



ANTI AGING / HEALTHY AGING

Acupuncture, Brainwaves & the Fountain of Youth

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"Qigong and acupuncture will not only make you smarter, but also make you sexier and get better dates" touted the late Dr. Daju Suzanne Friedman to her students, who always laughed at this joke, but also knew there was definitely some merit to it; because after practicing qigong or receiving an acupuncture treatment the results were obvious; feeling better, a clarity of mind and an improved overall appearance.

Acupuncture and mindfulness works, it helps us to relax, let go of stress and actually takes the body into a regenerative brainwave state, which has an incredible anti-aging effect throughout the entire body, from improved clarity of mind, to preserving telomeres and visible improvements in the skin and appearance.

In today's society, the stressed out sympathetic nervous system is ever dominant, so taking time to wind down and drop into a regenerative state is incredibly important, although it can be difficult for some to get into that relaxed state. Acupuncture can help almost anyone drop in to a relaxed state without the effort, making acupuncture a great tool, like mindfulness meditation, to help people experience renewal and healthy aging.

Types of Brainwaves



Electrical activity in the brain is displayed as brain waves, there are four dominant types of brain waves each corresponding to a level of activity and output in the brain. Brainwaves start as a low amplitude - high frequency wave and progress into higher amplitude - lower frequency as they continue on the scale. Every type of brainwave is associated with certain characteristics and benefits (or non-benefits in excess) to the human body.¹

BETA

12hz - 38hz - Beta waves are related to conscious thinking, learning, concentration and is also associated with anxiety and stress. Beta waves serve a very important function for the body - to help us learn and understand, but in excess we can get stuck in this brainwave state and experience anxiety and an overly stressed system in fight or flight mode which can erode creativity and energy.²

ALPHA

8hz - 12hz - Alpha state is our typical relaxation state where we relax, recharge and reflect while awake, it's winding down at the end of the day before bedtime. This state has an increase of serotonin production and is associated with relaxed focus, it's the beginning of access to an unconscious mind.

THETA

4h-8hz - Theta state is associated with deep meditation and relaxation or light sleep including the REM cycle of sleep. Great inspiration and profound learning can take place in this state of brain activity including healing and a general experience of *oneness*. Theta waves may also be present during times of emotional distress like frustration and disappointment and in degenerative brain

disorders.³

DELTA

0.5hz-4hz - Associated with deep, dreamless sleep Delta waves are the lowest in frequency but highest in amplitude. This state helps us access the unconscious mind and universal consciousness, release of the human growth hormone and is also associated and necessary for deep healing which occurs during that deep sleep phase, it's also the dominant pattern in infants and persons with serious organic brain disease.

How Acupuncture Effects Brainwaves

In practice, the effect of acupuncture is obvious, patients arrive with their sympathetic nervous system in a stressed state, and leave lighter and relaxed. The effect acupuncture has on the body, physiologically speaking, is producing an increased level of beneficial chemicals in the brain and body including endogenous opioids, serotonin, dopamine and noradrenaline which all help the body reach a relaxed state and decrease pain.

Acupuncture treatments decrease beta waves and increase the alpha wave state, there is also evidence that alpha waves can become synchronized during acupuncture treatment; pointing to the role of acupuncture's effect on the autonomic nervous system.³ Without extra meditation or relaxation techniques, acupuncture helps drop patients into alpha brainwave states which promotes the body's natural healing responses and is also linked to anti-aging properties like preserving telomeres and slowing cellular aging.

There is abundant information regarding the connection between telomeres and cellular aging in association with meditation and mindfulness practices. Due to the similar brainwave states that acupuncture and meditation produce, it's likely that acupuncture also has this similar benefit to preserving telomeres and slowing cellular death which promotes healthy aging.⁴

Shortened telomere length has been linked to chronic stress and depression, two things that mindfulness and acupuncture can help a patient with. Telomeres are compound structures at the end of DNA strands, that serve as *caps* or protection against fraying at the end of DNA strands, when they shorten and dissolve this leaves the DNA in a fragile state that can easily unravel and decompose, therefore preserving telomere length and integrity is essential to health.

The Fountain of Youth?

Telomeres play a role in how and when a body ages, they can be associated with cognitive decline as well as physical decline, so any treatment that preserves telomeres is accessing an essential anti-aging component of the human body. Using acupuncture to drop down brainwave states to states that are essential to restoration and relaxation inherently have the side-benefit of preserving telomeres and slowing cellular aging.

Reaching alpha - theta brainwave states may be what's responsible for the efficacy of acupuncture treatments, at least in part. It's in reaching these states that the Qi of the body can re-align, and meridians can restore the smooth flow of Qi and function. Looking forward it would be interesting to see more research on how regular acupuncture effects brainwave states over time, do patients experience less beta state or experience dropping into alpha - theta states more easily?

Our society of heightened concern about aging benefits from knowing how acupuncture in and of itself is a potentially powerful anti-aging or rather, *healthy aging* practice and is a gateway to

increased healing, patient compliance and of course, better dates.

References

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MAY 2019