



## **Introduction To Whole Brain Awakening**

**By Niraj Naik**

### **The Awakened Mind**

As Max Cade wrote in his seminal book, *The Awakened Mind*, the awakening of awareness through deep meditation that integrates the levels of the mind “is, perhaps, like gradually awakening from sleep and becoming more and more vividly aware of everyday reality.”

The meditator simply opens to the creativity and intuitive intelligence flowing in the deeper subconscious and unconscious mind, thus becoming aware of what was not known or understood before.

Anna Wise wrote in her book, *The High-Performance Mind*, that awakened people are high achievers who are often at the top of their professions. These excited, enthusiastic, and successful people enjoy an “ah-ha” experience of life filled with a steady stream of creative insights and peak moments of happiness and bliss.

No matter what their spiritual orientation, if any, awakened people know how to quiet the mind, go within, and master their brainwaves for creativity, insight, healing, and the actualization of a joyful, fulfilling life.

Awakened people are compassionate, empathetic and helpful, warm, kind, peaceful, and balanced. They are perceptive, insightful, and do not criticize, judge or blame others.

Nor does the awakened person attempt to control the thoughts or actions of other people, but rather is naturally devoted to love and service arising from a deep, heartfelt devotion to humanity and universal consciousness.

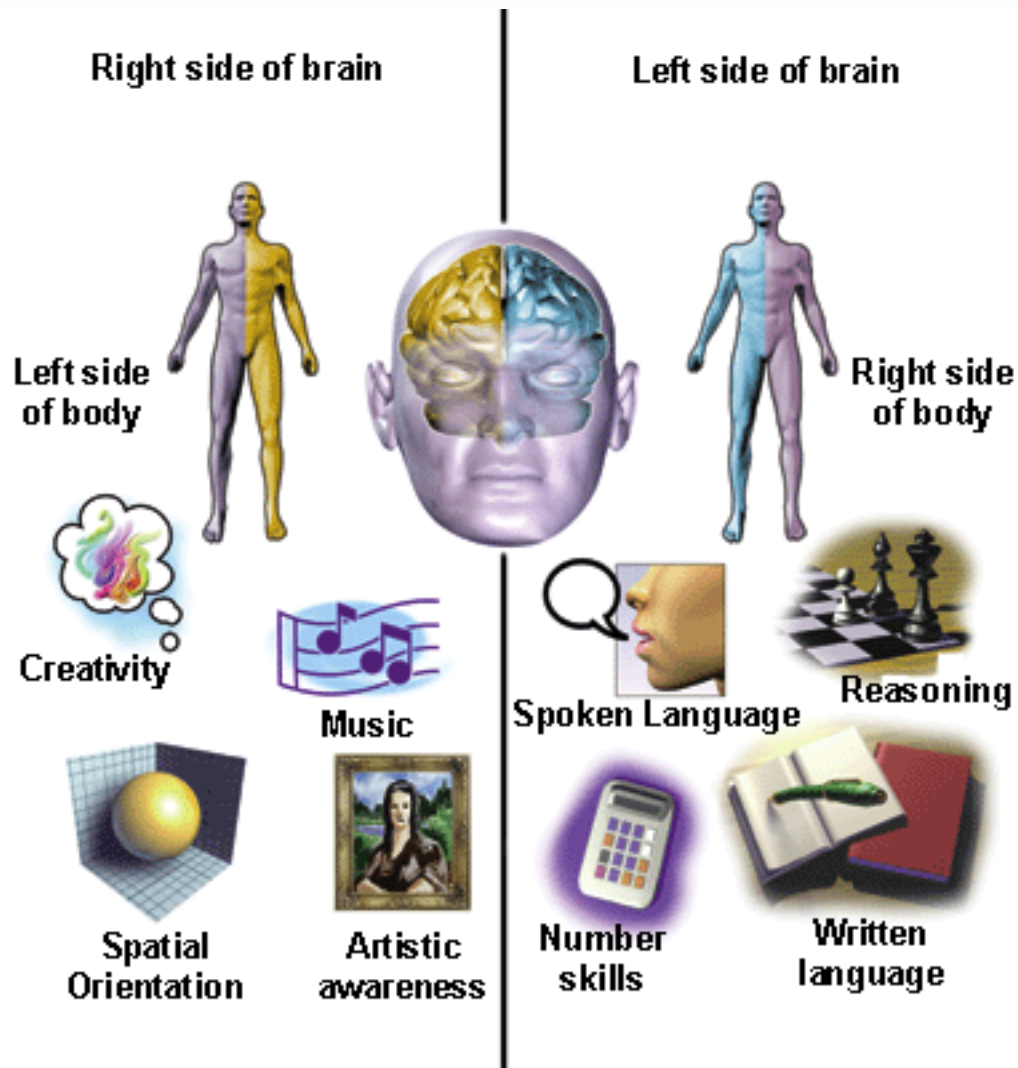
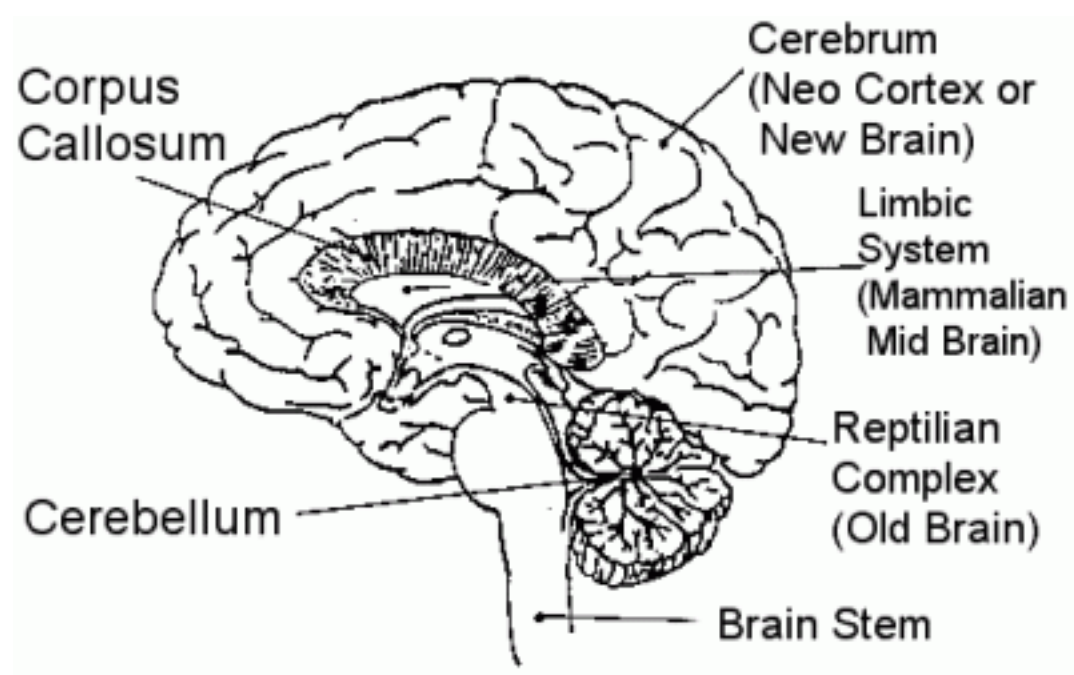
## **The Human Brain**

What makes the human brain special compared to all other animals? The human brain is actually the product of many hundreds of thousands of years of evolution leading to the development of a brain with 3 distinct layers. The outer layer of the human brain that differentiates us from other animals is the neo-cortex.

The middle layer is known as the limbic system, and the inner most layer contains the brain stem. In ancient mysticism, the color associated with these middle layers of the brain, is the color Indigo.

Research shows that these senses produce 11 million bits of information per second, which are all processed in the limbic system, but only 40 bits per second are passed on to the neo-cortex for conscious processing (thinking, planning, etc).

This means 99.9% of all information from our five senses is only subconsciously processed!



## **Neo-cortex/Cerebral Cortex**

This part of the brain is where the higher order functions that separate humans from the rest of the animal's takes place. 90% of the human brain is contained within the cerebral cortex.

The cerebral cortex is divided into right and left hemispheres and each hemisphere is further divided into larger structures called lobes. The lobes are associated with language and conceptual thinking, sensory perception, visual-spatial task, body orientation, attention and initiation of muscle activity.

Both hemispheres are similar in that they receive and analyze sensory information but there are some key differences in function.

The left hemisphere is more analytical and is the main center for verbal language and mathematical processes. The right hemisphere function in a more abstract way, and is the center for non-verbal thought and visual special perceptions.

However a brain that functions optimally requires precise interaction between both left and right hemispheres, and this is made possible by a bridge of nerve fibers called the Corpous Callosum, which connects the two hemispheres and is located as part of the interbrain.

The neo-cortex is the youngest in terms of evolutionary age emerging relatively recently in the development of the human species and is what makes us different from the rest of the animal kingdom. It is mainly responsible for logical deduction, reasoning, analysis, memorization and creativity. Its development has allowed humans to be able to develop languages, create ideologies and religions, write laws and establish civilizations.

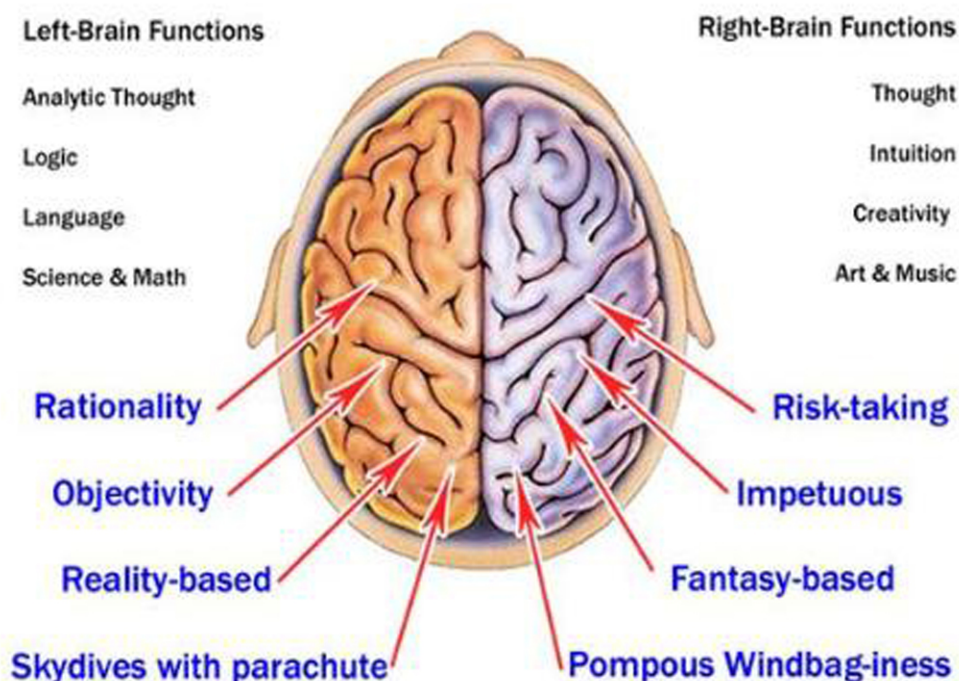
The neo-cortex has the ability to control our basic instincts, to the point it can even suppress our basic survival instincts. Its ability to suppress the instinctive desires of the limbic system is what allows us to live within the rules of society.

However it is important to be aware of the needs of the limbic system so that there is a harmonious relationship between the different

layers of the brain. Otherwise an in-balance leads to stress. When this stress is prolonged and become chronic, the efficiency of the life keeping functions of the brain stem is decreased.

The unique human defining feature of the neo-cortex is that it allows for creative thought and introspection, making it possible for us to ponder on the question “who am I”. We can also create situations and solutions to satisfy our inner most primal urges, at the same time learn to avoid ones that do not serve us.

## Left and Right Brain Functions



## The Limbic System: The Emotional World

The limbic system is the domain of our emotions and appetites. Appetites for food and sex, and emotions of joy, anger, grief and love arise within the limbic system. The mechanism for controlling the 5 senses of touch, taste, sight, hearing and smell is also found in the limbic system. Since the development of the neo-cortex, the limbic system has decreased in size and is much less developed in humans, than it is in animals such as dogs and cats. A dog wagging its tail with joy, or panting and salivating at the sign of food, is a signal of the

limbic system in action. The well-known flight or fight response is also a function of the limbic system.

By learning how to use our limbic system's full potential we would be better equipped to control emotions and generate an appropriate and constructive, rather than destructive emotional response in all situations.

## **Diencephalon**

The diencephalon, along with the telencephalon (cerebrum) comprise the two major divisions of prosencephalon (forebrain). Main structures of the diencephalon include the hypothalamus, thalamus, epithalamus (including the pineal gland), and subthalamus.

The diencephalon relays sensory information between brain regions and controls many autonomic functions of the peripheral nervous system. It also connects structures of the endocrine system with the nervous system and works in conjunction with limbic system structures to generate and manage emotions and memories.

Function:

The diencephalon is involved in several functions of the body including:

- Directing Sense Impulses Throughout the Body
- Autonomic Function Control
- Endocrine Function Control
- Motor Function Control
- Homeostasis
- Hearing, Vision, Smell, and Taste
- Touch Perception

## **The Brain Stem: Our Life Guardian**

The brain stem refers to several sub-cortical structures that include the medulla, midbrain, thalamus and hypothalamus.

The medulla is located where the spinal cord meets the brain that is responsible for the regulation of respiration and blood pressure. As



you move up the medulla, it swells into a structure called the pons. This is responsible for the communication between the neo-cortex and the cerebellum, which regulates balance and movement. The thalamus is a neurological relay station and sends sensory input to the neo-cortex. The hypothalamus controls food intake, sexual activity, endocrine levels, water retention and the autonomic nervous system.

The brain stem is in-charge of all the functions of the body that you do on auto-pilot, including digestion, respiration and circulation.

It is the least known but most important part of the brain.

## **Mesencephalon**

The mesencephalon or midbrain is a part of the brain stem. It is associated with vision, hearing, motor control, sleep/wake, arousal (alertness), and temperature regulation.

In the anatomy of developing animals, the brain forms from the neural tube, which turns into three vesicles. The mesencephalon (midbrain) is the middle vesicle, and becomes part of the brain stem.

The mesencephalon is ancient in origin, meaning its general architecture is shared with the most ancient of vertebrates. Dopamine produced in the substantia nigra plays a role in motivation and habituation of species from humans to insects.

The brainstem is the rear part of the brain. It has two sections: the hindbrain, which includes the pons, and the midbrain.

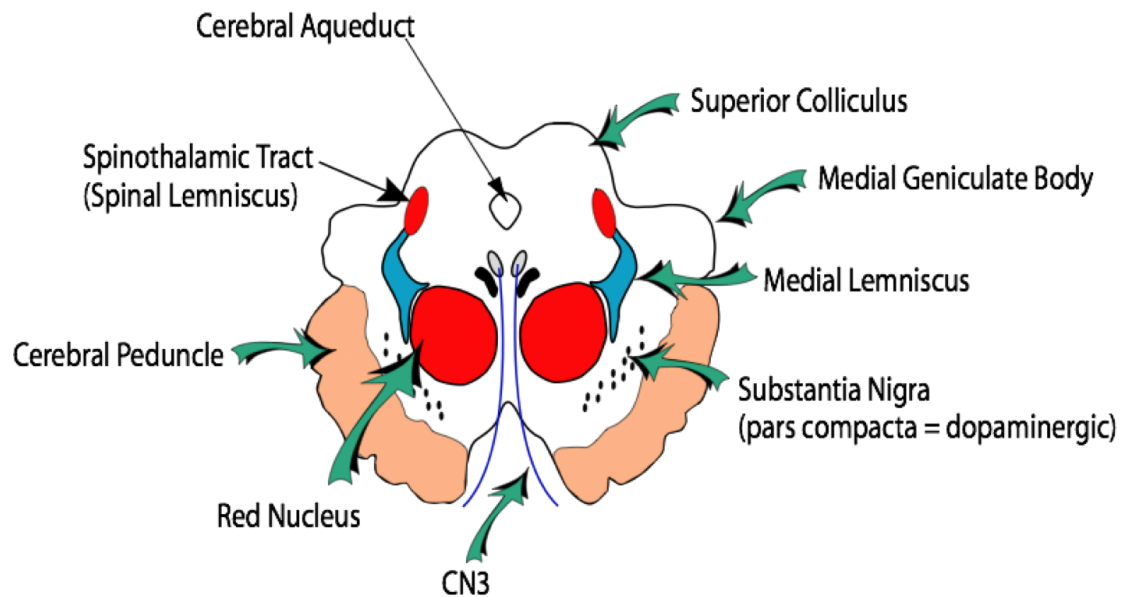
Though the brainstem is small, it is extremely important. The motor (movement) and sensory connections from the main part of the brain to the rest of the body pass through the brain stem. Also, from the brainstem come the main motor and sensory nerves to the face and neck. These nerves are called the cranial nerves. The brainstem controls many bodily functions of which we are not normally aware, such as breathing, heart beat, and sweating. The brainstem controls functions which are unconscious, but necessary for life.

Functions of the mesencephalon include:

- Controlling Responses to Sight
- Eye Movement
- Pupil Dilation
- Body Movement
- Hearing







## ***The Healing Powers Of Your Brain Stem***

All essential functions of the body are controlled by the brain stem without any conscious effort. If we consciously had to do all the work our brain stem does on auto-pilot, we would not be able to do anything else, without fear of killing ourselves by neglect or mistake. If the neo-cortex and our brain stem were not separated then life would be very different. Just a single harsh word from someone would stop us from breathing. One kiss from a lover might overload our hearts. Our limbic system that separates the neo-cortex from the brain stem, makes it possible for us to stay alive without having to think about it.

However there are times when the information in the neo-cortex has an immediate and dramatic effect on the function of the brain stem. When the neo-cortex believes a piece of information is 100% true, then it can have an effect on the function of the brain stem.

When a piece of information enters the neo-cortex, it critically examines it before it is allowed to form an imprint on the brain stem. However if the information is believed absolutely it is allowed to form an imprint on the brains stem.

The amazing power of absolutely belief with pure conviction is that it can affect the most basic functions of life itself.

An example of this is the strange phenomenon of being able to make a blister appear on a subject's hand under deep hypnosis. In a hypnotic state the function of doubt in the neo-cortex can be suspended temporarily, and you can plant a suggestion that a coin is scalding hot and causing a burn on a subjects hand, even if the coin is not actually hot. The suggestion goes straight to the brain stem, causing it signal an inflammatory response.

It is also the mechanism by which techniques like meditation, positive affirmations, hypnosis and scientific prayers can have such magical effects when used correctly.

'Even as a small child, you witnessed the healing power of your brain stem at work. If you scraped your knee, you could watch day-by-day as your body repaired itself, eventually becoming a brand new patch of skin. This kind of phenomenon, although commonplace, is really quite miraculous.

But what does the brain stem have to do with all this? Your brain stem is a like a hidden conductor of the great symphony that makes up the intricate systems of your body. Without any conscious direction from you, it sends out messages to the body, telling your heart how fast to beat, commanding your white blood cells to spring into action, directing your digestive system to go to work, and coordinating a myriad of other bodily functions that continuously support your health and well-being.

The role of the brain stem is essentially to maintain your state of equilibrium. The body is designed to maintain a consistent state of health. You could say that any prolonged disease represents lack of equilibrium in the body.

The great majority of the diseases of modern society, as you probably already know, are the result of lifestyle rather than some outside influence. In a way, through the choices we habitually make, we get in the way of our brain stem, and it never really has the chance to do its job.

The part we have control over is the prefrontal cortex, the thinking part of the brain. To put it simply, people today think too much. The thinking brain is constantly sending messages that keep our bodies in a state of alarm, and they never have ample time to recover. The trick

is to quiet the thinking mind and gain control over the content it produces so that the brain stem has a chance to coordinate the equilibrium that it exists to create.' Ilchi Lee, Brain Respiration

## **Brain Waves And Their Relationship To The Brain And Cognitive Function:**

The first brainwaves were discovered by Hans Berger using an EEG machine in 1924

Like the pulses of vibration that produce sound on a guitar string, your brain also creates pulses of vibrations.

These vibrations are electrical impulses

Their activity can be measured by using an EEG (electroencephalogram), which measures the frequency of these pulses.

You measure the frequency of these pulses in Hertz (Hz).

Your brain actually has a predominant frequency at which it operates in any given moment; this can be associated with your state of mind.

In other words, the emotional state of your mind in any moment, such as feeling happy, sad, frightened, sleepy or excited, can be measured as a frequency.

There are 5 broad categories of brainwave frequencies that are associated with the different states of mind:

### **1. Gamma (frequency of 30-100 Hz) :**

The apex of human brainwave frequencies are called Gamma waves of 24hz and higher. They have been associated with peak concentration, and your brains optimal cognitive functioning.

Gamma waves are split into two types:

- a) Hypergamma waves, with frequencies more 100 hertz.
- b) Lambda waves, with frequencies more than 200 hertz.

Hyper gamma and lambda waves are produced when the body is in a very alert and hyper focused state.

## **2. Beta (frequencies of 12-30 Hz) :**

Beta waves are produced when doing activities that need full concentration or full alertness i.e in the workplace, performing complex tasks or even communicating with other person.

Beta waves may be split into 3 types, namely high beta waves (frequency above 19 hertz), beta waves (15-18 hertz), and low beta waves (12-15 hertz).

Brain waves of these frequencies normally dominate adults and children from the ages 15 years and up, as the prefrontal cortex develops and life demands more self conscious effort for survival.

## **3. Alpha (frequencies 8-12 Hz) :**

These waves are produced by lobus occipital and thalamus parts of the brain.

Alpha Waves are associated with light meditation, peak performance, creativity and relaxed alertness. Your brain goes into this state naturally when you are daydreaming. Alpha waves also become more predominant when you close your eyes and relax your mind.

Brain waves at these frequencies mostly dominate the children of below 5-15 years old.

## **4. Theta (frequencies of 4-7 Hz) :**

Theta Waves are associated with deep meditation. They occur during heightened states of creativity and inspiration as you begin to process unconscious material. You will also produce theta waves just before you fall into sleep from a waking state. They are also associated with lucid dreaming states.

These frequencies also dominate many children of below 5-15 years old.

In general, theta and alpha waves are more present in babies and children.

These brainwave states are associated with subconscious/unconscious mind.

Babies and children therefore have a more dominant interbrain and midbrain as they have less activity from their cortex. This is why children's brains are like sponges, and they find it very easy to absorb information and learn new skills.

### **5. Delta (frequencies of up to 4 Hz) :**

Delta waves arise from the brain's thalamus and reticular formation parts. Delta waves are associated with a deep sleep state with no dreaming or unconsciousness. New cell production, regeneration and growth are associated when delta waves are predominant.

Summary of regions of brain and the production of brainwaves:

- Gamma wave is produced by the brain's cortex visual part.
- Beta wave is produced by the brain's motor cortex or neo/cerebral cortex.
- Alpha wave is produced by the brain's lobus occipital and thalamus.
- Theta wave is produced by the brain's hippocampus part.
- Delta wave is produced by the brain's thalamus and reticular formation part.

### **Brainwaves and Altered States Of Consciousness**

Your brain is like an orchestra playing a complex symphony with each component of your brain acting like an instrument playing its own special part in harmony with the rest.

The harmonies and tones change in accordance with our thoughts moods and emotions. When we call upon our brain to execute a certain task it is like a conductor about to cue up a new musical phrase.

Your brainwaves are just one indication of the kind of music your brain is playing at a particular time.

The human brain is a transmitter of brainwaves, but at the same time it is also a receiver. Our brainwaves can be altered through various ways leading to states of altered consciousness.

Hypnotists alter brainwave states through the power of hypnotic trance inducing language patterns. When you see a concert or go to a club where there is loud repetitive music your brainwave state will be altered dramatically. An engaging conversation with a friend, or playing a complex musical piece will again stimulate your brain waves and alter your state of consciousness.

Drugs and even food has the power to alter brainwaves when consumed, but a non-evasive method that can be used to create very specific altered states of consciousness is using the power of resonance.

In physics resonance is a tendency of an object to oscillate with greater amplitude at some frequencies than others. The resonant frequency of an object is also considered its natural frequency.

Einstein came up with the famous equation  $E=MC^2$  stating that all matter is energy. Energy is shown to be particles of matter vibrating at certain frequencies.

Sound is a form of energy with a specific vibrational frequency. Using sound you can actually make physical objects vibrate in harmony with the sound. Opera singers can sing at very high pitches that make wine glasses oscillate at the same frequency. When the opera singer finds the resonant frequency of the wine glass when they hit the correct pitch, the amplitude of vibration increases dramatically shattering the wine glass.

Each component of your brain also has a resonant frequency. Using sound and rhythm you can resonate with specific regions of the brain and awaken its dormant powers.

## **How To Use Resonance To Awaken Dormant Functions Of The Brain**

### **Music**



Music has since been used as therapy for many years and there has always been a belief amongst therapists that music and sound vibrations have a direct influence on our bodies at a physiological level.

Thankfully, in recent times, more and more research is confirming the magical effect music can have over your body and mind.

“Some of the most exciting and controversial research in the burgeoning field of alternative therapies has recently been introduced into Britain from France by Fabian Maman, a musician, acupuncturist and bio-energetician.

In relatively recent times Maman explained to doctors and therapists at the Bristol Cancer Help Centre the results of initial research he has been conducting with the biologist, Helene Grimal (of the University of Gussieu), which illustrates the effect of sound on cancer cells.

In a sequence of slides of cancer cells photographed, at 60-second intervals, while being subjected to a precise series of sound frequencies, he showed that systematic destruction of the cancer cells occurred. Maman emphasised that healthy cells were not affected by such frequencies.” Guardian 1988

“A study conducted in Colorado State University in 1991: Twenty-four undergraduate women had to swing their arms and hit a target with an object on completion of the downswing. They played music during this and the researchers found that when the women coordinated their movements and swings with the beat, instead of going at their own rate, they had more control over their muscles and it also enhanced their mood and motivation.”

To understand how music and sound has such a profound affect on your mind and body at a cellular level, you must first understand the basic physics of how sound and music is produced.

We know that sound is made of waves, or vibrations, of ENERGY moving in the air at about 340m/sec.

Each sound has its own specific frequency and you can hear from 20 frequencies per second to 20000 frequencies per second.

These waves travel through the air and your ear picks them up, turning them into electrical signals that move to your brain for translating into what you perceive as sound.

So, whether the sound is passing noise, music, or a person talking, your brain does an amazing job of differentiating exactly what signal is what.



The term Cymatics was coined by Dr. Hans Jenny (1904 -1972).

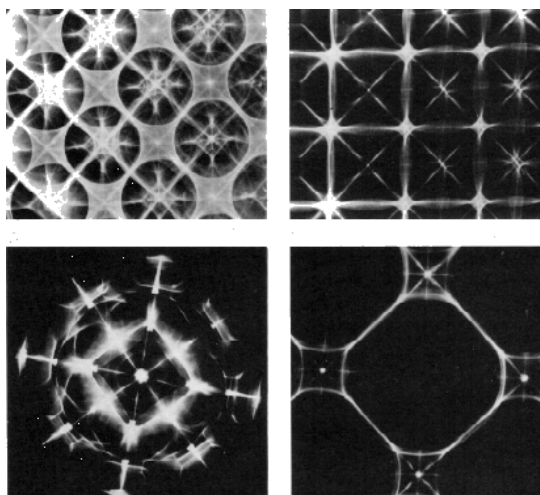
In 1960, Dr. Hans Jenny performed groundbreaking experiments to show for the first time the effect sound has on materials.

He coined the phrase Cymatics to name this new field of scientific research. For 14 years he conducted experiments that animated inert powders, pastes and liquids into life-like flowing forms that mirrored patterns found throughout nature, art and architecture.

To do this, he used single pure tones. What he observed is physical representation of the sound's vibration in the material world.

Hans Jenny has also pointed out in his research the resemblance between the shapes and patterns we see around us in physical reality and the shapes and patterns he generated in his investigations.

Jenny was convinced that biological evolution was a result of VIBRATIONS and their nature determined the ultimate outcome.



He speculated every cell had its own frequency and a number of cells with the same frequency created a new frequency that was in harmony with the original, which in its turn, possibly formed an organ that also created a new frequency in harmony with the two preceding ones.

Dr. Jenny was saying that the key to understanding how we can heal the body with the help of tones lies in our understanding of how different frequencies influence genes, cells and various structures in the body.

"The more one studies these things, the more one realizes that sound is the creative principle. It must be regarded as primordial. No single phenomenal category can be claimed as the aboriginal principle. We cannot say, in the beginning was number, or in the beginning was symmetry, etc. These are categorical properties, which are implicit in what brings forth and what is brought forth. By using them in description we approach the heart of the matter. They are not themselves the creative power. This power is inherent in tone, in sound." Hans Jenny

Through a process known as electroconformational coupling, resonant vibrational energy fields can alter the balance of charges in a protein. In a harmonic energy field, receptors will change their conformation. Consequently, cell membrane receptors respond to both physical and energetic environmental information. (Tsong, Trends in Biochem. Sci. 1989, 14:89-92),

Science has since proven that harmonic vibrational energy fields can actually alter the perception of your cell membrane and both sound and music are vibrational energy fields of specific frequencies.

So, if you listen to sounds and music you really love, that deeply resonate with you, they will have a resonant effect on your body, making your cells believe that the environment around them is safe, reducing stress and stimulating growth and repair.

Music is the a complex product of different sound frequencies interacting together in harmony, or even disharmony, depending on the music, often flowing rhythmically at a certain beat or tempo.

When you hear a piece of music that really resonates with you some amazing things can start to happen inside you.

Music does many things for the human body that has been shown in studies:

- Masking unpleasant sounds and feelings
- Slowing down and equalizing brain waves
- Influencing your respiration
- Influencing your heartbeat, pulse rate, and blood pressure
- Reducing tension in your muscles
- Influencing your body movement and coordination
- Influencing your body temperature
- Regulating stress-related hormones
- Boosting the immune function
- Changing your perception of space and time,
- Strengthening your memory and learning
- Aiding your productivity
- Enhancing romance and even your sex life
- Stimulating digestion
- Improving your endurance
- Giving you a sense of safety and well-being.

## **Get In Sync To The Rhythm Of Life**

There are a few things that as a species we all share as a common bond. We all have the same color blood, we all have a heart that beats

with a pulse, we even share the same brainwave states that correspond to different levels of mood and of course we are all born on the same planet Earth.

There is another little known thing that we all share, but this is not just between humans, but all life on this planet. Just like a cell has a thin tiny cell membrane surrounding it, the Earth has a relatively thin layer of its atmosphere known as the ionosphere.

The ionosphere acts like a filter and prevents any harmful radiation emitted from the sun from reaching the surface of the Earth.

The existence of the ionosphere is an absolute prerequisite for the development and persistence of life.

The bottom of the ionosphere and the surface of the Earth's crust create a cavity that acts as a medium for electromagnetic waves.

Tesla in his studies with electricity discovered that when lightening is produced in the top of the earth's atmosphere, extremely low frequency radiation is also produced that can penetrate the Earth.

He calculated that the resonant frequency of the planet is 8Hz.

Tesla's findings on this subject were ignored until much later in 1952 German physicist Professor W.O.Schumann predicted that there are electromagnetic standing waves in the atmosphere, within the cavity formed by the surface of the earth and the ionosphere.

This was confirmed in 1954 when measurements by Schumann and König detected resonances at a main frequency of 7.83 Hz. Since this discovery, several investigators worldwide have researched the Schumann resonance and they now have much more clarity about its characteristics.

The Schumann Resonance has been called the Earth's heartbeat, because every living thing has grown up with this "pulse" or "tone" going on in the background.

When Dr. Schumann published his results in the 'Technische Physik' journal, physician Dr Ankermueller immediately made the

connection between Schumann resonance and the rhythm of brain waves.

He was excited to find that the earth had the same natural resonance as the human brain, and contacted Dr. Schumann, who then assigned Dr. Herbert König to look into the phenomenon.

Dr König did some deeper research into this and discovered that the main resonant frequencies of Schumann waves begin at 4 Hz then having harmonics around 8 and 14 hz correspond directly to theta, alpha and beta wave patterns in the brain.

The peak of around 8hz that is the fundamental frequency of Schumann waves corresponds to the alpha brainwave states of peak performance and creativity.

Could it be that our brains evolved in harmony with the Schumann resonant frequencies and that nature is directly tuned into this “pulse” of our planet?

Many scientists have shown in recent times that there could well be a very strong link between biology and the Schumann resonances.

One pioneering scientist, Dr Neil Cherry has been leading this research.

“Dr Cherry’s own research, published in the Natural Hazards journal, Cherry (2002), shows that a natural electromagnetic signal, called the Schumann Resonances, generated by a tropical thunderstorms, and radiating around the world in the resonant cavity created between earth’s surface and the bottom layer of the ionosphere, is resonantly absorbed, detected and responded to by the brain because of the ELF frequency matching the frequency range of the spectrum of the brain EEG rhythms.”

“The Schumann Resonance signals provide synchronization of the ELF, daily and annual functions of the brain. The latter two are in support of the normal diurnal and seasonal solar activity. This provides the biophysically plausible mechanism to explain how sunspots on the sun, solar storms and sunspot cycles modulate cancer, cardiac, reproductive and neurological effects through modulating the melatonin/serotonin cycle in human populations. This confirms the importance of and sensitivity of the melatonin protective activity, including being a highly potent antioxidant being



with naturally produced (by breathing) oxygen free radicals.” Cherry Enviromental Health Consulting.

We live in world where the detection of Schumann waves has become increasingly difficult, especially in cities where there is large concentration of mobile phones, computers, T.V and radio signals creating an “electro smog”.

It has been hypothesized that this massive increase in electromagnetic interference has drowned out the normal exposure humans should get from the Schuman resonances.

This interference of the natural Schumann harmonics has linked to the rise in chronic illnesses such as cancer and heart diseases of people who live in cities and other areas of high electromagnetic interference.

This is also explains why many people get “cabin fever” from staying in doors for pro longed periods of time.

Many people who suffer from chronic diseases who spend long periods either at home or in the office usually find great relief from taking a vacation and spending time outdoors.

So it is really important to get out doors and spend time in nature. We are living creatures and being outside in the fresh air with the sky visible above us is what is most natural to us.

The primary (strongest) Schumann frequency is 7.83 Hz. Others include: 14, 20, 26, 33, 39, and 45 Hz

The primary frequency of 7.83 Hz actually correspond to Alpha brainwaves.

Ancient mystics understood the presence of the Earth’s pulse thousands of years ago. The ancient mystics also used meditation techniques to reach alpha states of awareness where their own brain activity would be in perfect harmony with the pulse of the planet.

This is the living pulse of the infinite oneness of our planet Earth that brings life and harmony to all things.

Interestingly the Schumann resonance 7.83 Hz also corresponds to 117 BPM (beat per minute) that is the measure of tempo of music.

Arpeggiated pieces playing at 16<sup>th</sup> note intervals at this tempo, directly correspond to 7.83Hz

Music played with 16<sup>th</sup> note arpeggiated riffs at tempos up to 150 BPM fall within the alpha wave range.

It is quite interesting that many ancient ritual drumming patterns from African tribes correspond to this. So to do the more recent “trance” music genres of Goa trance and progressive trance made famous by DJ’s like Tiesto.

Tiesto has been voted many times as the worlds most popular DJ playing to audiences of up to 250,000 people in some cases.

“Could this link between the Earth’s very own resonant pulse and the alpha wave inducing trance and dance music genres explain the rise of this new global culture of 1000’s of people congregating to celebrate life at dance music events with a combined feeling of oneness and unity for all?”

Baroque music of around 60 BPM composed by musicians like Mozart has also been shown in many experiments to help people improve their moods.

At 60 BPM notes played in a baroque style corresponds to a frequency of around 4HZ that is another natural harmonic of Schumann waves in the theta brainwave range.

However in a study by Balakrishnan Nair in 2010, to see whether baroque music can help dementia patients, some discrepancies occurred in the results with a conclusion drawn that many baroque pieces have varying tempo that can agitate the patients.

## **What Is Brainwave Entrainment?**

Sound has a profound ability to alter your brainwave state particular when it has a RHYTHM to it. Our ancient ancestors knew this instinctively.

African tribes would use special ritual drumming techniques to take the members of their ritual into a deep hypnotic trance.

The medicine men would use these rituals to invoke deep visions, aid recovery from sickness and injury and even communicate with the spirits of the natives

Thankfully, with modern technology, we can mimic this same technique digitally through a special, trance-inducing technique known as brainwave entrainment."

"Entrainment is the process whereby two interacting oscillating systems, which have different periods when they function independently, assume the same period.

The two oscillators may fall into synchrony, but other phase relationships are also possible."

One of the best ways to demonstrate this in action is to hold a tuning fork tuned to a particular sound frequency, such as the note C.

Hit the tuning fork and hold it close to the strings of a guitar.

You will notice that the C string on the guitar starts to vibrate because it has entrained on to the same frequency of the tuning fork.

## **How Does Brainwave Entrainment Technology Work?**

There are several methods used to entrain the brain. The idea is to get your brain to resonate, or vibrate, at a specific frequency.

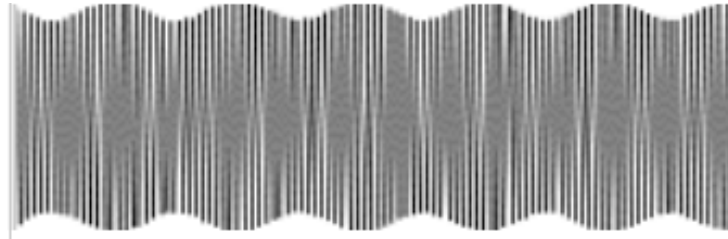
The most popular methods used today are:

- Binaural Beats
- Monaural Beats
- Isochronic Tones

## **How Do Binaural Beats Work?**

When you play two separate frequencies in each ear, say 140 Hz and 149 Hz, the difference in frequency is 9 Hz. Your brain compensates for this difference and a third tone of 9 Hz is experienced. This will result in your brain being raised or lowered and tuned into the

desired frequency. This is how binaural beats are produced. Headphones are essential for this to work. This is the least effective of all brainwave technologies.



### **How Do Monaural Beats Work?**

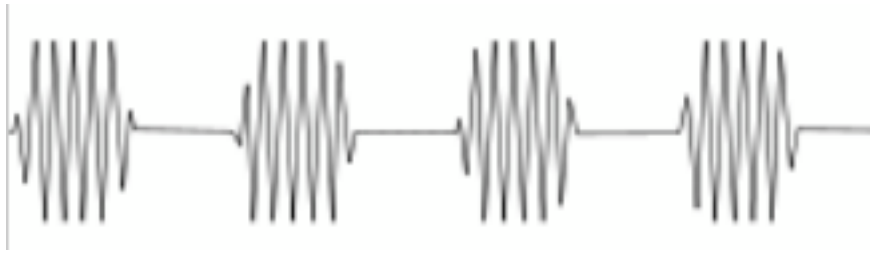
Instead of passing two tones of differing frequencies, another way to entrain your brain is to pass one signal to your brain that pulses on and off with a specific pattern. This is designed to leave your brain in the desired frequency state. This is a far superior method than binaural beats. You do not need headphones, but they are recommended.



### **How Do Isochronic Tones Work?**

These are by far the most powerful and effective brain trainers. They work by utilizing equal intensity tones and increasing the pulse speed to synchronize your brain with the rhythm. The more distinct and clear wave-form harmonizes your brain much faster. The effects can be felt without headphones, but using them will greatly enhance the effects.

Trypnaural brainwave technology uses the most advanced of these methods – isochronic tones. The combination of this with specially designed sounds and music is what creates the full tryptamic effect of state change, stress reduction, and serotonin, melatonin, DHEA and dopamine production.



## **Brain Wave Vibration (by Ilchi Lee)**

Brainwave vibration is a technique created by Ilchi Lee, the founder of the South Korean Institute For Brain Research.

Brainwave Vibration combines qi-gong energy meditation and visualization techniques, rhythmical music, yoga exercises and a special head nod exercise that stimulates the brain stem directly.

This special head nod exercise is done in rhythm with music composed of simple drum patterns or with musical grooves that are designed to resonate with alpha and theta brainwaves.

The effect of this is a relaxing of the brainwave state into the alpha/theta level, a calming of the nervous system, and a resonant effect boosting the activity of the interbrain and midbrain.

## **Brain Wave Vibration Presentation By Ilchi Lee**

[https://www.youtube.com/watch?v=\\_zO5orGjF4w](https://www.youtube.com/watch?v=_zO5orGjF4w)

## **The Head Nod Method**

This is one of the most simple and convenient forms of Brain Wave Vibration. It can be done anytime during the day to refresh your brain, even sitting at a desk while working or studying. The Head Nod Method is designed to deliver vibrations directly to the brain stem for deep relaxation and release of tension.

1. Sit in a chair with your arms resting comfortably at your sides or in front of you on a desk. You may also sit on the floor in a half-lotus posture. When sitting in a chair, do not lean your back against the chair, but keep your back straight.

2. Start playing rhythmical music of around 50 – 60 BPM.  
Trypnaural ultra sessions and the amAya drum yoga sessions are perfect for this. You will find them inside the TrypnauralMeditation.com members area. [Join Here](#)
3. Close your eyes and breathe comfortably, relaxing your body completely.
4. Begin gently shaking your head from side to side in rhythm to the music. It is normal to hear some noise from the neck as you begin, but this will lessen with practice. Breathe fully, focusing especially on the exhalation.
5. Focus on your brain stem, located at the point where your head pivots left and right.
6. Visualize your brain stem and entire brain lighting up as you go deeper and deeper into the shaking motion. Your head may also go up and down or follow the shape of an infinity symbol or figure of 8 as you go deeper into the motion.
7. After a few minutes, slowly return to external awareness, breathing in and exhaling fully.

### **Example Of How To Do The Head Nod Method**

<https://www.youtube.com/watch?v=xxaGMR-DPJE>

*Ilchi Lee, author of Brain Wave Vibration, is president of the Korea Institute of Brain Science and the International Brain Education Assn. He also is the founder of Dahn Yoga and the author of more than 30 books. Visit [www.ilchi.com](http://www.ilchi.com) and [www.brainwavevibration.com](http://www.brainwavevibration.com). Excerpted with permission by BEST Life Media at [www.bestlifemedia.com](http://www.bestlifemedia.com).*

### **Brain Gym**

Brain gym is a well known method for stimulating both the right and left hemispheres.

<http://www.youtube.com/watch?v=VL4an7UC3wA>

### **Memory Games/Mind Mapping**

Mind Mapping by Tony Buzan, a world memory champion is a recognized method for significantly boosting the power of your



memory. Memory is associated with the right side of your brain, and your brain remembers best through visual images and stories.

Through this special technique you will be able to recite the order of 100 words or more, forwards and backwards in a few minutes of learning the method.

This process is a great way to stimulate the right side of the brain and to give the child a valuable skill too.

## **Ambidexterity Training**

Michael Lavery is famous for creating the Whole Brain Power methodology for activating whole brain function. He states that through learning how to use both hands, instead of just one, in tasks such as writing, drawing and music, you can activate both hemispheres of the brain.

He made a fascinating correlation between major world cultures and their unique approach to handwriting that supports his theories underlying Whole Brain Power methodology.

Chinese calligraphy is written predominantly right-handed and from right-to-left and vertical top-to-bottom on the page. This indicates a left-brain dominance related to the use of the right hand, but the right-to-left direction and the vertical qualities imply more of a balanced involvement of the brain hemispheres and thus a more balanced emotional-analytical orientation in the Chinese culture.

- Middle-eastern cursive is written predominantly right-handed from right-to-left on the page. The use of the right hand indicates a dominant left-brain usage, but the right-to-left quality engages the right hemisphere and indicates more of an imaginative-emotional orientation in Middle-eastern cultures.
- Western European cursive is written predominantly right-hand from left-to-right. This style of writing focuses predominantly on the left hemisphere of the brain and indicates a process-analytical orientation to Western culture.

When you begin to write with the opposite hand that you are used to, you trigger the process of neuroplasticity, creating new neural

pathways in the brain. Simply writing with your left hand if you are right handed will stimulate the right side of your brain.

### **Alternate Nostril Breathing – Pranayama**

During the day you usually only actually breathe through one nostril at a time. If you are breathing through your left nostril it means you are using more of your right brain, and vice versa if you breathing from your right nostril. You can actually check this yourself by holding your finger to each nostril and feeling which side the air is flowing from.

When you perform this ancient breathing technique you stimulate both sides of your brain and awaken whole brain function.

Practice this special breathing technique to activate whole brain thinking – while listening to Trypnaural Ultra sessions, or before meditation, as both your left and right hemispheres are stimulated, and all your brainwaves are harmonized.

#### **Here is how to use it with this session:**

##### **Step 1:**

Initially, inhale through one nostril for 4 seconds then close it,

##### **Step 2:**

Now exhale through the other nostril gently for 6 seconds.

##### **Step 3:**

Now inhale through this nostril gently for 4 seconds then close it.

##### **Step 4:**

Now exhale through the other gently for 6 seconds.

##### **Step 5:**

Repeat this cycle at least 10 times or for the whole duration of this session.

Continue this for about two weeks and then increase the exhalation by two – so that you are breathing out for eight seconds. Continue this practice for a few more weeks, doing it at least twice daily for two minutes at a time.

Then check your breathing one morning and you'll find the exhalation has begun to increase by just one or two counts – you will know you are on your way to full breathing and your body is drinking up that oxygen.

As you transform the way you breathe and your body begins to absorb more oxygen, you will feel the benefits as muscles relax and the entire nervous system returns to balance.

## **Video Guide**

<https://www.youtube.com/watch?v=PU5BjY43twc>

You can watch this video guide with myself performing this exercise at the Nirvana Spa in the UK.

The reason I do this in a heated environment like a sauna or hot tub, although not necessary for meditation, is because your blood vessels dilate allowing more blood flow to your organs, chakra centers, especially your brain where your pineal gland and midbrain is located.

This makes the power of meditation and visualization even more powerful.

Be careful not to stay too long in heated environment like a sauna, if you have any health issues.

In a peaceful environment like this it is easier to go into a deep alpha/theta state during meditation too.