

## What Science Tells Us About Meditation on Twin Hearts and Our Brain

Glenn J Mendoza, MD, MPH and Maria Nichole Perez, MD

Ancient wisdom and spiritual teachers have been telling us for centuries that meditation will make us happier and a better person. Now the scientists, doctors and researchers tell us it is good for our health and minds.

People are drawn to practice meditation for many different reasons. Some meditate because of a physician's recommendation, seeking the health benefits of stress relief, lowering the blood pressure or getting restful sleep. Others seek meditation to



quiet their fiery mind. Still others try meditation to find greater self-understanding and ask more ennobled reasons such as seeking inner peace, stillness, bliss or to experience divine oneness.

The mind is a chattering monkey that one tries to keep quiet in meditation. But hundreds of thousands of meditators throughout the world know that the basic way of working with the mind is through the regular practice of Meditation on Twin Hearts. Science now has already proven that doing Meditation on Twin Hearts restructures our brain. In fact, current findings have shown that people who meditate even in small doses can remodel the electrical patterns of the brain that can help optimize mental functioning.

Using Quantitative Brain Waves or EEG Studies, Jeff Tarrant, Ph.D. and Neus Raines, Ph.D., researchers from Columbia, Missouri and San Diego, California saw differences between the brain waves of experienced meditators and non-meditators. In their recent study presented at the 1<sup>st</sup> Pranic Healing Research and Development Conference in Bogota, Colombia in September 2015, Tarrant and his colleagues compared the brain waves of 12 experienced meditators and 12 age-

matched non-meditators and found that the experienced meditators (who have an accumulated meditation practice of over 1,000 hours) had significantly more gamma brain waves (30-90 Hz) at pre- and post- tests. These brain wave patterns were found particularly at the anterior and posterior cingulate cortex suggesting increased integration and activation of key brain regions and ability to modulate attention and state of alertness. This Meditation on Twin Hearts study was presented by the author (Perez) at the Academy of Integrative Health and Medicine Conference in San Diego, California in October of 2015 achieving first place in the poster presentation session.

*“Benefits of increase gamma brain wave activity include an improvement in memory recall, sensory perception, ability to synthesize information, more focused attention, increase in compassion and feeling of oneness as well as more joy and peace.”*

Gamma brain waves play a role in assimilating perceptions and have been noted to be increased in experienced meditators even when they are not meditating. Increased gamma waves are observed in high levels of cognitive functioning particularly in successful professional athletes, entertainers and high-performing professional musicians when they are “in the zone.” “In the zone” is an expression to describe a state of consciousness where actual skills match perceived requirements perfectly. It also implies increase focus and attention that allows higher level of performance. Increase gamma waves were also noted in Celestine nuns, Tibetan monks, and experienced meditators when they experience deep feelings of God’s blessings. Benefits of increase gamma brain wave activity include an improvement in memory recall, sensory perception, ability to synthesize information, more focused attention, increase in compassion and feeling of oneness as well as more joy and peace.

More and more neuroscientists and physicians, like Mendoza and Perez, have started to think that learning to meditate to train the mind to learn mental skills is no different from physical exercises as an approach to train the physical body for fitness. As we physically shower several times every day, it is also important to have a spiritual shower through meditation. The essence of meditation is singular: to reach a deep state of relaxation, calm the emotions, still the mind and expand one’s consciousness.

A Happy Healthy Brain equates to a Happy Life. An excellent question to ask is ‘Does Meditation on Twin Hearts Make One Happy?’ Research studies on meditations have shown a relationship between production of neurotransmitters such as serotonin, oxytocin, and dopamine and happiness.

The author's (Mendoza) early research studies on neurophysiologic parameters such as electromyogram (EMG), skin conductance, skin temperature, heart rate, respiratory rate, blood pressure, oxygen level

*“Increase your Gamma Waves.  
Start Meditating!”*

and encephalogram (EEG) were measured in meditators and non-meditators before and after doing Meditation on Twin Hearts. Results showed decrease heart rate and respiratory rate by 15-20%, significant muscle potential measurement by EMG indicating muscle relaxation and positive skin conductance. EEG findings revealed increase in alpha, theta and delta waves and notable brain synchronization. Mendoza believes that synchronicity translates the use of the entire brain that can assimilate, process, and speed up whole brain functions.

Mendoza and colleagues did a follow-up study looking into the relationship of Meditation on Twin Hearts with neurohormones and neuropeptides. This showed increased melatonin in serum of up to 300% and serotonin levels after Meditation on Twin Hearts. Melatonin has been noted to correct sleep-wake patterns and prevent aging.

Dr. Neus Raines reported use of qualitative EEG study using newer technological methods including the P300 and sLoreta during Meditation on Twin Hearts. All experienced meditators showed increased scores, emerging positive emotions such as happiness and calmness and decrease anxiety after the meditation. The P300 values, which indicate faster reaction times changed significantly post meditation.

We do not yet know how brain studies can interpret deeper levels of experiences with advanced meditations such as bliss, deepening soul contact, divine oneness or out-of-body-experiences. But we do know enough about how to experience deep stages of meditations. The preliminary EEG studies on the Meditation on Twin Hearts are similar to published studies with long term and experienced meditators such as Buddhist monks and Zen practitioners. Of note is that Meditation on Twin Hearts is practiced by hundreds of thousands of people of different religions including Hindus, Christians, Jews, Buddhists, Muslims, Sikhs, Jains who practice this meditation as well as other cultures and philosophies worldwide.

So do not just assume your brain is restructuring – do something about it. Open up new experiences and possibilities as you engage with your brain. Increase Your Gamma Waves. Start Meditating!