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Even a single mindfulness meditation session can reduce anxiety

People with anxiety show reduced stress on the arteries after 1-hour introductory session

EXPERIMENTAL BIOLOGY 2018

Mindfulness meditation programs have shown promise for the treatment of anxiety, one of the most common mental health disorders in the U.S. New research suggests people can begin to derive psychological and physiological benefits from the practice after a single introductory session.

"Our results show a clear reduction in anxiety in the first hour after the meditation session, and our preliminary results suggest that anxiety was significantly lower one week after the meditation session," said lead study author John J. Durocher, PhD, an assistant professor of physiology in the department of biological sciences at Michigan Technological University. "Participants also had reduced mechanical stress on their arteries an hour after the session. This could help to reduce stress on organs like the brain and kidneys and help prevent conditions such as high blood pressure."

Understanding the effects of mindfulness meditation on the body can help improve the design of anti-anxiety therapies, according to Durocher. He will present the research at the American Physiological Society annual meeting during the 2018 Experimental Biology meeting, held April 21-25 in San Diego.

Anxiety can be a risk factor for cardiovascular disease. Previous studies have indicated that arterial stiffness (a predictor of cardiovascular disease) can be increased by traumatic life events, job strain, depression, temporary anxiety and long-term proneness to anxiety. Cardiovascular changes associated with anxiety can also lead to high blood pressure and long-term damage to various organs.

Researchers recruited 14 participants who had normal blood pressure but high levels of anxiety. They measured factors related to cardiovascular functioning--including heart rate, blood pressure, aortic blood pressure (blood pressure in the aorta, specifically) and arterial stiffness--before and after a 60-minute guided introductory session of mindfulness meditation. This type of meditation emphasizes focusing on breathing and awareness of one's thoughts.

The results demonstrate that even a single, brief intervention can yield measurable improvements in people with anxiety. Researchers said most participants reported continuing to use mindfulness after the initial session and anxiety scores were reduced even further one week later.

"This study is different because we examined the effect of a single mindfulness meditation session on anxiety and cardiovascular outcomes, while other studies have examined the effect of several days or weeks of mindfulness meditation," Durocher said. "The results suggest that a single mindfulness meditation session may help to reduce cardiovascular risk in those with moderate anxiety."

Durocher and colleagues recently started a new study to assess the effects of mindfulness-based stress reduction in people with moderately elevated blood pressure.

John Durocher will present this research on Monday, April 23, from 10 a.m.-noon in the San Diego Convention Center Exhibit Hall (poster A129) (abstract). Contact the media team for more information or to obtain a free press pass to attend the meeting.

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About Experimental Biology 2018

Experimental Biology is an annual meeting that attracts more than 14,000 scientists and exhibitors from five host societies and more than two dozen guest societies. With a mission to share the newest scientific concepts and research findings shaping clinical advances, the meeting offers an unparalleled opportunity for exchange among scientists from across the U.S. and the world who represent dozens of scientific areas, from laboratory to translational to clinical research. <http://www.experimentalbiology.org> #expbio

About the American Physiological Society (APS)

APS is a nonprofit organization devoted to fostering education, scientific research and dissemination of information in the physiological sciences. The Society was founded in 1887 and today represents more than 10,500 members and publishes 14 peer-reviewed journals. <http://www.the-aps.org>

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