

mente™

Getting started with Mente

Ebook

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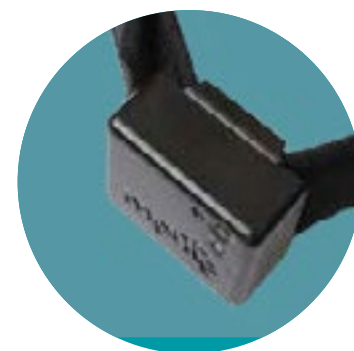


Mente™ is a light and portable neurofeedback device, designed for home-use, that helps to self-regulate attention and mood, feeding the brain with tailor-made binaural beats.

The binaural beats are selected according to the user's pre dominant frequency. The protocol delivered by the Mente device targets unbalanced brain patterns, which can be observed among neurodevelopmental disorders and learning difficulties.

These patterns can lead to inattention, impulsivity and hyperactivity, obsessing, anxiety, sleep and memory problems.

MENTE IS EASILY AND SAFELY USED WITH LITTLE TO NO SUPERVISION AT HOME, AND CLINICIANS CAN REMOTELY MONITOR THEIR PATIENTS' PROGRESS.



Rebalance excessive brainwaves

Reductions in disruptive Delta, Theta and high Beta brain waves were revealed by EEG.

Improve behavioural function.

Questionnaires revealed improvements in executive function as well as significant reductions in autistic behaviour.

Improve balance and posture.

Posturography analysis revealed significant improvements to sensorimotor behaviour & overall posture.

Enhance social engagement abilities.

Significant improvements in social skills and communication were reported by caregivers.

Mente has already demonstrated its efficacy as a home-based tool in reducing stress-induced symptoms and behavioural issues in the ASD population, which showed a specific dysfunctional neural profile (Carrick et al., 2018). Mente is a Grade IIa medical device and is regulated under the European Union Council and holds CE certification. Neurotech's subsidiary, AAT Medical is ISO 13485 certified.

This really has been a spectacular success. In just 12 weeks, Hannah is a lot calmer, able to think more clearly and take a breath before a situation overwhelms hers. Meltdowns are rare, and where she often used to react aggressively to her sister, now she rarely does.

Charlotte Dwight
mother of Hannah, 12.



Tune in with Mente How it works

Mente's Foundational Basis

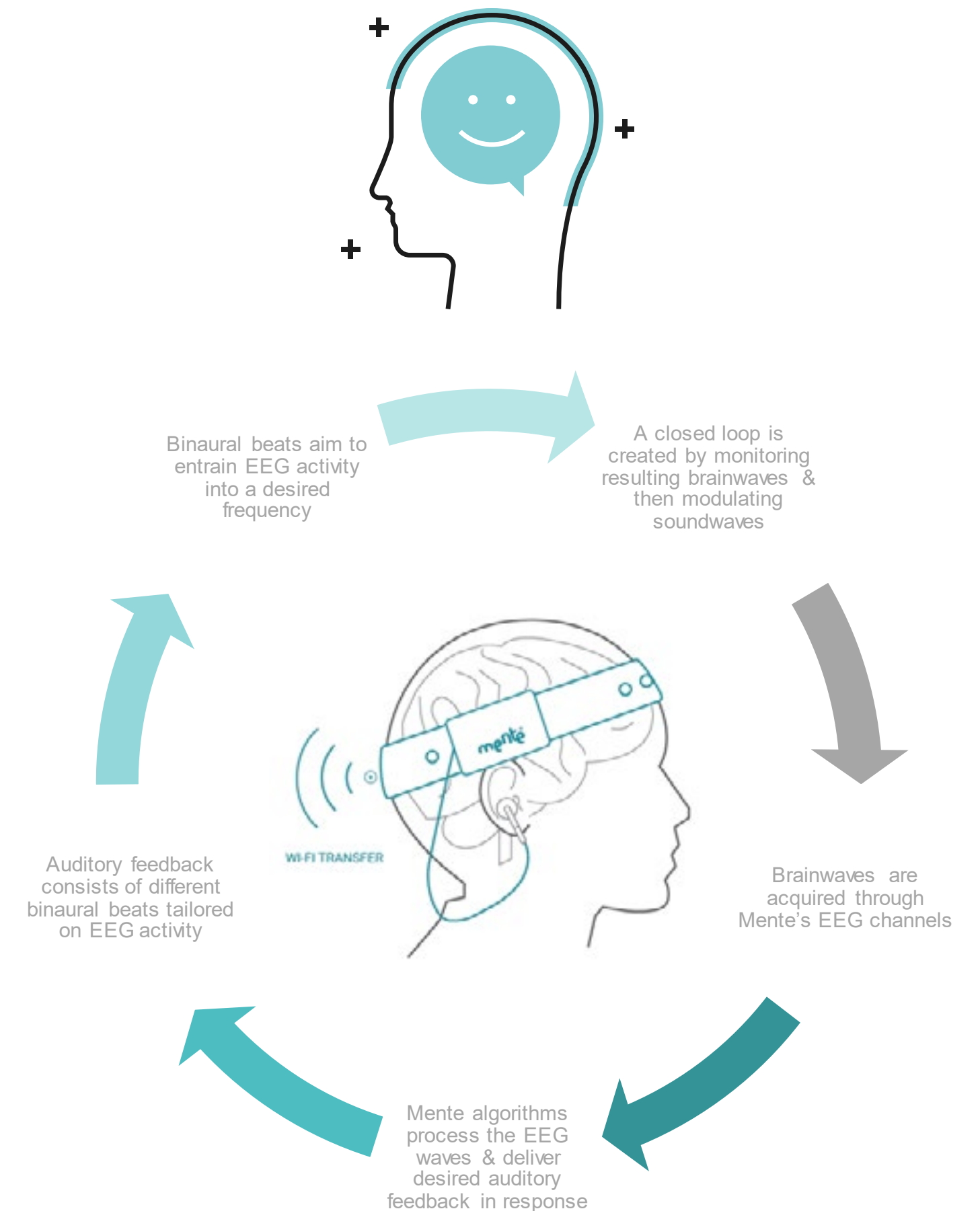
Brainwave entrainment is a known principle since as far back as the early 1930's and its clinical benefits have been articulated in a number of studies. It has been proven to be effective in promoting relaxation, improving attention, and reducing anxiety, depression and chronic pain. Recognising that each person is unique, Mente takes the individual's unique EEG as a continuous input to drive the brainwave entrainment.

Tailored therapy using closed loop system

As a result, the EEG driven therapy customises the stimulation from moment to moment, on the basis of the patient's own changing EEG. Contingent stimulation via a closed-loop has been found to produce greater lasting changes on the EEG compared to non-contingent stimulation.

Unlike standard NFB training tools, Mente's closed-loop feedback facilitates adjustment of ongoing background brain activity without the user's perceived attention or engagement. The process is effortless and intrinsic within the brain yet has still shown to be effective.

This makes it particularly suitable for use in children or people who may have difficulty with paying attention for extended periods, to follow instructions or to stay focused on brain training activities, such as video games.



How mente helps relax the minds of kids with autism.

Children with autism spectrum disorder are no strangers to stress, and finding ways to help them relax can be challenging. That's where Mente can help because it uses neurofeedback technology to promote relaxation, which makes it easier to engage with one's environment in a positive way. More than that, the device is affordable, easy to use, and provides at-home therapy that can improve communication, lengthen attention spans, and reduce agitation.

Why Mente Is Effective

Our thoughts, emotions and behaviours are all related to how the neurons in our brains synchronise their electrical signals to produce brainwaves. Brain waves vary both in amplitude and frequency and are associated with different brain functions and mental states. Children with autism spectrum disorder, attention deficit and learning disorders often exhibit high levels of delta and theta brainwaves (slow waves), with or without an excess of high beta (fast waves). This pattern is mostly associated with inattention, anxiety, impulsivity and impaired social skills. The Mente device uses neurofeedback to support the brain in adjusting its activity, as reducing this unbalanced pattern has been proven to be potentially useful in treating a set of core symptoms within neurodevelopmental disorders, **reducing episodes of agitation and outburst, improving behaviour, learning and attention span.**

It Encourages Communication Skills.

Delta and theta are usually related to daydreaming, dozing, and deep sleeping and therefore the excessive amount of these brainwaves can lead to fogginess, inattention and learning issues. These slow waves are also more present when a person is generally shut off from the outside world and deeply engaged in its own inner world. Mente can be effective at improving engagement in children with autism as reducing excessive theta and delta power in ASD lead to improvement in **reciprocal social interactions and communication skills.** After four to eight weeks of daily sessions with the device, parents notice that their children participate more in conversations or make more eye contact. On a related note, parents also notice their children have longer attention spans, are able to focus and learn better, and are more engaged in educational settings.

It Reduces Stress and Agitation.

Beta Waves are associated with mental arousal and engagement. Your brain is functioning on this level when you're awake, conscious, and actively involved in a stimulating activity. Because beta waves are generated when you're engaged in cognitive tasks, they're associated with alertness, focus, and socializing. **A brain that produces too many beta, and especially high-beta waves, may experience anxiety, stress and obsessing.** Mente aims to reduce excessive high beta thus decreasing stress, promoting relaxation and enhancing cognitive functions. As a result, parents will notice improved behaviour in their children and fewer episodes of agitation.



A Brief Primer on How the Device Works.

The Mente device is a portable and convenient electroencephalography (EEG) headset that reads brainwaves in real time. When a person puts the headset on, the device analyzes and records the person's brainwaves, and then generates neurofeedback in the form of sound to stimulate the brain, encouraging it to tune into a more desired pattern. Each session is 40 minutes long and can be done quickly and easily in the comfort of your home to promote relaxation in children with autism. The device is also linked to an app that records sessions, allowing parents to measure progress and results as the weeks pass.

The major benefit of the Mente device is that it reduces stress for children with autism, and this makes it easier to engage with others, communicate, and engage with the world. The device is also very easy to use. The quick 40-minute home sessions are easy to fit into your family routine, and the recording capabilities of the device make it easy for you and your child to monitor progress together.



Everyday Tips for Raising Children with Autism

Parents of children with autism spectrum disorder face a number of challenges, and being prepared can help you address them more easily. For instance, doing research on autism spectrum disorder can give you a better idea of what to expect, but also how to connect with your child on a more meaningful level. And with that in mind, here are some other great everyday tips for parents who are raising a child with autism.



1

Connect on Your Child's Level.

Human communication goes far beyond the words people say to one another, and there are many ways you can connect with your child, even if that doesn't involve speech or touch. Connecting with your child is important for developing your relationship, and part of that includes:

- Communicating through body language
- Learning your child's verbal or nonverbal cues regarding needs and wants
- Learning your child's interests and engaging in them together
- Using your tone of voice and facial cues to communicate your feelings

2

Learn Everything You Can About Your Child.

It may be challenging to learn about what your child does and doesn't like, but doing so will make life much more enjoyable for you both. For instance, if your child is triggered by loud noises, knowing this can help you avoid situations that might cause stress and agitation. Similarly, it's important to learn what calms, scares, excites, engages, and stresses your child so that you can advocate on his or her behalf.

3 Focus on the Cause Rather than the Behavior

Once you understand your child's likes and dislikes, it will be easier to understand his or her behavior, and from there you can focus on the cause. For instance, if your child starts acting out at the mall, it will help to remember that your child finds loud noises stressful, and you can remove the negative stimulus to help alleviate the behavior. Similarly, it can help to create a safe space at home where your child can go when feeling stressed out or overwhelmed.

4 Provide Routine and Consistency

Consistency is important to your child for a number of reasons, including that it will help to minimize stress and encourage the application of knowledge in different areas. One of the easiest ways to create consistency is through a daily routine, which can include having regular wake up, bed, and meal times, having therapy sessions at the same time and on the same days each week and having your own personal schedules that you develop together. Similarly, you can also create consistency by continuing at home with lessons and skills that your child learns at school or in therapy.

5 Use Positive Reinforcement

Positive reinforcement is an effective way to help children learn, and you can use praise to reward your child for things like learning new skills, choosing appropriate actions, or behaving in a way that you want to see repeated.

6 Come up with Manageable Goals and Tasks

Just as routines and consistency are important, so too are having goals and ambitions to work towards. The goals that are manageable will depend on your child, but having goals is an opportunity to provide more structure, bond with your child, and put positive reinforcement into practice.

Different therapies are also very effective tools for helping children with autism, and that includes medical devices like Mente's home device, which uses neurofeedback technology to promote relaxation in children with autism. The daily sessions provide an easy, everyday solution to common challenges and can promote relaxation, improve communication skills, increase attention spans and improve behavior.



“She’s almost like a different child.”

Charlotte invested in Mente for her 11-year-old daughter, Hannah, after years of disruptive tantrums and anxiety. They had already tried many different kinds of therapy, from Cognitive Behavioural Therapy to counselling to speech and language therapy.

Unfortunately, Hannah was struggling to engage with them and so they weren’t having much of an effect. Wanting to try something different that might complement and enhance the forms of therapy already being provided, Charlotte discovered Mente.

Discussing her hopes for the product, Charlotte said she “just wanted [Hannah] to be able to take a pause and not be so constantly reactive. She was prone to meltdowns; slammed doors and screaming, it could go on for a while.”





Putting Mente to the test

Hannah has been using Mente once a day for three months now. From the comfort of her bedroom she puts the headband on, starts the 40-minute therapy, and either draws, does homework or watches the TV with the sound off.

The results are clear: “This really has been a spectacular success,” Charlotte says with delight. In just 12 weeks, Hannah is a lot calmer, able to think more clearly and take a breath before a situation overwhelms hers. Meltdowns are rare, and where she often used to react aggressively to her sister, now she rarely does.

Fascinatingly, a case in point comes from the flight that the pair took just yesterday, on their way to speak with Mente. A family sat next to them on the plane constantly moved around, meaning Hannah had to repeatedly get out of her seat to accommodate them. Smiling down at her child, she reflected: “You stayed very calm, very well controlled. It was lovely, you were relaxed. Previously you just wouldn’t have tolerated it.”

Coming hand in hand with her new sense of calm, Charlotte says she’s noticed that Hannah seems happier and her confidence has grown: “She’s more independent and wanting to do things for herself now.” Recently, she was even able to get up on stage and take part in the school’s play without a hitch – something that wouldn’t have been imaginable as little as three months ago.

Perfectly complementing therapy.

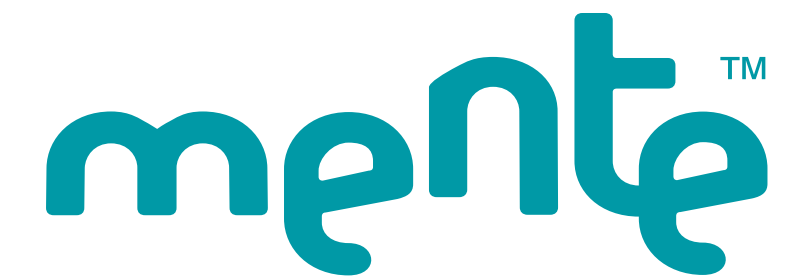
A benefit that the family didn’t expect, but have been thrilled to experience, is that using Mente works hand in hand with alternative therapies, and complements them perfectly. Previously, therapy was unsuccessful because Hannah was simply too distressed to engage properly.

Now, therapy is starting to really benefit Hannah. This is because using Mente allows her to reach a place of calm, so she can actually listen to the therapists and take information on board. Hannah’s therapist has recently reported that “she’s very well regulated and relaxed, almost like a different child.”

Life in the household.

Family life is much easier now. It’s not just Hannah who has felt a new lease of life, as Charlotte tells us that since Hannah has been using Mente her ability to engage and relax has “improved our lives immeasurably as a family. It’s been money well spent.”

If you’d like to find out about Mente, visit www.mentetech.com.



Getting started with Mente™

Getting into a new habit can be a challenge, especially for a child. It requires patience and time. Tackling the first 10 days can make all the difference between failure and success.

Here are a few of our hints and tips to help you on your way.

1

Understand your product

It's important that you understand how the product works, so you can get the most out of your sessions. Take the time to familiarise yourself with the product, as well as reading the Quick Guide and users' manual.



2

Set up and registration

Setting up your Mente headband has never been easier. Head over to www.mentetech.com to watch our 'How to videos' to guide you each step of the way.



3

Downloading the app

The Mente app has been designed to complement your Mente headset, and should be downloaded ahead of your first session. Simply head over to Google Play to download the Android app or the Apple Store to download the iOS app.



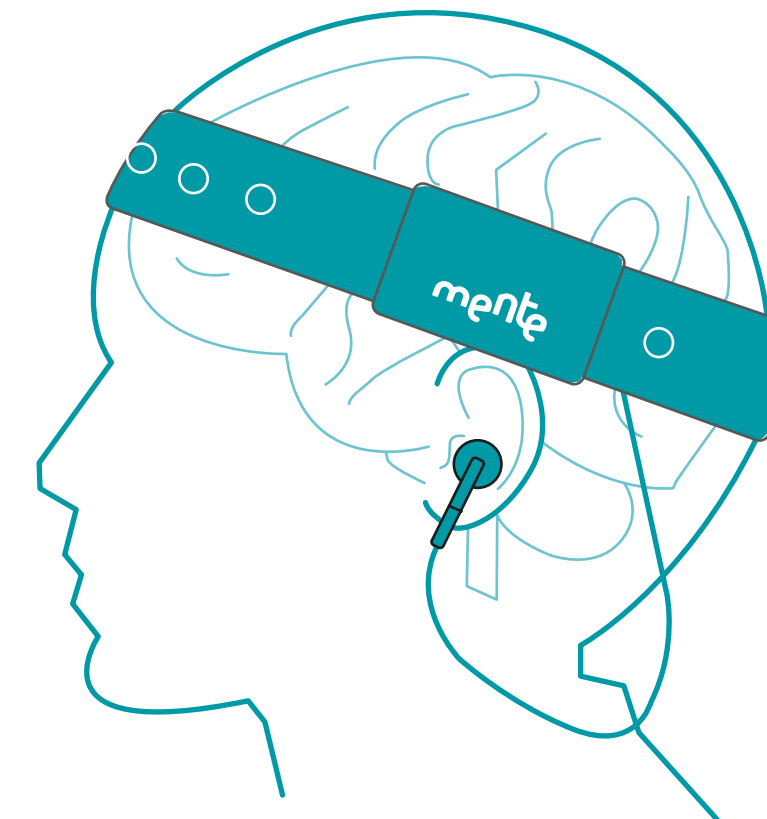
4 Introducing the headband to your child.

Your child may take some time to get used to wearing their headband. We suggest starting with short introductory periods to give them time to adjust.

Once they are comfortable with wearing the headband, try playing the sounds for short, 10-minute sessions. As your child becomes more and more used to the headband and sounds, increase the length of these sessions. It may take a few minutes for the sensors to achieve a strong signal. There is no need to tighten the headband too much.

5 Getting into the habit.

To experience the full benefits of Mente, we recommend that your child completes a session every day, preferably in the morning. There are plenty of ways to get into the habit – perhaps create a weekly timetable for sessions, or start the session immediately after breakfast. Leave plenty of time for each session, so you are not under any pressures, and can focus on the benefits of the session.



Don't be discouraged.

It may take a few sessions for your child to become comfortable with wearing their headband. But remember, every day is different and not all children adapt to wearing the headband in the same way.

If you are struggling to get your child to get used to their headband, it might be time to get creative. There are plenty of things you can do – some parents have tried turning the morning session into a game, while others pretend to wear a headband of their own. Sticking coloured items, such as flowers, can also help to make the headband more interesting.



Need any more help?

If you have any more questions about Mente, or how it works, get in touch with your clinician or schedule an appointment with Mente Clinic to speak to a Mente specialist.