



Brain Wave Patterns

*Master Teacher Training Anatomy
Assignment*

Written by Rossi Postler

My understanding of the different brain wave patterns, how they relate to Yoga and their overall effect on your practice on and off the mat.

Electrical activity emanating from the brain is displayed in the form of brainwaves. There are four categories of these brainwaves, ranging from the most activity to the least activity.

When the brain is aroused and actively engaged in mental activities, it generates beta waves.-it is the pattern of waking consciousness. These beta waves are of relatively low amplitude and are the fastest of the four different brainwaves (13 to 100+ Hertz). Beta waves are characteristics of a strongly engaged mind. As a Yoga teacher, teaching a class, I would be in beta state. Higher-end beta-waves also occur during times of distress and anxiety or dysfunctional and addictive behavior.

Alpha brainwaves are slower, and higher in amplitude (8 to 12.9 Hertz). A person who has completed a task and sits down to rest is often in an alpha state. Alpha waves create a relaxation response and at the higher end of its range, it produces a super learning state. Deep alpha waves are connected with peace and contentment.

In Yoga, a person would be in the alpha state during Savasana, where we use the time to heal the body and where we get a relaxation response.

Theta brainwaves are typical of even greater amplitude and slower frequency (4 and 7.9 Hertz). It is the pattern of rapid eye movement REM, dreamless sleep. It is associated with creativity, memory, and healing. A person who has taken time off from a task and begins to daydream is often in a theta brainwave state.

It is a state where tasks become so automatic that you can mentally disengage from them. The ideation that can take place during the theta state is often free flow and occurs without censorship or guilt. It is typically a very positive mental state.

During meditation, we would be in theta, but I also understand if my self-practice becomes a moving meditation, I would be in theta state. When I am completely connected with my body mind and breath and they all flow together, I would be in theta.

In delta, the brainwaves are of the greatest amplitude and slowest frequency-0.1 to 3.9 Hertz. They never go down to zero because that would mean that you were brain dead. A great feeling of unity and oneness is experienced in delta. It is possible to be alert in this state if there is a little amount of beta, alpha or theta patterns present.

This would be a state of deep meditation.

We create some combination of all of those wave patterns at all times, but usually and for most people, the beta waves are the most dominant brain wave patterns. If we learn how to relax and how to meditate, calm ourselves down through techniques like Yoga, Meditation and Pranayama, we could possibly change these patterns, especially in cases of anxiety, stress, addictions, etc. Challenges that most people struggle with nowadays.

How I would explain the brain wave patterns to a beginner class

Electrical activity emanating from the brain is displayed in the form of brainwaves. There are four categories of these brainwaves, ranging from the most activity to the least activity: Beta, Alpha, Theta and Delta.

We create some combination of all of those wave patterns at all times, but usually and for most people, the Beta waves are the most dominant brain wave pattern, typically when we are mentally engaged, but also, interestingly enough, when we are distressed, anxious or showing addictive behavior.

When we slow down and become more focused on a task, for example during your yoga practice, we move to low beta and eventually to Alpha, when we are in Savasana for example, where we often experience a relaxation response.

Through Meditation and also Pranayama we move to Theta, eventually to Delta, where we are still alert, but in a more calm and meditative state.

So this shows us that we could change our brain wave patterns through techniques like Yoga, Meditation, and Pranayama and possibly heal ourselves from challenges like anxiety, stress, addictive behavior.