# Binaural beats/isochronic 40-90 Hz tones for meditation benefits, Alzheimers, ADHD, autism, brain injury

## Description

Binaural beats/isochronic tones 40-90 Hz  for all day meditation benefits, Alzheimer's reversal, ADHD, autism, brain injury etc.

Alzheimer's reversal with 40hz tones & vibration & flickering light



Our brainwaves work at different speeds depending on our needs.  During sleep, delta waves (0-4 Hz) help our bodies recover best.  Theta waves (4-7hz) are associated with REM sleep (dreaming) and when the brain downloads what it's learned from short term to long term memory, and cleans the brain of toxins & tangles that can lead to Alzheimer's.  Alpha waves (7-9hz) are found in light sleep, and apart from sleep during beginning meditation & relaxation.  Beta waves (9-29hz) are found during an increase in concentration in some parts of the brain.  Gamma waves (30Hz+) are associated with intense concentration in the frontal cortex of the brain.

Researchers supposed that since testing showed that people with Alzheimer's don't get to the faster gamma Hz brain speed, then helping induce 40 Hz brain waves may help them concentrate better. They started with mice.

Mice studies

In three studies, mice bred to have early onset Alzheimer's who were exposed for one hour a day to either light flashes (40x/second) or sound that increased the amount of time their brain waves were at 40 hz showed a partial reversal of their Alzheimers in corresponding (visual or auditory) parts of the brain. When mice were exposed to both in one study for one hour a day, their memory came back even better than their normal age cohorts without Alzheimers, and they saw a very large reduction of the tangles endemic in Alzheimer's.

Gamma frequency entrainment attenuates amyloid load and modifies microglia

Hannah F. Iaccarino et al.

*Nature* Volume 540, pp 230–235 (08 December 2016)

fastcompany.com/90867531/how-simple-sound-and-light-are-treating-alzheimers-disease



Human studies

One study that used light only didn't find a significant benefit, but a subsequent study showed how the light activated the brain to start the repair process.

One study used sound & vibration at 40Hz a half hour twice a week & found temporary cognitive benefits from even that very infrequent treatment. Another study with people with Alzheimer's found a benefit for up to three hours in memory, cognition & engagement from a daily total of one hour of audio, video & vibrational 40hz entrainment. Another study also found benefits but hasn't reported results yet.

https://www.salon.com/2017/12/13/brain-wave-treatment-for-alzheimers-is-promising-but-the-first-human-subject-is-left-behind_partner/

After the first study I believe another study should have been done immediately using at least a 40 Hz tone every three hours or continuously, with vibration through a subwoofer added whenever home, as a tone is easiest for anyone with a phone to do multiple hours a day and 40hz visual flashes as well. Most phones with a speaker, or even bluetooth speakers should be able to handle 40 Hz without distortion.

Watching a youtube video at flashing 40 Hz made for this purpose, even for small segments of the day, should be possible, even set in the eyeline but below the tv for an indirect effect when watching tv.

https://blog.szynalski.com/2018/03/40-hz-tone-alzheimers/

https://www.nytimes.com/2019/03/14/health/alzheimers-memory.html

https://static1.squarespace.com/static/57057039044262121206c0f62c/t/58e26ba920099e5b01f06c76/14912
cortes+et+al+2016.pdf

https://www.salon.com/2017/12/13/brain-wave-treatment-for-alzheimers-is-promising-but-the-first-human-subject-is-left-behind_partner/

https://www.theglobeandmail.com/life/health-and-fitness/health/sound-vibration-treatment-may-boost-brain-activity-in-alzheimers-patients/article29771676/



My experiment

I do not have Alzheimer's, but wanted to see if there were any side effects of 40Hz brain entrainment all day to treat people with Alzheimer's. I set about to use sound to entrain my brainwaves to 40 Hz to see how it felt. I used a combination throughout the day of 15-16 hours of binaural beats when I'm in between two stereo speakers or headphones or earbuds. The left should be 80hz & right ear 40hz, or 60 center & 40hz right (which makes the left 80hz) in binaural.

Meditation Trekks has a Binaural app that also lets you choose the isochronic frequency. Isochronic works on just on speaker or earbud and if somone only has hearing in one ear. Many hearing aides are digital & may not work well with binaural or isochronic but it can be used at night when hearing aides are usually taken out.

I find that mixing up the way my brain gets entrained significantly maintains the benefits & seems to prevent the brain from becoming less sensitive to any one entrainment treatment by alternating binaural & isochronic inputs, & 50% more benefit doing them both at the same time.

The first day felt a little different, but the next day my brain enjoyed it, and the third day I started getting unexpected benefits.

After 2 1\2 weeks of daily binaural only at 40hz I realized it blew away my severe adhd & help me hyperfocus better than people with no adhd.

After 4 weeks I learned about isochronic needing only a speaker and that worker as well as binaural.

After 4 1\2 weeks I moved to 60 hz to see if it was better for other things than Alzheimers (only 40hz has tested as reversing tangles). At 60hz the first day I realized better the benefits I was getting from the 40hz- increased concentration, mood, calmness, creativity, & emotional insight into self & others. The 60 hertz was around 50% better than 40hz.

After two weeks I jumped to 90 hz & it was 50% better than 60hz.  92 hz & higher has had no effect with me, same as no “entrainment”.

After reading that someone used it at night I started doing it 24 hours a day and got another roughly 50% increase in effectiveness.

After doing binaural (earbuds or headphones or stereo speakers on both sides of bed at night) & isochronic (one speaker only) together (on different devices) for 24 hrs a day it felt like another 50% improvement.



Meditation benefits

I read that people who meditate for many hours a day have the highest frequency brain waves. And that people who listen to gamma frequency binaural or isochronic can meditate much more deeply. Then I realized that all the benefits brain entrainment are the same as meditating.

I have been doing it all day & night long both isochronic with a speaker (old cell phone) & binaural together at 90 hz for years and seeing a large benefit in brain speed, concentration (wiped away my ADHD), happiness, calmness, creativity,  and insight into my own & other people’s behavior.

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At 90 Hz the benefits may be much greater than even meditating all day, as even during meditation people may much more rarely get to 90 Hz.  I have also noted that many people can start at 90 Hz and go down as they feel like during the day & back up.  I like 90 Hz all day best as the benefits are greater especially the creativity & insight into self & others.  The effects are cumulative and keep getting better.

Binaural setting

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Frequency generator?

Recently I use a frequency generator app with a square wave because it is much louder & easier to hear on all phone speakers (looked up square wave frequency generator on app store), but it didn't seem to work as well as the isochronic or binaural beats.

Youtube or apps?



Since the research on mediation many people use 40 Hz youtube sounds to meditate to to more quickly become very effective meditators. They may not know that it gives the benefits of meditation all by itself. Easier than running youtube, there are many binaural beats apps that let you choose the Hz. There is only one I've found for isochronic tones which get the brain to 40 Hz with just a speaker. That app on the iphone and android is called Binaural by Meditation Trekks. It's really a chakra picture. I set it to Isochronic, leave the left on 40 Hz, and set the right to 40- it means beats per second on the isochronic app. 40 Hz is the limit for the Iphone app.

Where keep?

I use a phone carrying strap from the dollar store to hang it below my neck or under my arms & on my back so mostly only I can hear it using the phones speaker. I also can use a pair of sports clip headphones to put on top of my front shoulders & drape the cord behind me & loosely make a knot of the cord right behind my head so the earclip headphones stay right in place & don't droop down across my chest (like Koss KSC75 or other models) .

Why play the tones if you don't have Alzheimer's?

For Alzheimer's only the 40 hz seemed to work in early studies. I would do a month at 40hr before going higher for the Alzheimer's prevention.

When I was growing up I read a lot about the benefits of meditating, that it would bring enlightenment, happiness, creativity, intense focus, and great calm. I had real difficulty attempting meditation because of my severe ADHD. I have in the past been able to meditate in spurts as I do other things but not for very long periods. Now I get the benefits of meditating all day long.

Where to buy phones?



People often find it a lot easier to use older or cheap android phones to play in their pocket or in a phone holder & strap rather than their main phone all day. Ebay or Walmart appear to be the best site for $20 used android phones.

Overall effect

Overall I am a lot more effective in most every facet of my life, a lot happier & a lot calmer, more focused, more creative, and more insightful. My organizational ability just keeps getting better & better. The people I know who are using it are reporting the same benefits as well.

The science behind binaural beats

The gamma EEG pattern of cerebral activity as recorded by EEG has a frequency of 17 Hz to 100Hz associated with concentration, alertness, arousal and cognition; the beta frequency at 14-16Hz, the alpha pattern (8–13 Hz) with relaxation, meditation and creativity; the theta pattern (4–8 Hz) with random eye movement (REM) sleep; and the delta EEG pattern (0.1–4 Hz) is associated with deep, dreamless sleep. The Hz of a binaural beat trains the brain to produce a corresponding beat, and the more its used the better the syncronicity between them. Then name of the different frequencies aren't important- experimenting with how the different frequencies affect each individual person is what matters.

In a double blind study of 29 people, binaural beats (16 and 24 Hz) improved performance on a visual vigilance task and subjects had a better mood than people exposed to beats at the theta/delta range (1.5 and 4 Hz) while studying.



Binaural Auditory Beats Affect Vigilance Performance and Mood

James D Lane, Stefan J Kasian, Justine E Owens, Gail R Marsh

Physiology & Behavior

Volume 63, Issue 2, January 1998, Pages 249–252

In a study of 108 patients about to undergo surgery, those that listened to a 10 Hz binaural beat had half of the anxiety as those listening to music without the beat.

A prospective, randomised, controlled study examining binaural beat audio and pre-operative anxiety in patients undergoing general anaesthesia for day case surgery*

R. Padmanabhan, A. J. Hildreth and D. Laws

Anaesthesia Volume 60, Issue 9, pages 874–877, September 2005

DOI: 10.1111/j.1365-2044.2005.04287.x

In another study people who listened to binaural beats in the delta/theta range had a significant reduction in anxiety.

Use of binaural beat tapes for treatment of anxiety: A pilot study of tape preference and outcomes

Rene-Pierre Le Scouranec; Roger-Michel Poirier; Owens, Justine E; Gauthier, Jules; et al. Alternative Therapies in Health and Medicine7.1 (Jan 2001): 58-63.



In a small study theta binaural beats increased theta activity in the brain and significantly increased the hypnotic susceptibility of people as measured on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C).

Binaural-Beat Induced Theta EEG Activity and Hypnotic Susceptibility

Brian Bradya & Larry Stevensa

American Journal of Clinical Hypnosis Volume 43, Issue 1, 2000 pages 53-69

DOI:10.1080/00029157.2000.10404255

Eight people over sixty days listened to a delta binaural beat and experienced decreased anxiety, increased quality of life, and a decrease in insulin-like growth factor and dopamine.

They are available in apps & on youtube & other music sites, & I use speakers, earbuds, or headphones.

## The Buzz Around Sound Therapy  by Anton SF

infopathy.com/en/posts/the-buzz-around-sound-therapy?source=web

Kennel, S et al. Pilot feasibility study of binaural auditory beats for reducing symptoms of inattention in children and adolescents with attention-deficit/hyperactivity disorder. J Pediatr Nurs 2010, 25, 3. DOI: 10.1016/j.pedn.2008.06.010
Padmanabhan, R., Hildreth, A. J., and Laws, D. A prospective, randomized, controlled study examining binaural beat audio and pre-operative anxiety in patients undergoing general anesthesia for day case surgery. Anesthesia 2005, 60, 874. DOI: 10.1111/j.1365-2044.2005.04287.x
Abeln, V. et al. Brainwave entrainment for better sleep and post-sleep state of young elite soccer players – a pilot study. Eur J Sport Sci 2014, 14, 393. DOI: 10.1080/17461391.2013.819384
Garcia-Argibay, M., Santed, M.A. & Reales, J.M. Efficacy of binaural auditory beats in cognition, anxiety, and pain perception: a meta-analysis. Psychological Research 2019, 83, 357. DOI: https://doi.org/10.1007/s00426-018-1066-8
Le Scouarnec, R. P. et al. Use of binaural beat tapes for treatment of anxiety: a pilot study of tape preference and outcomes. Altern Ther Health Med. 2001, 7, 58.
Zampi, D. D. Efficacy of theta binaural beats for the treatment of chronic pain. Altern Ther Health Med. 2016, 22, 32.
Wahbeh, H., Calabrese, C., Zwickey, H. Binaural beat technology in humans: a pilot study to assess psychologic and physiologic effects. J Altern Complement Med. 2007, 13, 25. DOI: 10.1089/acm.2006.6196



**Category**

1. Uncategorized

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