

Binaural Beat Research & Science



This is a summary of the Binaural Beat research I have collected and analysed over the past three years. This clinical, scientific & PHD research *proves* that Brain Wave Entrainment works...



... and also lists the **major benefits** you can expect from using binaural beats, isochronic tones and other forms of [brain wave entrainment](#) (BWE) .

You'll find research into how binaural beats can increase relaxation; change the production of hormones in the body; reduce anxiety and stress... and more. I trust you'll find all this binaural beat research rather compelling!

I've arranged the benefits by category for those who wish to scan... and the first section summarises the overall proven benefits of binaural beats and [Brain Wave Toys](#).



Proof: Therapeutic Qualities of Binaural Beats

This binaural beat research proves the psychological benefits of using binaural beats.



1) "A Comprehensive Review of the Psychological Effects of Brainwave Entrainment", Tina L Huang, PHD, and Christine Charyton, PHD.

This binaural beat research paper nicely **summarises 20 previous peer-reviewed studies** into the psychological effects of Brainwave Entrainment.

The overall conclusion was that brainwave entrainment is an "**effective therapeutic tool**". People suffering from cognitive functioning deficits, stress, pain, headaches & migraines, PMS and other behavioural problems **all benefitted** from using binaural beats.

A sample quote from this paper: "The immediate psychological effects on memory, attention, stress, pain, headaches and migraines were shown to **benefit from even a single session** of brainwave entrainment".

One study even found that **improvements in intelligence and behaviour** lasted after the binaural beats were withdrawn, and that previous users could now produce the brainwave frequencies induced by BWE on their own. This suggests that the **results can be permanent**, even after you stop using binaural beats.

2) Research Papers from Wilson, 1990, and Rhodes, 1993

Conclusion: Binaural Beats increase relaxation, meditation, pain management, improve sleep, and reduce stress.



3) Research Paper from Hiew, 1995

Conclusion: Binaural Beats help to increase creativity, relaxation and meditation.

4) Research from Robert Monroe, Monroe Institute

Binaural Beats "**increase focus, problem solving, creativity, memory, learning, sleep induction, pain control and enhanced learning**".

This study was also reported in the 1986 book *Megabrain*, by Michael Hutchison.

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Proof: Effects of Binaural Beats on the Body

This binaural beat research focusses on the impact of Brain Wave Entrainment on the body (including hormone production).

1) Research by Dr Vincent Giampapa, MD, Former President of American Board of Anti-Aging Medicine, New England Journal of Medicine

Dr Giampapa suggested that binaural beats "**dramatically**" **affects the production of three hormones** directly related to longevity of life and overall well-being; cortisol, DHEA and melatonin:

- **Cortisol** is found in the adrenal glands and impacts learning and memory, as too much of it is bad for us and **causes stress**.
- **DHEA** is used as a "source ingredient" for virtually every "good hormone" the body needs, and **helps our immune system**.
- **Melatonin** is the chemical produced during **deep, natural sleep**. Having lots of DHEA and melatonin is good for us.

In a separate binaural beat research study using **Holosync** branded binaural beats:

- cortisol levels went **down** by an average of **46%**
- DHEA **increased** by an average of **43%**
- melatonin production **increased** by an average of **98%**.

These results alone are rather staggering!

2) Dr Margaret Patterson & Dr Ifor Capel, Marie Curie Cancer Foundation Research Department



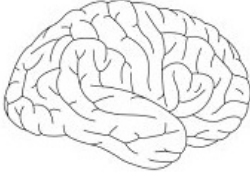
Binaural beats which take the user into the Alpha brainwave state **aids production of serotonin**, a hormone which **increases relaxation and eases pain**.

Binaural beats which take users into the theta brainwave state help **boost production of catecholamines**, which are **vital to memory and learning**.

Proof: Effects of Binaural Beats on the Mind

This binaural beat research looks at the impact of BWE on IQ and intelligence.

1) Research Paper by Dr Siegfried Othmer



In this study brain wave entrainment usage was shown to produce **average IQ increases of 23%**.

In cases where the IQ was lower than 100 to begin with, the **average IQ increase was 33 points**.

Dr Othmer also reported "**dramatic improvements**" in the subjects' visual retention (i.e. memory), auditory memory, reading and arithmetic.

In a follow-up study after one year, Dr Othmer reported "**major**" **long-term improvements in self-esteem and concentration**, and "significant" improvements in sleep patterns, irritability, organisation... and even handwriting.

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Proof: Effects of Binaural Beats on Anxiety

This binaural beat research is focussed on the impact brain wave entrainment can have on people who suffer from mild anxiety. (Note - if you suffer from anxiety, please consult a Doctor before using this technology!)

1) Alternative Therapy Health & Medicine, 2001

This study looked at the effectiveness of binaural beats for the treatment of anxiety. Subjects used them 5 times a week for four weeks. The result was that listening to binaural beats caused a "**significant reduction**" **in the subjects' anxiety score**.

2) Journal of Alternative and Complimentary Medicine, Jan / Feb 2007, "Binaural Beat Technology in Humans: A Pilot Study to Assess the Psychological and Physiological Effects", by Helene Wahbeh, Carlo Calabrese, Heather Zwickey.



This binaural beat research study involved 8 healthy adults over a 60 day period.

The subjects who used binaural beats reported a "**decrease in anxiety, and an increase in the quality of life**".

Effects of Binaural Beats on Sleep Patterns

I've only found one Binaural Beat research paper on the effects of brain wave entrainment on sleep - however almost everyone I have spoken to who has used them reports that **improved sleep is a key benefit** of binaural beats use.

1) Dr Arthur Hastings, PHD, 1975, "Tests of the Sleep Induction Technique"

Summary: Binaural Beats usage influences people to fall asleep.

Nice and simple for you there!

Binaural Beat Research into Depression

This binaural beat research looked into levels of depression in alcoholics...

... But if you are a depressed alcoholic, please consult a Doctor! If you're not, you'll probably find the results of this illuminating:

1) Research Paper by Peniston and Kulkosky, 1989



This experiment involved two groups of alcoholics; one group was sent to a regular "12 step" AA programme for help with their condition (control group); the other group received no counselling but were sent for 15 twenty-minute sessions of alpha and theta binaural beats usage (experimental group).

Within the AA-attending control group, alcoholism relapse rates 13 months after the test were at 80%. There was no change in levels of depression (as measured by Beck's Depression Inventory).

Within the Binaural Beat using experimental group, 13 months later there was **only a 20% relapse**, and **levels of depression had reduced** to that of a third, non-alcoholic control group.

This is a *huge* improvement on the AA results!

2) Research Paper by Waldkoetter and Sanders, 1997



This Binaural Beat research paper also suggested that Brain Wave Entrainment **decreased symptoms of depression** in alcoholic test subjects.

Therefore, if you're drunk and depressed (and have your Doctor's approval!), feel free to get yourself some Binaural Beats!

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Proof that Brain Wave Entrainment Works

Here is a selection of studies and research papers that prove that Brain Wave Entrainment technology (such as binaural beats and isochronic tones) works.

1) "Auditory Beats in the Brain", Dr Gerald Oster, 1973, Scientific American

In this first piece of Binaural Beat research, Dr Oster conclusively proved that **Binaural Beats do cause Brain Wave Entrainment**. This essentially means that Binaural Beat frequencies DO affect the brainwaves by entraining them.

2) "On the Frequency Limits of Binaural Beats", Harvard & Acoustical Society of America

This study also confirmed that **the brain synchronises when Binaural Beats are played**.

3) Dr Lester Fehmi, Director of Princeton Behavioural Medicine & Biofeedback Clinic

Dr Fehmi confirmed that **Brainwave Synchronization** (i.e. left brain and right brain operating in harmony) *and* Brainwave Entrainment can be induced by binaural beats.

This was also reported in the 1986 book *Megabrain*, by Michael Hutchison.

4) Research Paper by Foster, 1990

Conclusion: Alpha Binaural Beats DO increase Alpha brainwaves.

5) "EEG Disentrainment Feedback", Dr Ochs, 1993

This paper suggests that there is **no need for subjects to be consciously trying to do anything** when listening to Binaural Beats to get results.

Simply listening to them is enough!

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Final Thoughts

That brings us to the end of the binaural beat research I found. Hopefully all of this will help to put your mind at rest and encourage you to try brain wave entrainment for yourself!

If you have any specific questions about using binaural beats, isochronic tones or meditation machines, feel free to contact me and I'll happily help you out.

I'll continue to add research as and when I find it, however the frequency of studies has gone down in recent years, despite the massive uptake in this technology by "normal" folks like you and I...

... My sources tell me that this is due to pressure from "Big Pharma" companies, who apparently wield *major influence* over which clinical studies get funding.

Understandably, if these huge companies can sell a box of pills (indefinitely) to a depressed or anxious person for dozens / hundreds of dollars a pop, they are unlikely to want to fund research into a totally natural and low-cost phenomena such as Binaural Beats, which starts to help people feel better right away.

That's a real shame, because people would stop pouring "happy pills" down their throats if they gave this technology a go even once...

... Anyway, that's my conspiracy-rant over! :)

If you want to say no to "happy pills" try out the proven effects of binaural beats now.

Disclaimer: I have taken great care to report the findings in this article accurately, however please note that I am *not* a Doctor or student of psychology or medicine, so please forgive any mistakes or unintentional misrepresentations.

I did study law at university, so am used to reading rather dry texts and extracting key information, however *please* do not rely on my findings alone. If you are relying on Binaural Beat research before deciding whether to try them, I recommend you take responsibility for the information you act on, and have a look for yourself. Most of these reports can be found through Google Scholar or by doing a bit of Googling.

Also - apologies for any dates or citations that are missing, this is due to a lack of information on the reports themselves.

Last of all - enjoy yourself on your binaural beats / brainwave entrainment journey! I reckon you'll have lots of fun!



Enjoy your adventure,

Carl
aka Binaural Beats Geek

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