

# Compassion meditation may boost neural basis of empathy, study finds

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The idea behind the compassion-based meditation is that "the feelings we have about people can be trained in optimal ways," says Lobsang Tenzin Negi, who developed the protocol.

(Medical Xpress)—A compassion-based meditation program can significantly improve a person's ability to read the facial expressions of others, finds a study published by Social Cognitive and Affective Neuroscience. This boost in empathic accuracy was detected through both behavioral testing of the study participants and through functional magnetic resonance imaging (fMRI) scans of their brain activity.

"It's an intriguing result, suggesting that a behavioral intervention could enhance a key aspect of empathy," says lead author Jennifer Mascaro, a post-doctoral fellow in anthropology at Emory University. "Previous research has shown that both children and adults who are better at reading the emotional expressions of others have better relationships."

The meditation protocol, known as Cognitively-Based Compassion Training, or CBCT, was developed at Emory by study co-author Lobsang Tenzin Negi, director of the Emory-Tibet Partnership. Although derived from ancient Tibetan Buddhist practices, the CBCT program is secular in content and presentation.

The research team also included senior author Charles Raison, formerly a psychiatrist at Emory's School of Medicine and currently at the University of Arizona, and Emory anthropologist James Rilling.

When most people think of meditation, they think of a style known as "mindfulness," in which practitioners seek to improve their ability to concentrate and to be non-judgmentally aware of their thoughts and feelings. While CBCT includes these mindfulness elements, the practice focuses more specifically on training people to analyze and reinterpret their relationships with others.

"The idea is that the feelings we have about people can be trained in optimal ways," Negi explains. "CBCT aims to condition one's mind to recognize how we are all inter-dependent, and that everybody desires to be happy and free from suffering at a deep level."

Study participants were healthy adults without prior meditation experience. Thirteen participants randomized to CBCT meditation completed regular weekly training sessions and at-home practice for eight weeks. Eight randomized control subjects did not meditate, but instead completed health discussion classes that covered mind-body

subjects like the effects of exercise and stress on well-being.

To test empathic accuracy before and following CBCT, all participants received fMRI brain scans while completing a modified version of the Reading the Mind in the Eyes Test (RMET). The RMET consists of black-and-white photographs that show just the eye region of people making various expressions. Those being tested must judge what the person in the photograph is thinking or feeling.

Eight out of the 13 participants in the CBCT meditation group improved their RMET scores by an average of 4.6 percent, while the control participants showed no increase, and in the majority of cases, a decrease in correct answers for the RMET.

The meditators, in comparison to those in the control group, also had significant increases in neural activity in areas of the brain important for empathy, including the inferior frontal gyrus and dorsomedial prefrontal cortex. These changes in brain activity accounted for changes in the empathic accuracy scores of the participants.

"These findings raise the intriguing possibility that CBCT may have enhanced empathic abilities by increasing activity in parts of the brain that are of central importance for our ability to recognize the emotional states of others," Raison says. "An important next step will be to evaluate the effects of CBCT on diverse populations that may particularly benefit from enhanced empathic accuracy, such as those suffering from high-functioning autism or severe depression."

Findings from the current study add to a growing database indicating that the CBCT style of meditation may have physical and emotional effects relevant to health and well-being. For example, [previous research](#) at Emory found that practicing CBCT reduced emotional distress and enhanced physical resilience in response to stress in both healthy young

adults and in high-risk adolescents in foster care.

Provided by Emory University

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