

Hutcherson, C. A., Seppala, E. M., & Gross, J. J. (2008). Loving-kindness meditation increases social connectedness. *Emotion, 8*, 720-724.

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A total of 93 participants with a mean age of 24 years were randomly assigned to one of two conditions: a guided loving-kindness meditation (LKM; n=45) or a neutral imagery control condition (IMAGERY; n=48). Each condition lasted approximately 7 minutes. In the LKM condition, participants were asked to imagine two loved ones standing to their side and sending their love. After four minutes, they were instructed to open their eyes and direct their feelings of love and compassion toward a photograph of a stranger (target stranger) that appeared on a monitor in front of them. Participants repeated a series of phrases to bring attention to the other and to wish them health, happiness and well-being. In the IMAGERY condition, participants were asked to imagine two acquaintances that they did not know very well and toward whom they did not have strong feelings. Participants were instructed to focus on the physical appearance of each acquaintance. After four minutes, they were instructed to open their eyes and look at a photograph of a target stranger and focus on the visual details of the stranger's face and imagine details of the stranger's appearance (e.g., what clothes they might be wearing). Before and after these periods of 7 minutes of meditation or control practice, various explicit and implicit measures were obtained. On measures of self-reported mood, participants in the LKM condition reported increased positive and somewhat less negative mood than participants in the IMAGERY control condition. The LKM participants showed a stronger positive evaluation of the target photograph following meditation compared with the IMAGERY group. The LKM participants but not the IMAGERY control participants reported increased feelings of positive affect to non-target neutral strangers. To assess implicit evaluative changes, participants were presented with an affective priming task. This task consisted of the presentation of faces followed by positive or negative words. Participants were instructed to judge as quickly and as accurately as possible whether the word was positive or negative. Implicit evaluations were determined by taking the difference between the average response time to positive and negative words following a particular prime. Participants in the LKM but not the IMAGERY condition became significantly more positive (i.e., faster response time to positive vs. negative words) following photographs of the target face. Changes in self-reported positive affect did not mediate this change in implicit evaluation. These findings indicate that very short-term practice of LKM induces explicit and implicit increases in positive affect toward strangers.