Meditation may reduce anxiety, stress levels by altering brain's white matter

Researchers believe they have created the world's first mouse model of meditation by using light to trigger brain activity similar to what meditation induces.

Human experiments show that meditation reduces anxiety, lowers levels of stress hormones and improves attention and cognition. In one study of the effects of two to four weeks of meditation training, Michael Posner of the University of Oregon and colleagues discovered changes in the white matter in volunteers' brains, related to the efficiency of communication between different brain regions.

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Posner's team figured that [the changes in white matter were] related to changes in theta brainwaves …Meditation increases theta wave activity, even when people are no longer meditating.

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To test the theory, the team used optogenetics – they genetically engineered certain cells to be switched on by light.

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The team found that mice that received theta wave stimulation were less anxious than mice given light pulses that induced other kinds of brainwaves, or who had no treatment at all.

Posner says this mirrors meditation's ability to lower anxiety in humans and supports the involvement of theta waves in this effect.

[The study can be found here.]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: 'Meditating mice' reveal secrets of mindfulness training