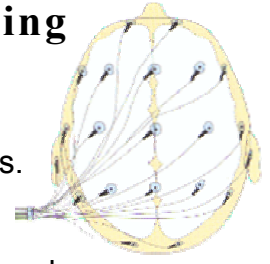

Harness Well-being and Productivity: Understanding the Use of the Cyma 1000 Brainwave Codes

By Elizabeth Bauer

There are 4 main states of brainwave activity with associated brain functions. In every state, we experience important chemical and physical function in conjunction with these levels of consciousness. A summary of the major functions of these brainwave states and the Cyma1000 applications are offered below.



Beta β

Range: 13-40Hz



Beta is a brainwave state that activates:

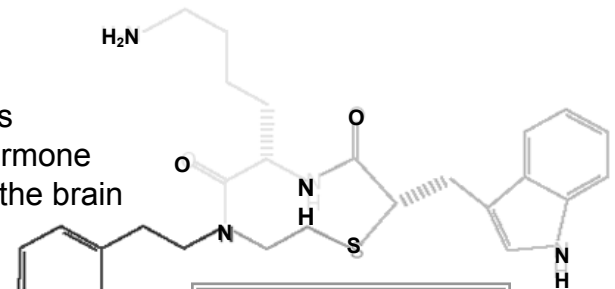
- ◆ Alertness
- ◆ Concentration
- ◆ Cognition
- ◆ Analysis and organization of information
- ◆ High stress levels
 - Higher levels of Beta can quickly deteriorate to anxiety and flight-or-fight reactions

Thermograph of the head in Beta.

Bio chemicals released by the brain in a beta state:

Somatostatin

- ◆ Inhibits the secretion of other hormones
- ◆ Decreases the production of growth hormone
- ◆ Inhibits the function of the right side of the brain
- ◆ High levels may cause emotional instability
- ◆ Decreases the rate of nutrient absorption during digestion
- ◆ Impairment of motor responses
- ◆ Inhibits the secretion of insulin and glucagon



Somatostatin

Chemical Formula

C₇₆H₁₀₄N₁₈O₁₉S₂

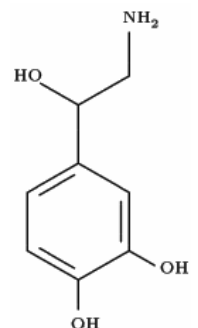
Noradrenaline

- ◆ Decreases the production of growth hormone
- ◆ Increases cholesterol and blood pressure
- ◆ Effects the flight-or-fight response, activating the sympathetic nervous system to directly increase heart rate
- ◆ High levels of noradrenalin cause:
 - Sleeplessness
 - Loss of appetite

Noradrenaline

Chemical Formula

C₈H₁₁NO₃

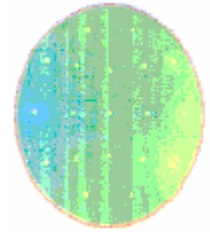
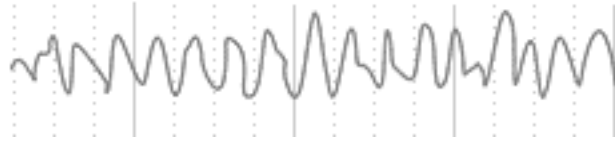


- Anxiety and irritation
- Depression

*Note: don not confuse, Beta Endorphins, with beta brainwave states. **Beta Endorphins promote pain control.**

Alpha α

Range: 7-13.9Hz



Thermograph of the head in Alpha.

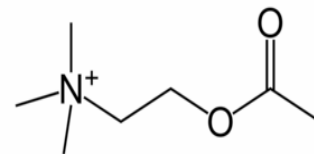
Alpha is a brainwave state that activates:

- ◆ Deep levels of relaxation essential to health and well-being
- ◆ Stress relief
- ◆ Visualization
- ◆ Creativity
- ◆ Concentration
- ◆ Problem solving
- ◆ Creative visualization
- ◆ Intuition
- ◆ Perception
- ◆ Emotional peace
- ◆ Deeper states of consciousness
- ◆ Sleep induction
- ◆ Improved immunity
- ◆ Pulse and breath rate modification
- ◆ The bridge between consciousness and the Schuman Resonance —the resonant frequency of the earth's electromagnetic field

Bio chemicals released by the brain in an alpha state:

Acetylcholine (Ach)

- ◆ A neurotransmitter
- ◆ Growth hormone
- ◆ Decreases cholesterol
- ◆ Decreases blood pressure levels
- ◆ Regulates the secretion of pheromones[†]
- ◆ Helps relieve anoxemia (insufficient oxygen supply to the blood)
- ◆ A deficiency of acetylcholine is associated with Alzheimer's disease

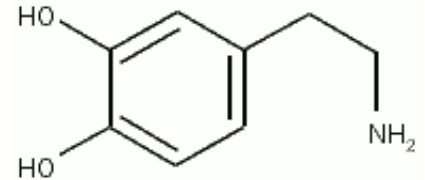


<p>Acetylcholine Chemical Formula $\text{CH}_3\text{COOCH}_2\text{CH}_2\text{N}^+(\text{CH}_3)$</p>

[†] Pheromones are sex hormones released that help us attract a mate.

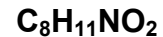
Dopamine

- ◆ A neurohormone and neurotransmitter
- ◆ Increases heart efficiency
- ◆ Increases renal (kidney) blood flow
- ◆ Improves emotional state of mind
- ◆ Associated with the pleasure centers of the brain and motivation
- ◆ Important in Parkinson's disease
- ◆ Important in psychosis
- ◆ Important in depression



Dopamine

Chemical Formula

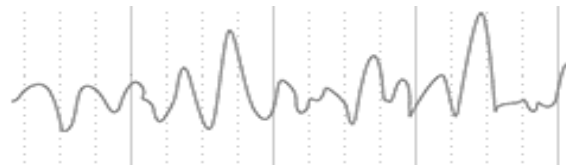


Theta θ

Range: 4-7.9Hz

Theta is a brainwave state that activates:

- ◆ Deep states of meditation
- ◆ Intuition
- ◆ Enhanced memory
- ◆ Heightened receptivity
- ◆ Enhanced creativity
- ◆ "Ah-ha!" moments or 'suddenly getting it' are a burst of theta waves
- ◆ Dreamlike imagery
- ◆ Inspiration
- ◆ Improved focus
- ◆ Mind expansion beyond the boundaries of the body
- ◆ Behavior modification
- ◆ Potentiation of the treatment for drug and alcohol withdrawal
- ◆ Super-learning, allows faster uptake of information
- ◆ Mind reprogramming
- ◆ Dream recall
- ◆ Self-hypnosis
- ◆ Stress reduction
- ◆ Extrasensory perception



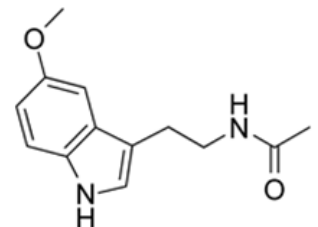
Thermograph of the head in Theta.

Theta is called the 'twilight state' that is felt while drifting off to sleep or just upon waking. Theta is also often called a waking dream state where vivid imagery presents itself to the mind's eye allowing us to be receptive to information beyond our normal conscious awareness.

Bio chemicals released by the brain in a theta state:

Melatonin

- ◆ The master hormone
- ◆ A 'pro-hormone' that may inhibit or help the body regulate many other hormonal functions
- ◆ Controls the daily cycle of several endocrine hormones
- ◆ Regulates the sleep wake cycle
- ◆ Improves mood
- ◆ Relieves symptoms of depression
- ◆ Increases heart efficiency
- ◆ Increases blood flow through the kidneys
- ◆ Inhibits hypertension
- ◆ Protects nuclear and mitochondrial DNA
- ◆ Regulates the production of most human hormones
- ◆ May reduce damage caused by some types of Parkinson's disease
- ◆ May play a role in preventing cardiac arrhythmia
- ◆ May increase longevity
- ◆ Immunoregulator that enhances T-cell production
- ◆ Controls the daily cycle of several endocrine hormones
- ◆ Prevents insomnia
- ◆ Helps jetlag
- ◆ Prevents misalignments of circadian rhythms
- ◆ May help in immune disorders
- ◆ May improve cardiovascular diseases
- ◆ Useful in depression
- ◆ Useful in seasonal affective disorder (SAD)
- ◆ Useful in sexual dysfunction
- ◆ Longterm memory potentiation
- ◆ Helps learning and memory
- ◆ In perimenopausal women it produces a highly significant improvement in thyroid function and gonadotropin levels
- ◆ May help restore fertility
- ◆ Helps prevent the depression associated with menopause
- ◆ Preventative treatment for migraine sufferers
- ◆ Treatment of various forms of cancer, HIV, and other viral diseases

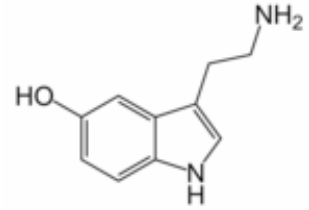


Melatonin
Chemical Formula
C₁₃H₁₆N₂O₂

Serotonin

- ◆ Regulates blood pressure
- ◆ Regulates the secretion of stomach acid
- ◆ Stimulates smooth muscle function
- ◆ Regulates mood
- ◆ Regulates sleep
- ◆ Helpful in the regulation of vomiting
- ◆ Regulation of sexuality

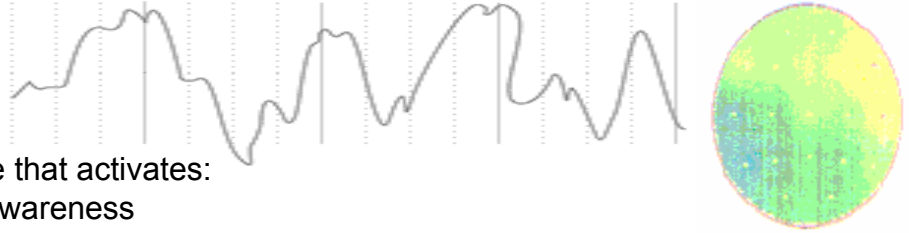
- ◆ Regulation of appetite
- ◆ Part of the biochemistry of depression
- ◆ Part of the biochemistry of migraine
- ◆ Part of the biochemistry of bipolar disorder
- ◆ Part of the biochemistry anxiety
- ◆ Is synthesized from the amino acid tryptophan



Serotonin
Chemical Formula
N₂O C₁₀ H₁₂

Delta Δ

Range: 0.1-4Hz



Delta is a brainwave state that activates:

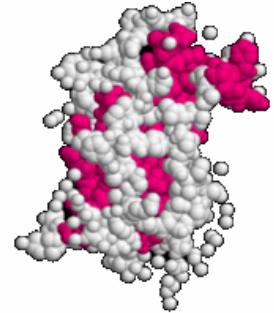
- ◆ Detached Awareness
- ◆ Healing
- ◆ Deep sleep
- ◆ REM sleep
- ◆ Suspension of active brain function, to allow us to rest completely
- ◆ Healing and regeneration
- ◆ Access to subconscious activity
- ◆ Flow of information from the subconscious mind for clearing and empowerment
- ◆ Release of Human Growth Hormone (HGH)

Thermograph of the head in Delta.

Bio chemicals released by the brain in a delta state:

Human Growth Hormone or Somatotropin

- ◆ Metabolism of proteins
- ◆ Stimulates the growth of cartilage
- ◆ Stimulates bone growth
- ◆ Effects protein, lipid and carbohydrate metabolism
- ◆ Combats the weight loss and general wasting characteristic of HIV and cancer
- ◆ Used by bodybuilders and athletes to increase muscle mass



HGH

Single polypeptide chain of 191 Amino Acids

Chemical Formula

C₉₉₀H₁₅₂₉N₂₆₃O₂₉₉S₇