

Bellabee Explained in Simple Terms

Why does Bellabee work?

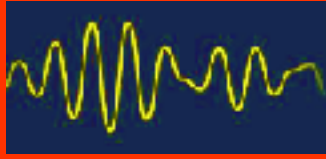

Bellabee works because it is based on a proven technology called pulse electromagnetic stimulation (PEMF). This has been used to treat depression and other brain abnormalities for years in clinics and hospitals. PEMF technology has already been FDA approved in other devices thus it is a safe technology to use.

What does Bellabee do?

Bellabee works in the same manner as music, both are frequency based. Music is picked up by the ears of a person and the brain then reacts to the specific frequencies inside the music. If the music is soft it relaxes the brain, which causes the person to relax.

If the music is very upbeat, the brain reacts in a very energised manner causing a person to feel energised and alive. Upbeat music creates a vibe where people want to dance and jump, that is why it is used in clubs and gyms, people react to the beat of the rhythm.

You might find yourself asking what are brain frequencies and what do they do???

	Delta 0.5 - 4 Hz These are the slowest waves in the brain. They are associated with sleep. If you do not have enough Delta you might not be able to reach deep sleep. Low Delta is also associated with depression. Too much Delta is also sometimes noted in depression and is also seen in people with brain injuries.
	Theta 4 - 8 Hz These are seen when you are drowsy and meditating. In children and adults too much Theta is seen in ADHD. It is also sometimes associated with anxiety, trauma and PTSD.
	Alpha 8 - 12 Hz Alpha is associated with a relaxed, normal wakeful rest. Too much Alpha in the frontal areas can cause concentration and other problems. Too little alpha can lead to anxiety and other problems.
	Beta and Hi-Beta 12 - 30 Hz Beta is associated with processing and concentration. Too much Hi-Beta leads to a brain that is too busy which can lead to sleeping problems and inefficient working. If the brain is running too fast, it tires too quickly causing concentration problems and decreased work speed.
	Gamma 35 - 140 Hz Plays a role in integrating information and in conjunction with Theta has an effect on long term memory. It also has an impact on reflexes and cognitive processing. It is very important for activity in the networks of the brain.

How does Bellabee support different brain abnormalities?

Each Bellabee app has been tested and created to help the brain react to the right frequencies in order to perform better according to the various known brain abnormalities.

What happens in the brain?

The brain reacts (“registers”) the frequencies Bellabee is providing in a natural manner. These frequency beats are not detected by the ears, they are directly picked up by the brain. The brain then adopts these better performance frequencies, which enable the person to perform better.

Bellabee comparisons

Coffee is most people’s drink to get a boost for the day or to help people wakeup. Bellabee can also energise and help you focus better all without chemicals.

Need to concentrate on work? Bellabee can help with that too, by using the app specifically developed for concentration and focus.

Different brain abnormalities and how they relate to brain issues:

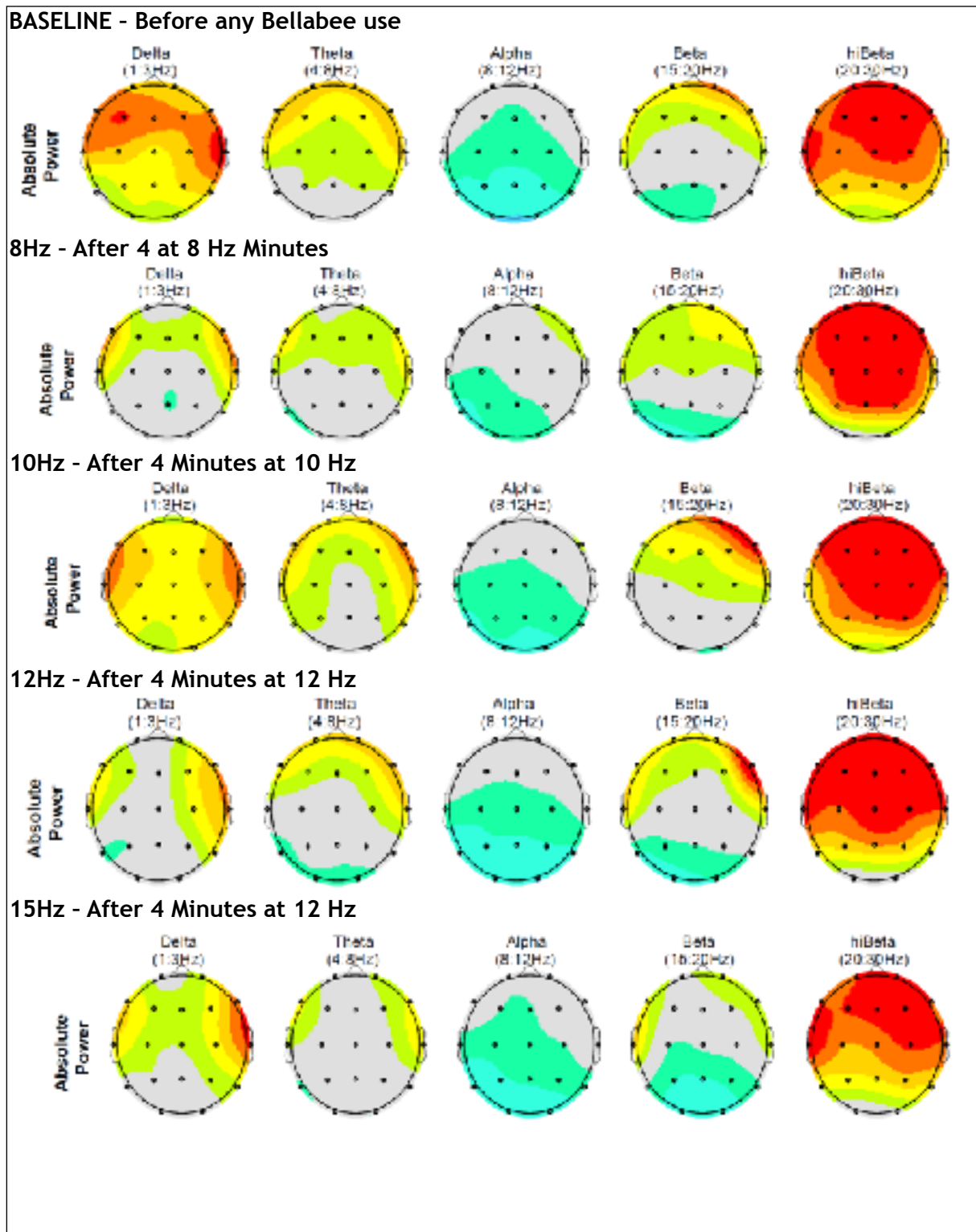
A D H D A t t e n t i o n D e f i c i t H y p e r A c t i v i t y D i s o r d e r	Your brain will in most cases have too much high Beta and too little Alpha, Bellabee has a specific program to help you by stabilising your Beta and supporting your Alpha frequency to perform at a better level. If Alpha is not performing optimally it can lead to a loss of energy, concentration and focus and this leads to problems with learning.
Depression	In most cases your brain either has too little Delta activity or too much Alpha or Beta activity in the frontal area. It is also usually much higher on the one side than the other, for example much more Alpha on the left side than the right side of the brain. This can cause the brain to react differently and think differently about things (events, concepts) which can impact motivation and self-esteem.
PTSD - Post T r a u m a t i c S t r e s s D i s o r d e r	Trauma can really throw things out of balance in the brain. It is mostly associated with a lot of Beta and Hi-Beta activity, a lot of Theta activity and in many cases almost no Alpha activity. The brain is thus either in a state of “fight or flight”. In other words someone will either feel like withdrawing/be “switched off” struggling to focus or they can be in a constant heightened state where they are hyperactive, get angered easily and really struggle to control their emotions.
Anxiety	People with high anxiety usually have a lot of Hi-Beta activity. Especially over the front middle part of the brain which plays a role in the “fight or flight” response as is seen in PTSD. They also commonly do not have enough of the calm brain waves that are supposed to be able to keep us calm and relaxed - Alpha and Theta.

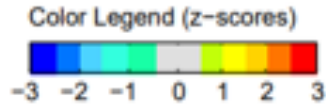
<p>Insomnia (Sleep disorder)</p>	<p>Most people who have Insomnia do not have enough Delta activity which is needed for deep sleep. In combination with this they often have too much Hi-Beta activity which keeps the brain very active and awake. Often they do not have enough Alpha and Theta activity. All these slower waves are needed to calm a person and help the brain switch off to get ready for sleep. Bellabee helps with a program that helps create these slower frequencies. This in turn decreases the Hi-Beta and the brain can start switching off.</p>
<p>Stress</p>	<p>Stress has become a normal part of daily life for most people but it impacts our ability to work efficiently. In high stress the brain will have too much Hi-Beta and not enough Alpha and Lo-Beta. Lo-Beta is needed to be calm but very focused. Hi-Beta is like being on a speed train - you can easily get confused and overwhelmed plus it really tires out the brain so it cannot be maintained for a long time. Calming the brain to work at a lower speed helps you focus better plus you can maintain it for much longer times. Most people find they finish work much quicker when they are calmer and more focused. Bellabees' concentration protocol helps the brain to make more Alpha, Lo-Beta and Beta activity which in turn reduces the Hi-Beta. This helps you concentrate better and for longer.</p>
<p>Autism</p>	<p>An autistic person would typically have too much Theta and too little Alpha, this affects a variety of functions in the brain which causes abnormal development within such individuals. Learning is a challenge but in some cases a specific area in the brain would be over active or developed such as a mathematical skill or a very active memory which would be more advanced than normal. The brain compensate for other areas which are not functioning optimally. Social behaviour is usually not within normal boundaries.</p>
<p>Alzheimer's / Dementia Memory Disorders</p>	<p>This brain abnormality causes so many issues, personality changes and in some cases aggression due to people feeling insecure and the brain's survival instinct kicks in. Anxiety can also be seen within these people as well as depression. Delta and Theta will be higher and Alpha and Beta would be below normal in most cases.</p>
<p>Parkinson's</p>	<p>People with this problem have trouble focusing and staying still, abnormal uncontrolled muscle movement is observed within such patients. Theta and Alpha brain waves are affected in such individuals.</p>
<p>Tinnitus</p>	<p>The ringing in the ears can cause confusion, and also lead to people feeling hopeless because hearing affects their normal daily life. Observed in these individuals are: lower Alpha and increased Delta, Theta and Gamma brain waves.</p>

Below see an example of the effect of Bellabee on the brain in an individual with ADHD and Depression/ Anxiety:

The pictures indicate how much of frequency is present compared to a normative database to determine how much deviant activity is present in the brain (Quantitative electroencephalogram data).

ADHD:

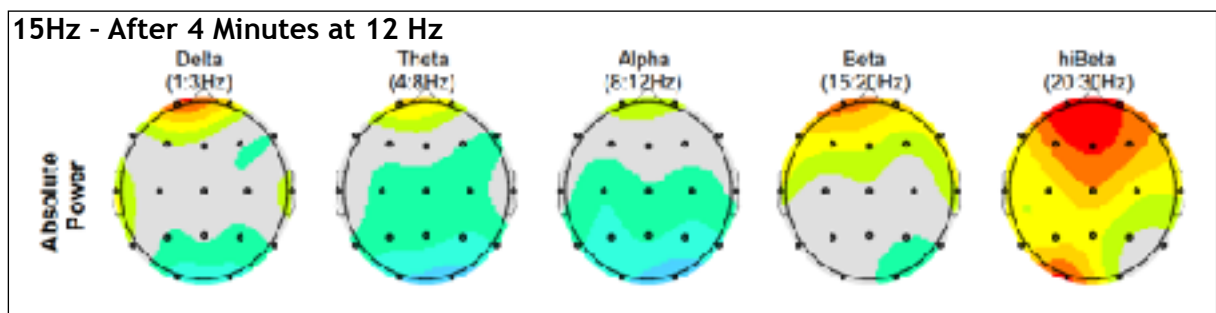
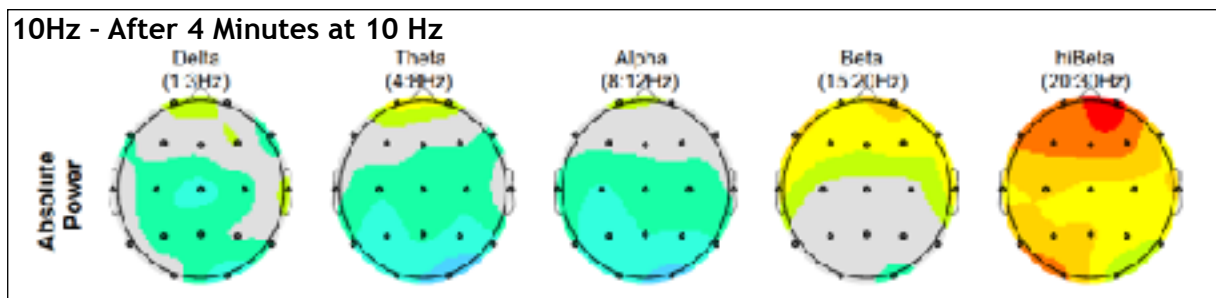
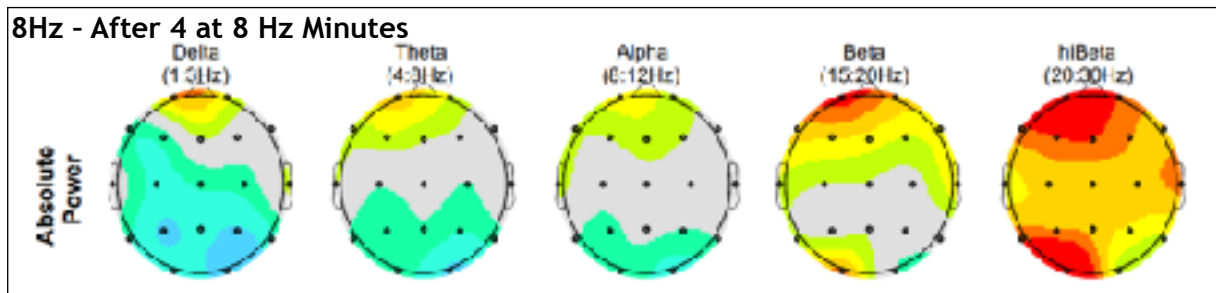
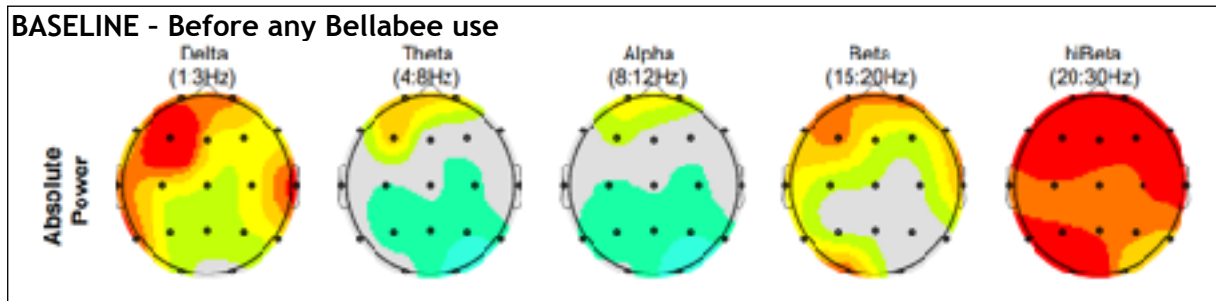


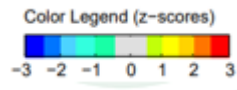


Legend - **Red** indicates very high activity, **Blue** indicates very low activity and **Green / Grey** areas are within more normal boundaries.

A decrease in Delta shows that the brain is waking up. Also, the decrease in slow Theta activity will improve concentration and focus.

Depression and Anxiety:

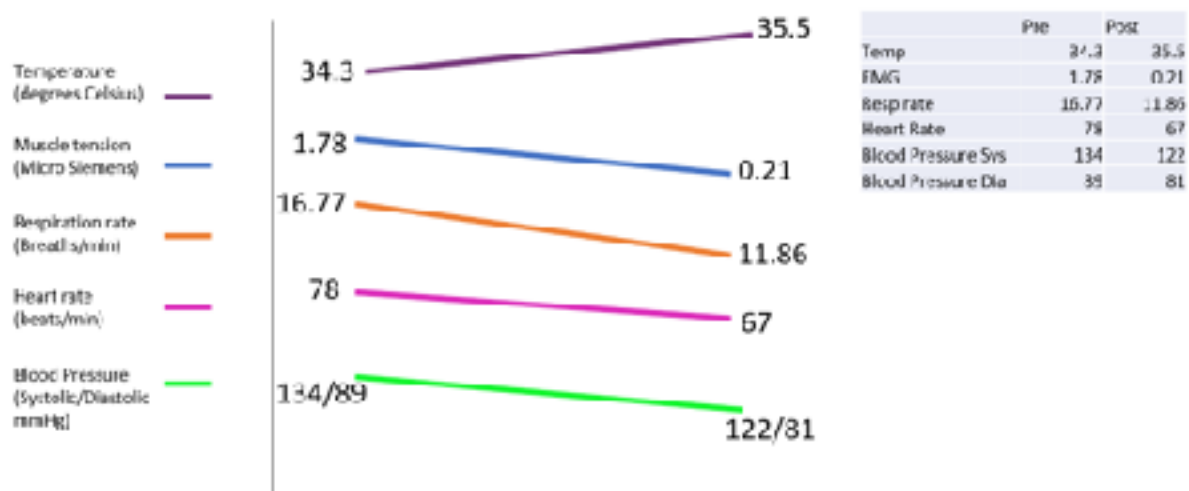




A decrease in Delta and frontal Theta and Alpha makes the individual feel more awake and energised. There is also a significant decrease in Hi-Beta activity, which will make the individual feel much calmer and relaxed.

After only 12 minutes of Bellabee use the individual reported feeling focused, full of energy and calm the whole day.

It is also important to note that not only do clients/individuals using Bellabee experience better cognitive performance but also feel physiological differences. By measuring this while the client was using Bellabee the following was noted:



This indicates that the individual was moving from a sympathetic (stressed) state into a parasympathetic (relaxed) state. Current research indicates an increase in body temperature, relaxation of the trapezius (shoulder) muscle, a decrease in the rate of respiration, a decrease in heart rate and a decrease in blood pressure.

Pre-set Apps in Bellabee and how they can be applied

Below is a guideline for symptoms you might experience and which Bellabee setting to try first. If one of the pre-programmed settings do not work, a custom setting can be made available by a Neurofeedback Professional. Email karlien.balt@bellabee.us or vernher.friedrich@bellabee.us.



Bellabee Application Settings

	Symptoms	ADD	ADHD	Depression	Anxiety	Insomnia	Stress	Autism	Tinnitus	Anger	High BP
Bellabee Protocol											
Improve Sleep Anti-Anxiety Meditate Anti-Stress Concentrate		✓	✓	✓		✓					
				✓	✓	✓	✓	✓	✓	✓	✓
					✓	✓	✓				✓
			✓				✓	✓		✓	
	✓	✓	✓	✓	✓			✓	✓		



Bellabee Health Application Settings

	Symptoms	ADD	ADHD	Trauma/PTSD	Anxiety	Anger Control	Parkinsons	Autism	Tinnitus	Alzheimer's
Bellabee Protocol										
Alz - me Park - me Aut - me PTSD ADHD										✓
							✓			
								✓		
				✓	✓	✓				
	✓	✓	✓							