The Effects Meditation Has on the Mind and Brain

There are many tools that we can use to help improve our mind or brain in various ways. One very effective tool is meditation and the way it can affect our thoughts. Thoughts being at the core of our brain activity, we can use meditation to analyze and reflect on them. Many people resort to meditation to deal with disturbing thoughts that preoccupy their mind. Martine Batchelor describes one of the five ways to deal with disturbing thoughts by Contemporary Buddhism, "The first suggestion the Buddha makes is that 'if some unskilled thoughts associated with desire, aversion or confusion arise and disturb the mind, you should attend instead to another characteristic, which is associated with what is skilled'. He compares this to 'a skilled carpenter who can knock out a large peg with a small peg'" (Batchelor at 161) It appears Buddha is asserting that we can use a strong focused thought to eliminate a larger disturbing one.

Through focused meditation our mind can be enlarged and enlightened to a level of mindfulness. Batchelor further concludes: "As we continue with meditation, it grants the mindfulness two powerful aspects: acceptance and transformation. We can only accept something that we can see clearly without rejection or desire. And when we can see both inner states of mind and outer situations with clarity and acceptance, then we may find the strength and capacity to transform them." (Batchelor at 164) When we go back behind the curtain in our minds to reflect on our thoughts, we gain the power to understand and direct them.

Also, there have been studies that show the effects of meditation on our brains through the use of fMRI scans and other study methods. One article by Belle Cooper (a skeptic of meditation for years prior to this) presents some of these methods to capture these effects. She explains what she found about the effects that meditation has on different regions of the brain: “

Frontal lobe

This is the most highly evolved part of the brain, responsible for reasoning, planning, emotions and self-conscious awareness. During meditation, the frontal cortex tends to go offline.

Parietal lobe

This part of the brain processes sensory information about the surrounding world, orienting you in time and space. During meditation, activity in the parietal lobe slows down.

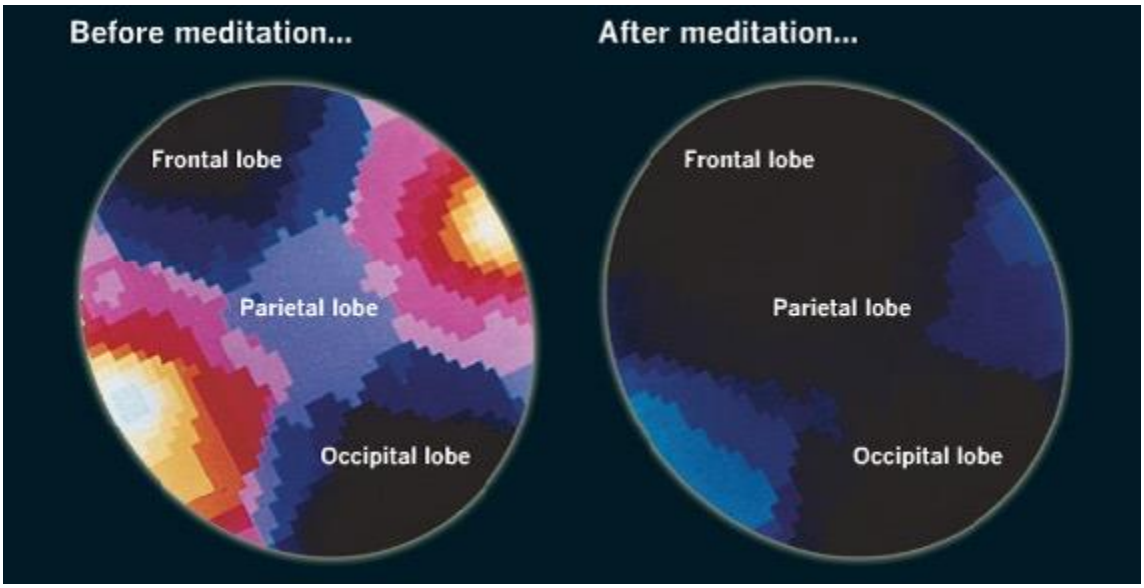
Thalamus

The gatekeeper for the senses, this organ focuses your attention by funneling some sensory data deeper into the brain and stopping other signals in their tracks. Meditation reduces the flow of incoming information to a trickle.

Reticular formation

As the brain’s sentry, this structure receives incoming stimuli and puts the brain on alert, ready to respond. Meditating dials back the arousal signal.” (Cooper)

"In the image below you can see how the beta waves (shown in bright colors on the left) are dramatically reduced during meditation (on the right)." (Cooper)



The dictionary describes beta waves as: "a pattern of high-frequency brain waves observed in normal persons upon sensory stimulation, especially with light, or when they are engaging in purposeful mental activity." The beta waves are also tagged with anxiety and stress; so one can assume that meditation reduces both stress and anxiety from this study.

Another similar take on the effects that meditation has on our brains is written by George Dvorsky. He says: "neuroscientists observing MRI scans have learned that meditation strengthens the brain by reinforcing the connections between brain cells. A 2012 study showed that people who meditate exhibit higher levels of gyrification — the "folding" of the cerebral cortex as a result of growth, which in turn may allow the brain to process information faster."(Dvorsky) He does take a step back to say that the research didn't prove directly that meditation "exhibits higher levels of gyrification" but that it does

show a link to a physical change in our brain. He also discusses how “open-monitoring (OM) meditation can promote idea generation. OM meditation is basically the polar opposite of focused attention meditation, requiring practitioners to non-reactively monitor the content of experience from moment to moment.” (Dvorsky)

A study was conducted to convey the effects that certain types of meditation have, the types include: mindful attention, compassion, and control. This was described in an article by Sue McGreevey and she quotes Desbordes, the guy that conducted the study, who says “We think these two forms of meditation cultivate different aspects of mind. Since compassion meditation is designed to enhance compassionate feelings, it makes sense that it could increase amygdala response to seeing people suffer. Increased amygdala activation was also correlated with decreased depression scores in the compassion meditation group, which suggests that having more compassion towards others may also be beneficial for oneself. Overall, these results are consistent with the overarching hypothesis that meditation may result in enduring, beneficial changes in brain function, especially in the area of emotional processing.” (Mcgreevey) The amygdala has been known to be important for emotion- and to the images that have emotion.

An important part of absorbing information is the use of concentration. Concentration meditation can serve well in this department. As described in the book called Luminous Mind, “By developing our ability to concentrate, we increase our capacity for integrating thoughts, fact, and information in a way that reveals deeper, more integral wisdom than that which is immediately apparent to the unfocused observer. The concentrated mind enables us to accelerate our growth and learning

because it provides more intuitive insight into the true nature and meaning of life."(Levey)

It is interesting to note how meditation has gone up and down in its popularity through the years. Although the popularity of meditation changes the idea and benefits of meditation remain constant. Since meditation reduces the "action" areas of our brain it's not surprising that it can lead to a reduction in stress and anxiety in our lives. Also the post by Belle Cooper also showed many of the potential benefits that meditation has. Some of the benefits include: less anxiety, more creativity, more compassion, better memory, less stress, and more gray matter.

Works Cited

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