

Mind Over Matter: Can Zen Meditation Help You Forget About Pain?

By [Meredith Melnick](#) Thursday, December 9, 2010

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Living without pain may not require potent drugs, according to a new study published in the medical journal *Pain* — all you need is a cushion, a quiet corner and maybe a mantra.

Previous research has found that people who practice Zen meditation are less sensitive to pain. For the new study, researchers at the University of Montreal aimed to figure out why. They exposed 13 Zen masters and 13 comparable non-practitioners to equal degrees of painful heat while measuring their brain activity in a functional magnetic resonance imaging (fMRI) scanner.

The meditators reported feeling less pain than the control group did. What's more, the Zen group reported feelings of pain at levels below what their neurological output from the fMRI indicated. In other words, their brains were receiving pain signals, but they weren't translating them to actual feelings of pain. **(More on Time.com: [Study: Acupuncture May Change the Way the Brain Perceives Pain](#))**

While the pain centers in the meditators' brains lit up, the areas of the brain responsible for higher-order processes like cognition, emotion and memory were understimulated. "Using functional magnetic resonance imaging, we demonstrated that although the meditators were aware of the pain, this sensation wasn't processed in the part of their brains responsible for appraisal, reasoning or memory formation. We think that they feel the sensations, but cut the process short, refraining from interpretation or labeling of the stimuli as painful," said lead author Pierre Rainville, a researcher at the University of Montreal, in a statement.

Indeed, ancient texts used in Zen practice address the distinction between the sensation of pain and the experience of it. The researchers write:

An ancient Eastern text describes two temporally distinct aspects of pain perception; the direct experience of the sensation and habitual, negative, mentation which follows. It was suggested that the so-called 'second dart' of pain could be removed via meditative training, obliterating the suffering associated with noxious stimulation. Remarkably, the first claim parallels modern science which has demonstrated that cognitive and affective factors can greatly influence painful experience.

Also called *zazen*, Zen meditation is self-focused, and meant to help practitioners view the self as merely an extension of the rest of the world. The *Pain* study is the second bit of good news this week regarding such mindfulness techniques. A separate paper in the *Archives of General Psychiatry* found that when patients who had recovered from depression used mindfulness-based cognitive therapy — in which patients learn to become aware of their thinking patterns when they feel depressed, and change negative mental responses like rumination to more positive ones like constructive reflection — they were able to prevent relapse nearly as effectively as those using antidepressant drugs. **(More on Time.com: [Forget Pain Pills, Fall in Love Instead](#))**

The studies add to the evidence that mindfulness techniques like meditation can be learned, and that they may help in the management of a variety of conditions. "The results suggest that Zen meditators may have a training-related ability to disengage some higher-order brain processes, while still experiencing the stimulus," said Rainville. "Such an ability could have widespread and profound implications for pain and emotion regulation and cognitive control."

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