

Researchers find yoga helps ease stress related medical and psychological conditions

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An article by researchers from Boston University School of Medicine (BUSM), New York Medical College (NYMC), and the Columbia College of Physicians and Surgeons (CCPS) reviews evidence that yoga may be effective in treating patients with stress-related psychological and medical conditions such as depression, anxiety, high blood pressure and cardiac disease. Their theory, which currently appears online in *Medical Hypotheses*, could be used to develop specific mind-body practices for the prevention and treatment of these conditions in conjunction with standard treatments.

It is hypothesized that stress causes an imbalance in the [autonomic nervous system](#) (parasympathetic under-activity and sympathetic over-activity) as well as under-activity of the inhibitory neurotransmitter, gamma amino-butyric acid (GABA). Low GABA activity occurs in [anxiety disorders](#), post-traumatic stress disorder, depression, epilepsy, and chronic pain. According to the researchers, the hypothesis advanced in this paper could explain why vagal nerve stimulation (VNS) works to decrease both [seizure frequency](#) and the [symptoms of depression](#).

"Western and Eastern medicine complement one another. Yoga is known to improve stress-related nervous system imbalances," said Chris Streeter, MD, associate professor of psychiatry at BUSM and Boston Medical Center, who is the study's lead author. Streeter believes that "This paper provides a theory, based on neurophysiology and neuroanatomy, to understand how yoga helps patients feel better by relieving symptoms in many common disorders."

An earlier study by BUSM researchers comparing a walking group and a yoga group over a 12-week period found no increase in GABA levels in the walking group, whereas the yoga group showed increased GABA levels and decreased anxiety. In another BUSM 12-week study, patients with [chronic low back pain](#) responded to a yoga intervention with increased GABA levels and significant reduction in pain compared to a group receiving standard care alone.

In crafting this neurophysiological theory of how yoga affects the nervous system, Streeter collaborated with Patricia Gerbarg, MD, assistant clinical professor of psychiatry at NYMC, Domenic A. Ciraulo, MD, chairman of psychiatry at BUSM, Robert Saper, MD MPH, associate professor of family medicine at BUSM, and Richard P. Brown, MD, associate clinical professor of psychiatry at CCPS. They are beginning test these theories by incorporating mind-body therapies such as yoga in their clinical studies of a wide range of stress-related medical and psychological conditions.

Provided by Boston University Medical Center

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