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The Four Types of Brain Waves

Brain Waves

In the brain, millions of nerve cells communicate with each other by emitting tiny electrical impulses. This activity can be registered as oscillations (popularly called brainwaves) by placing electrodes on the scalp, amplifying the signals and recording them on an electroencephalogram (EEG). Brain waves vary in frequency and correlate with the different levels of consciousness. They are measured by their amount of oscillations, or cycles per second (cps).

Beta Waves (14 to 40 cps)

Beta Waves are generated when the brain is aroused, actively engaged in mental activity: problem solving, communicating with others and making decisions.

High levels of mental and emotional stress produce rapid beta-wave activity (30-40 cps) and acute stress on the heart, creating double or triple the risk of heart fatalities.

Alpha Waves (4 to 13 cps)

Alpha Waves are indicative of a non-arousal state, when the mind is relaxed, at peace and open to creative thoughts: sitting in the park and enjoying the day, reflecting on a fond memory, taking a catnap, meditating, creative visualization. When brain-wave activity slows to alpha waves, the body experiences a deep relaxation that is especially beneficial to the heart and nervous system. Many artists have produced their best work when they're "in the zone." (Example: Bob Dylan wrote his first hit song "Blowin' In The Wind" in just ten minutes.) The "alpha state" is the gateway that leads into deeper states of consciousness.

Theta Waves (5 to 8 cps)

Theta Waves usually happen when the eyes are closed and one is falling into sleep (when fleeting images pass through the mind before drifting into sleep). Theta waves are associated with the free flow of ideas, sometimes occurring during daydreaming, or when one is doing a repetitive task and they receive a creative idea (a runner jogging, a driver drifting on a open highway, someone taking a peaceful shower). Theta waves bring forth heightened receptivity, flashes of dreamlike imagery, inspiration and also a sense of "floating."

Delta Waves (1-4 cps)

Delta Waves appear only during sleep and represent the deepest form of sleep, when the brain slows down to its lowest frequency (during stage 4 sleep). Low-frequency delta wave activity is a deep, dreamless sleep (usually 2-3 cps) that happens for brief periods of time (since the REM dream state cycle occurs every 90 minutes).

Intensity Level	Type of Brain Wave	Cycles Per Second
Acute Stress:	Highest Beta Waves	28-40 cps
Moderate Stress:	Moderate Beta Waves	18-28 cps
Natural Balance - Homeostasis:	Low Beta/High Alpha	13-17 cps
Healing Relaxation:	Moderate Alpha Waves	8-12 cps
Deep Relaxation	Low Alpha Waves	4-8 cps

Sources: *Stress Makes You Fat, Wrinkled and Dead* Lewis Publishing Richard Lewis ISBN 0-9664069-0-7 **Wikipedia** (<http://en.wikipedia.org>) **Medline Dictionary** (<http://en.wikipedia.org>)

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