



Scientists prove Meditation Increases Brain's Processing Capacity

Dr. Ravi Shankar, Bangalore, India

Meditation is not a new thing to India. Being the land of oldest civilizations, rich in heritage and ancient, India conceals many truths and facts of life which westerners first rejected due to huge gap between their time, history of our science and its maintenance, giving large disbelief in vedic practices and vedic science, fully discouraged by rulers and governments of modern India.

But every now and then, prestigious research institutions are coming with results validating the vedic practices. Addition to this is recent scientific experiment results coming in strong support of Vipassana meditation enhancing the brain processing capacity. The work has been reported recently by Rachel Jones, in a prestigious scientific journal, Plos Biology, May 2007 edition.

Vipassana is a vedic meditation over self where the subject concentrates upon the body and soul system and senses of weightlessness and nullity is generated. This method of meditation was rediscovered many times in many other forms in India, out of which Buddhist methodology got most popularity and has become synonymous to vipassana meditation in present time.

The neural system of body works under the influence of constant inputs generating sensory responses, called stimulus. The whole process is carried on by the voltage differences generated across the cell membranes, where the cell membrane behaves like a capacitor and metal ions like sodium-potassium, Magnesium-calcium and chlorides etc maintain the electric potential difference across the two sides of cell membrane's at equilibrium. Whenever there is a disturbance in that equilibrium a sensation is felt through stimulus.

Our attention to objects are matter of visual stimuli, over which this group worked. Every object which we see with attention, induces stimulus in our brain. This allocates processing space in our brain to process and infer the visualization of the object. The time consumed for this whole process is called "Attentional Blink", a phase during which, if the observing brain is exposed to another consecutive unrelated

stimulus, becomes unable to process and recognize it, due to occupied processors of brain. This is the cause behind our attention, learning capacity and multitasking.

This group of scientists proved that by performing vipassana meditation, the brain reduces the blink period and becomes more attentive. The blink has nothing to do with the structure and architecture of brain and it can be enhanced with practice.

Three different groups were prepared. One group underwent extensive vipassana training for 3 months(10-12 hours) while another group of novice learners (armatures) practiced vipassana only for 20 minutes per day, while the third group was of people who did not practice vipassana or any meditation. Patient's brain's waveform during learning or observation process was measured, which is directly proportional to the amount of processors of brain involved in processing. This was noticed that blink period was reduced in meditating people and they were able to detect targets in the period which was earlier a blink period for them.

This finding was further corroborated with study over event related potentials—electrical changes associated with neural responses to sensory stimuli or cognitive tasks, which can be recorded through the scalp, for memory allocation. When event-related potentials are recorded from subjects during the attentional blink task, a noticeable electrical change—called the P3b—is associated with the appearance of the first target. This event is believed to reflect the allocation of resources to the target.

The P3b was smaller for the group trained for three months, means the potential consumed was lower and was utilised to detect second target in the same time of observations.

Finally a correlation study was done between the two different modules of the study at individual level too. The scientists found that individuals for whom the P3b potential was low were very able to learn more than one exercises withing the same blink time. There was a linear relationship between these two analyses, again suggesting



that meditation reduces the resource consumption and frees them for computation of other tasks by the brain to gain stimulus. Larger attention blinks are due to more allocation of processing space by the brain which reduces the capacity to do multitasking.

So, what our vedic practitioners did is now being proved scientifically. We can say that the problem is with the pace of science to catch up with spirituality which is the advanced version of science and truth and becomes general when it's

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dealt successfully by a science. Einstein proved that things can move faster than light but still for us vision is defined by only those 7 colors sensations and fit the popular phrase: Seeing is believing!

About the Author: *Dr. Ravi Shankar is Bio computing scientist working at Bioinformatics Division, Jubilant Biosys., Bangalore. He can be reached at Ravish9@gmail.com*