

# Sound Therapy Basics

Sound therapy may seem like a fairly recent exploration, (if you are even aware of it) but it is actually thousands of years old and has roots in nearly every sacred musical tradition around the world. Now science is beginning to piece together how sound therapy can affect us on such a profound physical, mental and spiritual level.

Sound waves are measured by their frequency of waves, in Hertz, just like brainwaves. Brainwaves will also synchronize with external frequency waves via a process called Entrainment. Soundwaves can alter brainwaves to aid in achieving states of deep relaxation.

## What is sound therapy?

Sound Therapy is similar to music therapy, but has a few key differences. Sound therapy focuses more on the elements of sound and their physiological and neurological effects. This is the deeper connection of sound, frequency and rhythm to our physiology. Specifically used, sound has the ability to affect us on a deeper level, by enabling us to transcend our normal, day to day, states of consciousness and find states of relaxation or even transcendence from day to day stresses. Sound therapy also focuses less on the traditional styles of music and more on sounds (specific frequencies or rhythms). Most of the time it is intentionally kept simple in order for the listener to focus less on the composition and facilitate a mental space for letting go of stress.

## How does sound therapy work?

The whole universe is composed of moving and vibrating energy and we are too. Our bodies are rhythm based systems. We have a heartbeat, in and out breath, pulsation, digestive rhythms, circadian rhythms etc. Our brainwaves are even measured by frequency which is also a measurement of rhythm. Specific sounds, frequencies and oscillations have the ability to entrain, or synchronize our brainwaves and physical systems. This enables our body the chance to re-harmonize, balance and find deeper states of relaxation.

Thinking of our brainwave states or [states of being as "gears"](#) is one way to look at relaxation. There are four main states of consciousness that are represented by specific frequency ranges in the brain. The brainwave states and associated hertz are:

**Beta** - (13-38 hertz) This is our active waking, problem solving state of being.

**Alpha** - (8-13 hertz) This is a relaxed and calm state or light meditation.

**Theta** - (4-7 hertz) This is associated with deep relaxation, meditation, hypnosis, visualization etc.

**Delta** - (below 4 hertz) This is associated with deep dreamless sleep. Buddhist Monks and advanced meditation practitioners have also been measured in this state during meditation.

< download or stream sounds for free at: [SONICYOGI.COM](http://SONICYOGI.COM) >

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Most of the time we are in Beta State. This is our waking, alert, problem solving state of being. When we go to sleep we briefly pass thru Alpha and Theta on our way to deep sleep in the Delta waves.

## Brainwaves as gears

I like the [analogy](#) of looking at these brainwave states like gears on a car or a bike. If you had a car with four gears, but you only drove in first and fourth, then obviously that wouldn't be very efficient. Also, this would put stress on the car. I think the same is true with our minds. We have been conditioned to think we should be in full Beta mode soon after waking up and then at the end of the day we should just switch it off and go right to sleep. Unfortunately, that doesn't really work very well. This type of conditioning results in imbalances that can lead to insomnia, anxiety and stress. Being able to understand and access the other gears in our minds is important to being able to function well. Accessing Alpha and Theta states also invokes the Relaxation Response, the opposite of Fight or Flight Response. The Mind, Heart and Breath are connected via the parasympathetic nervous system. When the mind relaxes, so can the heart and the breath. This helps greatly in alleviating and avoiding stress. This pattern of being is also reflected in nature, whose patterns we are designed to be in harmony with. The Sun rises gradually to start the day. We wake up and our brainwave patterns begin to shift from Delta and Theta, moving toward Beta. In the evening the Sun sets and we begin to relax wind down, this should also be reflected in our patterns. In modern life, it's easier to go against this with artificial light, TV and other brain active activities that can keep us up. These light signals also send info. to the pineal gland which regulates our circadian rhythms (our cycles of sleeping and waking).

## So how can you learn to access these other gears?

Sound Therapy and Brainwave Entrainment is one very effective way. Other great tools include yoga, meditation, prayer, exercise and healthy foods and probiotics. I believe all of these can function together in helping the body, mind and spirit to operate in a stress free and more effective way.

## What is entrainment?

Entrainment is when two systems come into synchronization with each other. This was first noticed by Christian Huygens, the inventor of the pendulum clock. He noticed that the pendulum clock in his shop would always "sync up" to each other. This phenomena was later studied and the idea of Entrainment came into being.

This type of entrainment also happens with our brainwaves. Because the brain, the heart and the breath are all connected via the parasympathetic nervous system, this helps to relax our entire body and essentially allow us the space to find a new level of harmony within the body.

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With sound therapy, our brainwaves are entraining to an existing oscillation that is contained in the sound or musical background. Our brains do this naturally. This occurs because of a phenomenon called the [Frequency Following Response](#) or FFR. The repetitive nature of these oscillations encourage our brainwaves to entrain with the oscillation. In this way we are able to access some of the "gears" in our mind states. Accessing these different gears not only give the mind a rest, but because the mind the heart and breathing are all connecting via the Parasympathetic Nervous System, they also give our body a rest. [Binaural beats](#) are sound oscillations that give our brains a window into accessing these mental states. Other instruments, like Tibetan Singing Bowls or Crystal Bowls also produce these types of oscillations.

## What is an oscillation?

according to [wikipedia](#): "Oscillation is the repetitive variation, typically in [time](#), of some measure about a central value (often a point of [equilibrium](#)) or between two or more different states. Familiar examples include a swinging [pendulum](#) and [AC](#) power. The term [vibration](#) is sometimes used more narrowly to mean a mechanical oscillation but is sometimes used as a synonym of "oscillation". Oscillations occur not only in physical systems but also in [biological systems](#), from human [society](#) to the [brain](#)."

A few types of Entrainment -

**Binaural Beats (from Wikipedia)** are [auditory](#) processing artifacts, or apparent sounds, caused by specific physical [stimuli](#). This effect was discovered in 1839 by [Heinrich Wilhelm Dove](#). The effect on the brainwaves depends on the difference in frequencies of each tone: for example, if 300 Hz was played in one ear and 310 in the other, then the binaural beat would have a frequency of 10 Hz. The brain produces a phenomenon resulting in low-frequency pulsations in the [amplitude](#) and [sound localization](#) of a perceived sound when two tones at slightly different frequencies are presented separately, one to each of a subject's ears, using stereo [headphones](#). Binaural beats reportedly influence the brain in more subtle ways through the [entrainment](#) of [brainwaves](#) and provide other health benefits such as control over pain.

**Monaural Beats (from Wikipedia)** Monaural beats are similar to [binaural beats](#) in that two [frequencies](#) are combined to create a perceivable beat; however they vary in two distinct ways. First, binaural beats are created by introducing two different tones, 400 Hz and 410 Hz, via separate speakers (e.g., headphones). Second, binaural beats seem to be "created" or perceived by [cortical areas](#) combining the two different frequencies, whereas monaural beats are due to direct stimulation of the [basilar membrane](#).

**Isochronic tones (Wikipedia)** - are regular beats of a single [tone](#) (or sound) used for [brainwave entrainment](#). Similar to [monaural beats](#), the interference pattern that produces the [beat](#) is outside the brain so headphones are not required for

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*entrainment to be effective. They differ from monaural beats, which are constant [sine wave](#) pulses rather than entirely separate pulses of a single tone. As the contrast between [noise](#) and [silence](#) is more pronounced than the constant pulses of monaural beats, the [stimulus](#) is stronger and has a greater effect on brain entrainment. Isochronic tones work by emitting sound at regular intervals.*

## **Your Body is a Rhythm Machine! .. get with the groove.**

The body is a rhythm machine. You have a heartbeat, pulsation in your vessels, your brainwaves create frequency (another type of rhythm) and your breath expands and contracts and our digestive system even has it's own rhythm. We have circadian rhythms that regulate waking and sleep states from night to day. On the micro level even our [cells have their own rhythms and vibrations](#). It is important that these things function in concert with each other with ease. Stress is imbalance and disharmony. In order to maintain harmony and ease, we have to maintain synchronicity and harmony in the system. The best part about this is that our bodies are naturally inclined toward this state. **WE ARE HARDWIRED TO FUNCTION IN HARMONY WITH THE ENVIRONMENT. MOTHER NATURE.** We just have to relax, do the right things (eat well, exercise, sleep...and [practice relaxing!!](#)) and get out of the body's way. This can seem very complicated depending on your situation, but each step you take towards back towards harmony will pay big dividends and your body will thank you.

Entrainment and sharing and matching energies are also common concepts that are present throughout nature. I believe these are also the fundamental ideas behind not only sound therapy, but also other energetic healing practices. Resonance, entrainment and sharing of energies (cooperation) occur in all harmonious systems. Disharmony and lack of cooperation occur in systems that are moving towards a state of degeneration and self destruction.

These are just some of the basics of sound therapy. Some of the sounds and techniques may seem unusual or even mystical, they are grounded in very measurable scientific concepts that are universal.

At the end of the day whether we're talking about science, religion, psychology or drugs, sex and rock'n roll, it's is all about letting go of stress and feeling great! The best part about sound therapy is that it won't give you a hangover! **If we feel good...we do good... and our world gets better.**

One of my epiphanies from my personal experience was that I have a choice in how I feel. What I mean by that is this:

**Physiologically speaking, I am both the experiencer and producer of stress.**

**Physiologically speaking, I am both the experiencer and producer of bliss.**

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Inside of our bodies is a storehouse of chemicals as powerful than anything you could get a prescription for, and they are all waiting to respond to our thoughts. **Choose Love, not fear.** So, I have a choice I can choose to react to my negative thoughts and choose fear, worry or stress (and all of the body chemicals and reactions that ensue), or I can choose love, kindness and compassion for myself (and others) and benefit from my body's responses to those thoughts and feelings. Ultimately our thoughts (our internal frequency patterns) are the most important sound therapy, we can choose our thoughts and brainwave vibrations, which can affect our whole being. I believe sound therapy itself can give a jumpstart for changing internal energies and letting go of stresses.

## **Some simple daily practices:**

Listen to sound therapy tracks daily.

I like to listen at least an hour before going to bed to allow my mind and body to relax and get in to a lower gear for sleep. Sometimes I listen in the morning also.

I have also found that listening to a particular track helps my brain sync to the hertz range of the track. Doing this repetitively has help to get used to these brain states and be able to access them later when I am not listening to the track.

I recommend trying an instrument like Tibetan Bowls. They can be very relaxing to play, listen to and sing with. Singing a basic vowel sound like oohh, ahhh or ohmmm can help to reset breathing patterns and create healing and relaxing vibrations in the chest and head.

I have also created tracks for rhythmic breathing (breathing in a specified pace with the music) and chakra balancing tracks with affirmations. **Download these free at [sonicyogi.com](http://sonicyogi.com).**

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## Resources / Books:

### [The Stress Answer - Train Your Brain to Conquer Anxiety and Depression](#)

The bestselling author of "The ADD Answer and The IQ Answer" offers a powerful remedy for a universal malady.

### [Buddha's Brain - The Practical Neuroscience of Happiness, Love and Wisdom.](#)

Jesus, Moses, the Buddha, and other great teachers were born with brains built essentially like anyone else's. Then they used their minds to change their brains in ways that changed history.

Well-referenced and grounded in science, the book is full of practical tools and skills readers can use in daily life to tap the unused potential of the brain and rewire it over time for greater peace and well-being. If you can change your brain, you can change your life.

### [The Relaxation Response](#)

When Dr. Herbert Benson introduced this simple, effective, mind/body approach to relieving stress twenty-five years ago, his book became an instant national bestseller. Since that time, millions of people have learned the secret--without high-priced lectures or prescription medicines. *The Relaxation Response* has become the classic reference recommended by most health care professionals and authorities to treat the harmful effects of stress.

Discovered by Dr. Benson and his colleagues in the laboratories of Harvard Medical School and its teaching hospitals, this revitalizing, therapeutic approach is now routinely recommended to treat patients suffering from heart conditions, high blood pressure, chronic pain, insomnia, and many other physical ailments. It requires only minutes to learn, and just ten to twenty minutes of practice twice a day.

### [The Healing Power of Sound - by Dr. Mitch Gaynor, MD](#)

Dr. Gaynor. shares his experiences of using crystal bowls with his patients and it's role in their recovery. Dr. Gaynor is a an Oncologist at the Cornell University Medical Center.

### [The Body Ecology Diet:](#)

The Body Ecology Diet reveals how to restore and maintain the "inner ecology" your body needs to function properly, and eliminate or control the symptoms that rob you of the joy of living.

## Sources and Footnotes:

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Wikipedia

The Power of Sound: How to Be Healthy and Productive Using Music and Sound  
by Joshua Leeds

How Music Works: The Science and Psychology of Beautiful Sounds, from  
Beethoven to the Beatles and Beyond (Kindle Locations 343-349). Little, Brown  
and Company. Kindle Edition.

Brainwaves as gears: from: [http://www.biocybernaut.com/about/brainwaves/  
alpha.htm](http://www.biocybernaut.com/about/brainwaves/alpha.htm)

## **Where can you get Tibetan Bowls?**

**The Best sources on the internet I have found for price and quality are on Ebay.**

**The stores I have purchased from are:**

**<http://www.ebay.com/usr/silverskyimports>**

**<http://www.ebay.com/usr/allweareisnow>**

**I also occasionally sell bowls online at [sonicyogi.com](http://sonicyogi.com)**

**The native flutes (tuned to 432hz) are made by Lee Nix - [farpointflutes.com](http://farpointflutes.com)**

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In addition to Sound Therapy, Yoga and Meditation I have found that creating a healthy ecosystem in the gut and getting the right vitamins and minerals for brain support is also key. The following is a basic overview about nutrients and probiotics that support mental and physical health. (This is pasted from my blog and the sources are contained in the links at <http://sonicyogi.blogspot.com>. To view the article with links to the sources, visit: <http://sonicyogi.blogspot.com/2014/09/basic-brain-nutrients.html>

For more info. check out this excellent book about the nutrients we need and how they work in our bodies. **The Mood Cure (this book is about how nutrients affect mental well being)** <http://www.amazon.com/The-Mood-Cure-Program-Emotions-Today/dp/0142003646>

**Probiotics:** Probiotics not only work to maintain digestive health, but they also support mental health too.

From [Psychology Today](#):

**90 percent of the cells in our bodies are the commensal bacteria who live on and within us.** Knowledge of these colonies of bacteria could lead us to [amazing insights and new treatments](#) for common and devastating diseases.

While the [brain](#), doubly protected from the outside by our skin and guts first, then our blood brain barrier, may seem far removed from the human microbiome, there is growing evidence that the trillions of beasts in our guts could [communicate with our brains](#), and that some [psychopathology could result from disturbances in the gut microbiome](#).

Also probiotics actually PRODUCE brain supporting neuro-transmitters:

*Lactobacillus* and *Bifidobacterium* species are known to produce GABA. *Escherichia*, *Bacillus*, and *Saccharomyces* produce norepinephrine. *Candida*, *Streptococcus*, *Escherichia*, and *Enterococcus* produce [serotonin](#). *Bacillus* and *Serratia* produce [dopamine](#), and *Lactobacillus* species produce acetylcholine. That's pretty much the entire hit parade of major neurotransmitters...

(So, our gut bacteria are supporting and producing our neurotransmitter chemicals!)

Read more:

<http://www.psychologytoday.com/blog/evolutionary-psychiatry/201206/do-probiotics-help-anxiety>

<http://www.psychologytoday.com/blog/evolutionary-psychiatry/201206/groovy-probiotics>

For more info. on changing diet habits, cleansing and reestablishing your good bacteria, I [highly recommend this book](#). ([The Body Ecology Diet](#))

Other nutrients that support neurotransmitter production and overall health:

**Magnesium**

**B Vitamins - B complex and sublingual B12**

**Omega 3's and 6's - Hemp Seeds, Hemp Oil, [Ovega](#) or Fish Oil**

**Protein - Lean Protein, there are also many [vegetarian sources](#) of high protein.**

**Zinc**

**Probiotics - [Theralac and Natren](#) are my favorite brands as well as probiotic foods and drinks (yogurt, kombucha, kefir, cultured vegetables)**

**Vitamin D**