps your nervous system find better balance.

- We place small sensors on your head to pick up your brain's natural activity - nothing goes into your brain, we're just "listening."
- A computer then turns those signals into feedback, usually through a video or sound that changes in real time.
- As your brain watches itself this way, it learns how to calm, stabilise, and regulate itself better - kind of like holding up a mirror so it can see what it's doing and make small adjustments on its own.

What makes this method special is that it works with the *slowest brain rhythms*, which are like the foundation for sleep, mood, focus, and stress control. By strengthening this foundation, people often notice they feel calmer, sleep better, handle stress more easily, and think more clearly.

You don't need to "do" anything during a session - your brain does the learning automatically, just by receiving the feedback.

The method uses two key scientific principals:

1. The brain's natural plasticity, known as neuroplasticity;
2. The brain's ability to interpret and adapt in response to information received.

Like a muscle, if you practise over 20 sessions your brain forms new neuropathways, and the change is sustained.

In addition to improving brain regulation, Neurofeedback can enable you to:

1. Process traumatic memories. Memories as a result of trauma, whether conscious or unconscious, can get 'stuck' in the emotional brain and influence how we perceive and respond to the world. As trauma expert Dr Bessel van der Kalk says, "The body keeps the score". We may be triggered by reminders of the trauma. Neurofeedback can allow you to process these memories so they no longer have the same emotional triggering effect.
2. Exercise parts of the brain you would like to perform better. This might be inhibition control for children with ADHD, motor function for stroke recovery, concentration or focus.

How it works in practice:

1. **EEG measurement**
 - Sensors are placed on the scalp to pick up electrical signals from the brain (EEG).
 - The signals are analysed to detect very slow shifts in brain activity.
2. **Feedback loop**
 - The person watches or listens to continuous feedback (often a video or sound).
 - The brain receives information through the feedback on it's own regulation, and it's own activity. The information is encoded into size of the video picture, the sound, or a vibrating cuddly toy that sits next to you, and fed back into the brain and nervous system through its natural sensory inputs.

3. Learning process

- The brain is not *consciously* controlling the feedback. Instead, through exposure to its own activity patterns, the brain and nervous system gradually learns to adjust and stabilise itself.
- This can improve regulation of emotions, sleep, stress responses, attention, and even physical symptoms tied to nervous system dysregulation (like migraines or chronic pain).

Why infra-low frequencies matter

- These rhythms are thought to act as the “*foundation*” frequencies of brain function, coordinating large-scale brain networks.
- Training at these levels improves overall *self-regulation capacity*, which can then reduce many symptoms of dysregulation associated with different problems (e.g., anxiety, ADHD, PTSD, developmental trauma, seizures).



How to Explain Neurofeedback

Some analogies that can help explain ILF neurofeedback:

ILF is like a mirror for the brain at its slowest, most fundamental rhythms. By watching itself in this mirror, the brain can practice adjusting and balancing its own activity — leading to better regulation of mood, arousal, and body functions.

Think of your brain like a musical instrument. Over time, stress, trauma, or illness can knock it out of tune.

ILF neurofeedback works like a gentle tuner — it gives your brain feedback so it can hear itself more clearly and adjust back into balance. You don't have to force it; just like an instrument naturally settles into the right note when tuned, your brain finds its own healthier rhythm.

How you can explain it to kids:

Imagine your brain is like a superhero.

Sometimes it gets really busy fighting too many battles — like worries, big feelings, or trouble falling asleep. When that happens, the superhero can feel tired or mixed up.

*ILF neurofeedback is like a **secret training gym** for your Brain Superhero.*

We put little “listening stickers” on your head (no pokes, no shocks!) so the computer can watch what your Superhero Brain is doing. Then, while you watch a video or listen to sounds, your superhero gets secret messages about how strong or calm it is.

Little by little, your Superhero learns new moves: how to relax, focus, and feel steady again.

*And the best part? **You don’t have to do anything — your Superhero Brain does the training all by itself!***

It’s like a video game your brain plays to help it feel calmer and stronger.

We put little stickers on your head that let us watch your brain, and the computer shows your brain how to relax.

It helps your brain learn to settle down, kind of like when you practice deep breathing or swinging until you find your smooth rhythm.

For more information visit www.braintrainuk.com or email zoe@braintrainuk.com