

Study finds Zen meditation alleviates pain

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Zen meditation - a centuries-old practice that can provide mental, physical and emotional balance - may reduce pain according to Université de Montréal researchers. A new study in the January edition of *Psychosomatic Medicine* reports that Zen meditators have lower pain sensitivity both in and out of a meditative state compared to non-meditators.

Joshua A. Grant, a doctoral student in the Department of Physiology, co-authored the paper with Pierre Rainville, a professor and researcher at the Université de Montréal and its affiliated Institut universitaire de gériatrie de Montréal. The main goal of their study was to examine whether trained meditators perceived pain differently than non-meditators.

"While previous studies have shown that teaching chronic pain patients to meditate is beneficial, very few studies have looked at pain processing in healthy, highly trained meditators. This study was a first step in determining how or why meditation might influence pain perception," says Grant.

Meditate away the pain

For this study, the scientists recruited 13 Zen meditators with a minimum of 1,000 hours of practice to undergo a pain test and contrasted their reaction with 13 non-meditators. Subjects included 10 women and 16 men between the ages of 22 to 56.

The administered pain test was simple: A thermal heat source, a computer controlled heating plate, was pressed against the calves of subjects intermittently at varying temperatures. Heat levels began at 43 degrees Celsius and went to a maximum of 53 degrees Celsius depending on each participant's sensitivity. While quite a few of the meditators tolerated the maximum temperature, all control subjects were well below 53 degrees Celsius.

Grant and Rainville noticed a marked difference in how their two test groups reacted to pain testing - Zen meditators had much lower pain sensitivity (even without meditating) compared to non-meditators. During the meditation-like conditions it appeared meditators further reduced their pain partly through slower breathing: 12 breaths per minute versus an average of 15 breaths for non-meditators.

"Slower breathing certainly coincided with reduced pain and may influence pain by keeping the body in a relaxed state." says Grant.

"While previous studies have found that the emotional aspects of pain are influenced by meditation, we found that the sensation itself, as well as the emotional response, is different in meditators."

The ultimate result? Zen meditators experienced an 18 percent reduction in pain intensity. "If meditation can change the way someone feels pain, thereby reducing the amount of pain medication required for an ailment, that would be clearly beneficial," says Grant.

Paper: *Psychosomatic Medicine*: [www.psychosomaticmedicine.org/ ...nt/abstract/71/1/106](http://www.psychosomaticmedicine.org/...nt/abstract/71/1/106)

Source: University of Montreal

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