

## “Spiritual State,” by James Shreeve *National Geographic*, March 2005

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For 2,500 years Buddhists have employed such strict training techniques to guide their mental state away from destructive emotions and toward a more compassionate, happier frame of being. Spurred by the cascade of new evidence for the brain’s plasticity, Western neuroscientists have taken a keen interest. Can meditation literally change the mind?



To focus the mind and increase awareness of self, Shingon Buddhists like Souei Sakamoto practice takigyō, chanting for hours while standing in frigid waterfalls at the Oiwasan Nissekiji Temple in Toyama, Japan

For the past several years

Richard Davidson and his colleagues at the University of Wisconsin–Madison have been studying brain activity in Tibetan monks, both in meditative and non-meditative states. Davidson’s group had shown earlier that people who are inclined to fall prey to negative emotions displayed a pattern of persistent activity in regions of their right prefrontal cortex. In those with more positive temperaments the activity occurred in the left prefrontal cortex instead. When Davidson ran the experiment on a senior Tibetan lama skilled in meditation, the lama’s baseline of activity proved to be much farther to the left of anyone previously tested. Judging from this one study, at least, he was quantifiably the happiest man in the world.

Davidson recently tested the prefrontal activity in some volunteers from a high-tech company in Wisconsin. One group of volunteers then received eight weeks of training in meditation, while a control group did not. All the participants also received flu shots. By the end of the study, those who had meditated showed a pronounced shift in brain activity toward the left, “happier,” frontal cortex. The meditators also showed a healthier immune response to the flu shot, suggesting that the training affected the body’s health as well as the mind’s.

“You don’t have to become a Buddhist,” says the Dalai Lama himself, who is closely following the work of Western cognitive scientists like Davidson. “Everybody has the potential to lead a peaceful, meaningful life.”