

WATCH EFT CHANGE BRAINWAVES

with

Dr Inci Erkin EFT Master

How do our the patterns in our brains change when we experience EFT?

Inci will be using neurofeedback equipment to show the frequency of our brainwaves first as we experience emotions such as hate and anger and sorrow and then as they are changed after EFT. You will see them change from beta (alert, anxious) to alpha (relaxed) or possibly even theta (drowsy) after EFT processes the negative feelings.

She will work with a volunteer thinking about events in the past or present to bring up emotions, with five electrodes on his or her scalp and take and project an EEG measure at two sites. (The volunteer will not feel anything and will not be harmed in any way.)

On the following pages is some technical information that will help you get the most from this session.

BRAINWAVES

The language of the brain

Definitions

Our brain receives and gives information via our brain waves.

All information is coded electro-bio-chemically.

The EEG (electroencephalograph) measures brainwaves of different frequencies within the brain.

Electrodes are placed on specific sites on the scalp to detect and record the electrical impulses within the brain.

A frequency is the number of times a wave repeats itself in a second.

It can be compared to the frequencies that you tune into on your radio.

If any of these frequencies are deficient, excessive, or difficult to access, our mental performance can suffer.

The raw EEG has usually been described in terms of frequency bands:

Gamma (greater than 30Hz)

BETA (13-30Hz),

ALPHA (8-12 Hz),

THETA (4-8 Hz),

DELTA (less than 4 Hz).

For example: Our brain uses 13Hz (high alpha or low beta) for "active" intelligence.

Often we find individuals who exhibit learning difficulties and attention problems have a deficiency of 13Hz activity in certain brain regions that affects the ability to easily perform sequencing tasks and math calculations.

Brain Wave Frequencies:

DELTA (0.1 to 3.9 Hz)

The lowest frequencies are delta. These are less than 4 Hz and occur in deep sleep and in some abnormal processes. It is the dominant rhythm in infants up to one year of age and it is present in stages 3 and 4 of sleep. It tends to be the highest in amplitude and the slowest waves. We increase Delta waves in order to decrease our awareness of the physical world. We also access information in our unconscious mind through Delta.

Peak performers decrease Delta waves when high focus and peak performance are required. However, most individuals diagnosed with Attention Deficit Disorder, naturally increase rather than decrease Delta activity when trying to focus.

The inappropriate Delta response often severely restricts the ability to focus and maintain attention.

It is as if the brain is locked into a perpetual drowsy state. Another way to look at Delta is to imagine you are driving in a car and you shift into 1st gear....you're not going to get anywhere very fast. So Delta would represent 1st gear.

DELTA (0.1-3.9 Hz): Distribution: generally broad or diffuse; may be bilateral, widespread

Subjective feeling states: deep, dreamless sleep, non-REM sleep, trance, unconscious

Associated tasks & behaviors: lethargic, not moving, not attentive

Physiological correlates: not moving, low-level of arousal

Effects of training: can induce drowsiness, trance, deeply relaxed states

THETA (4-8 Hz)

The next brainwave is theta. Theta activity has a frequency of 3.9 to 7.8 Hz and is classed as "slow" activity.

It is seen in connection with creativity, intuition, daydreaming, and fantasizing and is a repository for memories, emotions, sensations.

Theta waves are strong during internal focus, meditation, prayer, and spiritual awareness. It reflects the state between wakefulness and sleep and relates to the subconscious mind.

It is abnormal in awake adults but is perfectly normal in children up to 13 years old. It is also normal during sleep.

Theta (cont.)

Theta is believed to reflect activity from the limbic system and hippocampal regions.

Theta is observed in anxiety, behavioral activation and behavioral inhibition.

When the theta rhythm appears to function normally it mediates and/or promotes adaptive, complex behaviors such as learning and memory.

Under unusual emotional circumstances, such as stress or disease states, there may be an imbalance of three major transmitter systems, which results in aberrant behavior.

Back to our car example, Theta would be considered 2nd gear. Not as slow as 1st gear (Delta) but still not very fast.

THETA (3.9-7.8 Hz): Distribution: usually regional, may involve many lobes, can be lateralized or diffuse;

Subjective feeling states: intuitive, creative, recall, fantasy, imagery, creative, dreamlike, switching thoughts, drowsy; "oneness", "knowing"

Associated tasks & behaviors: creative, intuitive; but may also be distracted, unfocused

Physiological correlates: healing, integration of mind/body

Effects of Training: if enhanced, can induce drifting, trance-like state. If suppressed, can improve concentration, ability to focus attention

ALPHA (8-12 Hz)

Alpha waves are those between 8 and 12(Hz).

Alpha waves will peak around 10Hz.

Good healthy alpha production promotes mental resourcefulness, aids in the ability to mentally coordinate, enhances overall sense of relaxation and fatigue. In this state you can move quickly and efficiently to accomplish whatever task is at hand. When Alpha predominates most people feel at ease and calm.

Alpha appears to bridge the conscious to the subconscious.

It is the major rhythm seen in normal relaxed adults - it is present during most of life especially beyond the thirteenth year when it dominates the resting tracing.

Alpha (cont)

Alpha rhythms are reported to be derived from the white matter of the brain. The white matter can be considered the part of the brain that connects all parts with each other. Alpha is a common state for the brain and occurs whenever a person is alert (it is a marker for alertness and sleep), but not actively processing information. They are strongest over the occipital (back of the head) cortex and also over frontal cortex. Alpha has been linked to extroversion (introverts show less), creativity (creative subjects show alpha when listening and coming to a solution for creative problems), and mental work. When your alpha is within normal ranges we tend to also experience good moods, see the world truthfully, and have a sense of calmness.

Alpha is one of the brain's most important frequency to learn and use information taught in the classroom and on the job.

You can increase alpha by closing your eyes or deep breathing or decrease alpha by thinking or calculating.

Alpha-Theta training can create an increase in sensation, abstract thinking and self-control. In our car scenario, Alpha would represent neutral or idle. Alpha allows us to shift easily from one task to another.

ALPHA(8-12 Hz): Distribution: regional, usually involves entire lobe; strong occipital w/eyes closed

Subjective feeling states: relaxed, not agitated, but not drowsy; tranquil, conscious

Associated tasks & behaviors: meditation, no action

Physiological correlates: relaxed, healing

Effects of Training: can produce relaxation

Sub band low alpha: 8-10: inner-awareness of self, mind/body integration, balance

Sub band high alpha: 10-12: centering, healing, mind/body connection

BETA (above 12 Hz)

Beta activity is 'fast' activity. It has a frequency of 14 and greater Hz. It reflects desynchronized active brain tissue.

It is usually seen on both sides in symmetrical distribution and is most evident frontally. It may be absent or reduced in areas of cortical damage.

It is generally regarded as a normal rhythm and is the dominant rhythm in those who are alert or anxious or who have their eyes open.

Beta cont

It is the state that most of brain is in when we have our eyes open and are listening and thinking during analytical problem solving, judgment, decision making, processing information about the world around us.

Beta would represent overdrive or hyperdrive in our car scenario.

The beta band has a relatively large range, and has been divided into low, midrange and high.

LOW BETA (12-15HZ): Distribution: localized by side and by lobe (frontal, occipital, etc)

Subjective feeling states: relaxed yet focused, integrated

Associated tasks & behaviors: low SMR can reflect "ADD", lack of focused attention

Physiological correlates: is inhibited by motion; restraining body may increase SMR

Effects of Training: increasing SMR can produce relaxed focus, improved attentive abilities,

MID BETA (15-18hz): Distribution: localized, over various areas. May be focused on one electrode.

Subjective feeling states: thinking, aware of self & surroundings

Associated tasks & behaviors: mental activity

Physiological correlates: alert, active, but not agitated

Effects of Training: can increase mental ability, focus, alertness

HIGH BETA (above 18hz): Distribution: localized, may be very focused.

Subjective feeling states: alertness, agitation

Associated tasks & behaviors: mental activity, e.g. math, planning

Physiological correlates: general activation of mind & body functions.

Effects of Training: can induce alertness, but may also produce agitation

GAMMA (above 30 Hz)

GAMMA (above 30hz Hz): Distribution: very localized

Subjective feeling states: thinking; integrated thoughts

Associated tasks & behaviors: high-level information processing, "binding"

Physiological correlates: associated with information-rich task processing

Effects of Training: not known

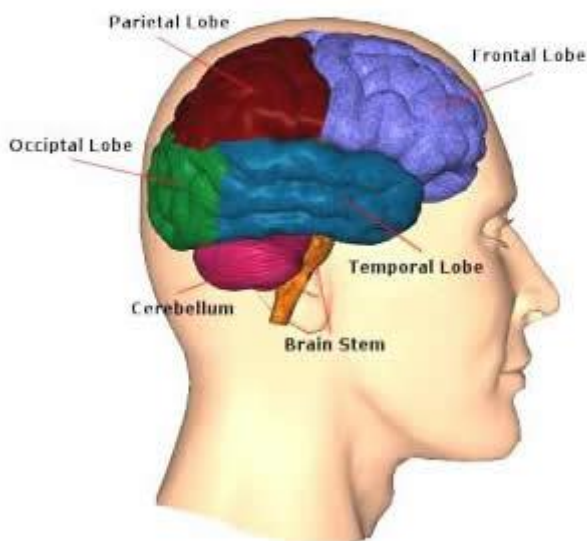
Gamma cont.

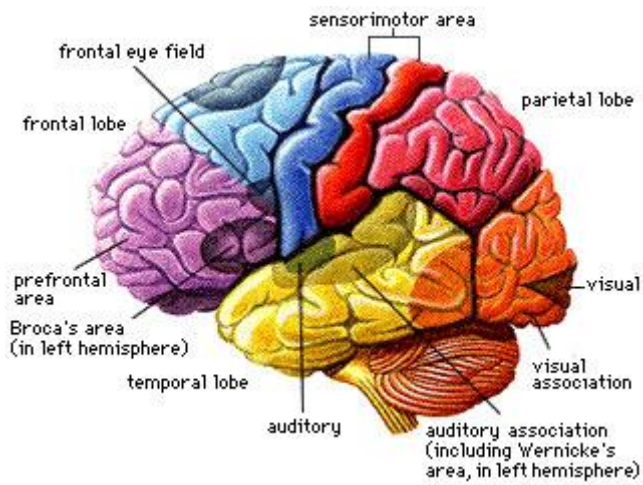
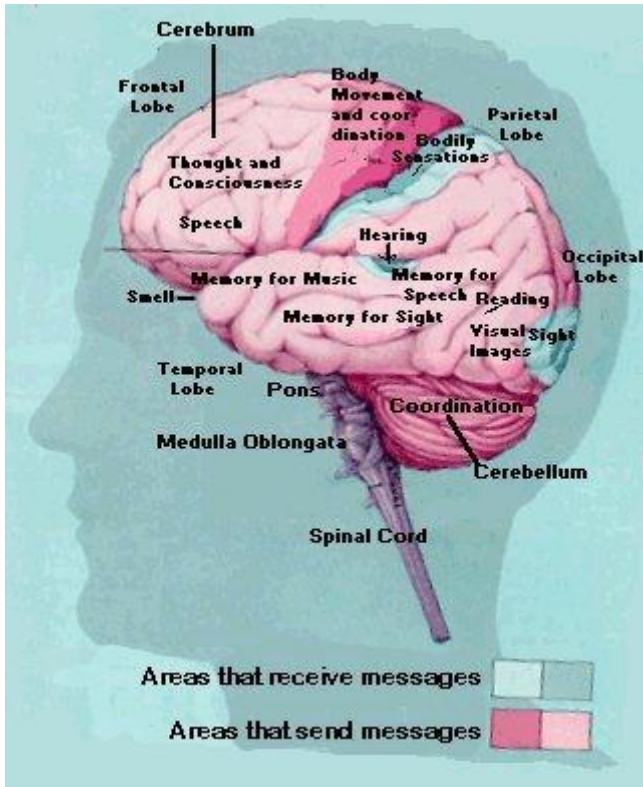
Gamma is measured between 30 and 44 (Hz) and is the only frequency group found in every part of the brain.

When the brain needs to simultaneously process information from different areas, it's hypothesized that the 40Hz activity consolidates the required areas for simultaneous processing.

A good memory is associated with well-regulated and efficient 40Hz activity, whereas a 40Hz deficiency creates learning disabilities.

Regions of the Brain





Dr Inci Erkin EFT Master

www.eftturkey.com

iletisim@eftturkey.com

drekin@gmail.com