

Biopsychological basis of mindfulness

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The term mindfulness is usually described as maintaining a non - judgmental moment - by - moment awareness of our thoughts, feelings, bodily sensations and surrounding environment. Person is consequently capable of being permanently aware. That can lead to physical relaxation, emotional balance, behavioral regulation, self - perception alternation and decentration. Mindfulness is known to have numerous positive effects, such as anxiety and depression decrease, prevention of depression relapse, suicide prevention and it can also be used as an alternative cure for diseases such as cancer, multiple sclerosis, Parkinson's disease and most importantly, for increasing general quality of life.

Our aim was to figure out, whether mindfulness influences brain in any possible way and if there are, despite of psychological, also any physiological changes. To achieve our goal, we have examined the online - available literature, especially articles and summed up the results.

We know that our connections and the structure of our brain can be changed if we are exposed to the same behavior over and over again. This phenomena called neuroplasticity is responsible and fundamental for alteration in our brain after mindfulness meditation training. Studies that compare non - meditations to the experienced ones have revealed differences in size and density of gray matter in prefrontal cortex, amygdala, and hippocampus - areas that are also responsible for memory, learning and regulation of emotions. Some researchers have also confirmed epigenetic changes in some regulatory genes after a sufficient period of regular meditation.

Mindfulness can reshape our brain and neurological findings can profoundly explain the well-known psychological changes that occur as a consequence of mindfulness based meditation. With this scientific evidences of beneficial effects we could use the meditation as a preventive or healing alternative in variety of psychological and physical problems.

Keywords: mindfulness meditation, neuroplasticity, brain alterations, epigenetic changes

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