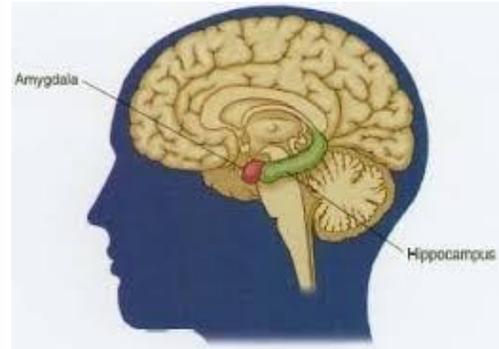


Neurogenesis: The Amygdala and the Hippocampus

by Joseph Lucier LMT

The topic this time for our series on *Points to Ponder*, is about neurogenesis. With the Tam Healing System, we focus a lot on nerves. Removing a blockage, allowing the unimpeded flow of bioelectricity to flow throughout the body by way of the central nervous system (CNS), can have tremendously positive impacts on healing and well-being. Accessing the CNS is a major strategy of our healing system.



Since nerves are so crucial to our body-wide communications and maintenance, it is good to understand that nerves can regenerate. Up until the 1990s it was believed that neurons do not regenerate, especially in the brain. Since that time, this idea that neurons do not regenerate has been scientifically disproved again and again. Neurogenesis or nerve regeneration is a reality.

Until Fred Gage published his revolutionary findings on adult hippocampal neurogenesis in 1998 (1), it was widely accepted that the adult human brain did not produce new neurons. By marking adult human brain cells Fred Gage and his colleagues demonstrated that the human brain generates new neurons throughout life.

[New neurons] are generated from dividing progenitor cells in the dentate gyrus of adult humans. Our results further indicate that the human hippocampus retains its ability to generate neurons throughout life.

Imagine all the possibilities that exist if we regenerate neurons. This means that functions such as memory [amygdala], body movement and overall cognitive function can be enhanced and deliterious conditions related to them such as memory loss, Alzheimers and even autism and brain cancer can be reversed. For the case of autism, science has proven that adult autistic patients have a significant shortage of neurons in the amygdala, the area which manages social and emotional habits and practices.

Neurogenesis and Brain Plasticity

Science has now located the main area for neurogenesis, the hippocampus. This capability is called brain plasticity. Neuroscientist Magistretti of the University of Geneva states:

Neuroplasticity means that the connections between brain cells alter with experience, either growing stronger or weakening depending on the nature of the experience itself. This concept is mirrored in the ideas of psychoanalysis and the impact of life experiences on our psyche.

"The idea is that the trace for neuroscience and the trace for psychoanalysis are based on the biological facts, which are those of neural plasticity. These are a set of mechanisms by which our brain encodes experience - how we learn, how memory works and how life experience leaves traces in our brain," Magistretti said.

Tong Ren - Opening a Blockage for Neurogenesis

From our Tong Ren healing perspective, we can access these areas to encourage and support neurogenesis and the hippocampus and all body and brain recipients of neurogenesis including the adjacent amygdala.

STEP 1: Tian Dong: Blood supply: Posterior Cerebral Artery accessed primarily from the vertebral artery and the basilar artery.

STEP 2: GB11 and 12: Hippocampus - Located on top of the brain stem

STEP 3: SI19: Amygdala - Located at the end of the hippocampus

Keep Tapping: Focus - Challenge - Reward

In addition to our excellent access of the brain through Tong Ren, there are additional factors for neurogenesis. The first is that these 3 points, also stimulate neurogenesis.

Focus: When we focus our attention on a particular task or problem, the nucleus basalis, a deeply-nestled region of the brain's dentate gyrus, secretes a substance called acetylcholine. Acetylcholine triggers the hippocampus to hold on to the memories being formed. The more we focus, the more we remember.

Challenge: By focusing on a challenging task for a sufficient period of time we encourage the brain to devote more resources to the brain functions being tested.

Reward: Success at a challenging task creates a sense of achievement and satisfaction, triggering the release of dopamine (the "happy" chemical). Acetylcholine and Dopamine *together* stimulate new neural growth (neurogenesis) and brain plasticity. (2)

These points are important to note because this is an explanation about what happens when we tap on the doll, especially when doing a group healing class. Not only are we connecting to the collective unconscious, we are also giving our own brain a workout. With that said, I highly recommend patients to work on themselves too.

Additionally, exercise has been shown to improve neurogenesis. This makes sense, improved oxygen and movement improves almost anything, especially for the brain. But, another interesting finding surfaced while testing the efficacy of exercise on neurogenesis. There was another factor which greatly influenced the rate of neurogenesis, social

contact. Not surprisingly, the amygdala which manages memory and proper social interactions, is right next to the hippocampus. Science has shown that, exercise alone, without companions, is the least effective in terms of neurogenesis. When subjects were in a group, neurogenesis greatly improved.

Conclusion

The human mind, our nervous systems, our local and collective unconsciousness is capable of amazing feats. It is important to note the oneness of all these great resources and opportunities that unite us all. When treating someone with Tong Ren, we are connecting to these resources and helping our patients but also, as we noted above, we are enhancing our own brain. It is hard to deny that we don't FOCUS on the Tong Ren doll, that we have a CHALLENGE of treating successfully and getting the right points, and we have REWARD through confidence, empowerment and compassion when people get well. This I believe, of course also occurs for the patient. But more specifically, for the patient, we go to our core philosophy of opening a blockage. In the case of nerves, the body has the power to regenerate nerves and heal which is the main directive of our body and nature itself. By using our Tong Ren techniques, we can significantly improve the body, remove blockages, enhance neurogenesis, positively impact disease and reduce suffering.

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1. *Nature Medicine* 4, 1313 - 1317 (1998) doi:10.1038/3305, www.mindsparke.com retrieved 9/25/2013
 2. *Mind Sparke Brain Site*, Adult Neurogenesis, http://mindsparke.com/adult_neurogenesis_hippocampus.php