

## Meditation and Brain Waves Patterns

Deep meditation creates new neural pathways to the brain that lead to whole brain functioning. This means that now, both sides of the brain (are synchronized and) work together rather than operating with one side or the other side of the brain at any one moment.

Brain wave patterns, Beta, Alpha, Theta and Delta are generated in the brain and are detailed as follows: In deep meditation we slow down the brain waves from Beta to Alpha to Theta to Delta (via deep meditation,) and there is a corresponding increase in balance between the two hemispheres of the brain. This more balanced brain state is called brain synchrony, or brain synchronization. As the brain waves slow down and the brain balances, we are able to tap into what scientists call whole-brain thinking, or whole-brain functioning. The result is greater learning ability, enhanced mental clarity, better memory, greater self-awareness and increased problem solving abilities. The mind becomes sharper and new ideas flow. Anti stress hormones go up while hormones that are linked to aging go way down. Problems like anger, stress, anxiety, depression, substance abuse, sadness, over eating habits will tend to go away automatically.

**Beta stage:** The pattern of normal waking consciousness is called a Beta brain wave pattern. At the high end you feel dizziness, anxiety and disharmony. In other words you feel unbalanced, while at the low end you feel alert, in control and able to solve problems. In the Beta stage both sides of the brain tend to take turns dominating one another.

**Alfa stage:** This is the stage when the brain becomes more balanced, with no domination by either side. Eg. When you are reading a book and get completely absorbed in it with no awareness of a disturbing environment around you. As you become more relaxed, your brain wave activity slows into what is called an alpha brain wave pattern. Alpha patterns vary from deep alpha, a state of deep relaxation, (often referred to as the twilight state between sleep and waking) to the higher end of alpha that is a more focused, yet still a very relaxed state. Alpha is often associated with what is known as "super learning"—the ability to learn, process, store and recall large amounts of information quickly and efficiently.

**Theta stage:** This is a deep meditation stage. It can be best described as a dream like stage, pre-sleep or pre-awaken stage (or deep meditation stage). The brain becomes more balanced and communicates with the unconscious mind. Although the Theta stage is best known as the dreaming sleep stage, it is also associated with a number of other beneficial states, including increased creativity, some kinds of super learning and especially increased memory. When you are accompanied by bursts of theta waves in your brain, you will experience an insight like "Ah-ha!" "I get it," when a great idea suddenly comes to you. Best of all, the Theta stage brings about

a state of tremendous stress relief. In the slower theta brain wave pattern, the brain makes lots of relaxing endorphins that melt all your stress away.

**Delta stage:** This super deep meditation stage is dreamless sleep, collective consciousness and total alertness. This is the slowest brain wave pattern and generally people are asleep in the delta stage, but there is evidence that it is possible to remain alert in this state—a very deep, trance-like, non-physical state you would have to experience to appreciate. In certain delta frequencies the brain releases many highly beneficial substances, including human growth hormone (HGH). As we get older, decreasing quantities of HGH results in many aging symptoms including loss of muscle tone, increased weight gain, loss of stamina, and many diseases associated with aging.

Researchers at the University of Wisconsin announced to the media in 1990 that they had injected a synthetic Human Growth Hormone into a small group of elderly people between the ages of 61 and 81. The result was a sudden rejuvenation that reversed biological aging by as much as 20 years! These treatments were, unfortunately, very expensive and the effects disappeared when the treatments were discontinued. The good news is you can duplicate the same results via deep meditation.

HGH:

According to researchers, our levels of HGH begin to drop around the age of 30 and continue to drop at a consistent rate and diminish by as much as 80% or more over time.

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Here are some of the benefits of HGH:

- Improved immune and cardiac function
- Improved bone density and quicker healing time
- Improved memory and mental clarity
- Increased muscle tone
- Increased energy, strength and endurance
- Thicker and fuller hair
- Decrease in body fat
- Reduction of wrinkles, tighter, and smoother skin
- Better deep sleep experiences

Recent research performed by Dr. Vincent Giampapa, M.D., a prominent anti-aging researcher and past-president of the American Board of Anti-Aging Medicine, revealed that deep meditation also dramatically affects production of three important hormones related to increased longevity,

lower stress, and enhanced well-being: Cortisol  
DHEA(Dehydroepiandrosterone), and Melatonin.

First, meditation can *decrease* Cortisol, a hormone naturally produced by the adrenal glands. This is a major age-accelerating hormone. It also interferes with learning and memory and is, in general, bad news for your health and your well-being. The more of it you have, the more stressed you feel, the more susceptible to disease you are and the faster you age!

Second, meditation can *increase* DHEA ((Dehydroepiandrosterone)) hormone, which is also produced by the adrenal glands. DHEA is an important source ingredient that virtually every hormone in your body needs. Your DHEA level is a key determinant of physiological age and resistance to disease. When levels are low, you're more susceptible to aging and disease; when they're high, the body is at its peak—vibrant, healthy, and able to combat disease effectively. It acts as a buffer against stress-related hormones (such as Cortisol), which is why as you get older and make less DHEA you are more susceptible to stress and disease.

Third, meditation can *increase* Melatonin. As everyone knows, this is a hormone that helps to create restful sleep. We make less of it as we age, and since during sleep many important rejuvenating substances are created in the brain, the inability to sleep soundly can dramatically decrease the quality of your life and greatly accelerate the aging process. New research also reveals that it is a powerful antioxidant. In fact, it is even more powerful than Vitamin E.

Tony U-Thasoonthorn  
Founder/President  
The International Foundation for Inner Peace  
[Info@Intlfip.Org](mailto:Info@Intlfip.Org)  
[www.intlfip.org](http://www.intlfip.org)

Also:

Founder/Director  
The International Meditation Club  
[Info.Thai@Intlmedclub.Org](mailto:Info.Thai@Intlmedclub.Org)  
[www.intlmedclub.org](http://www.intlmedclub.org)