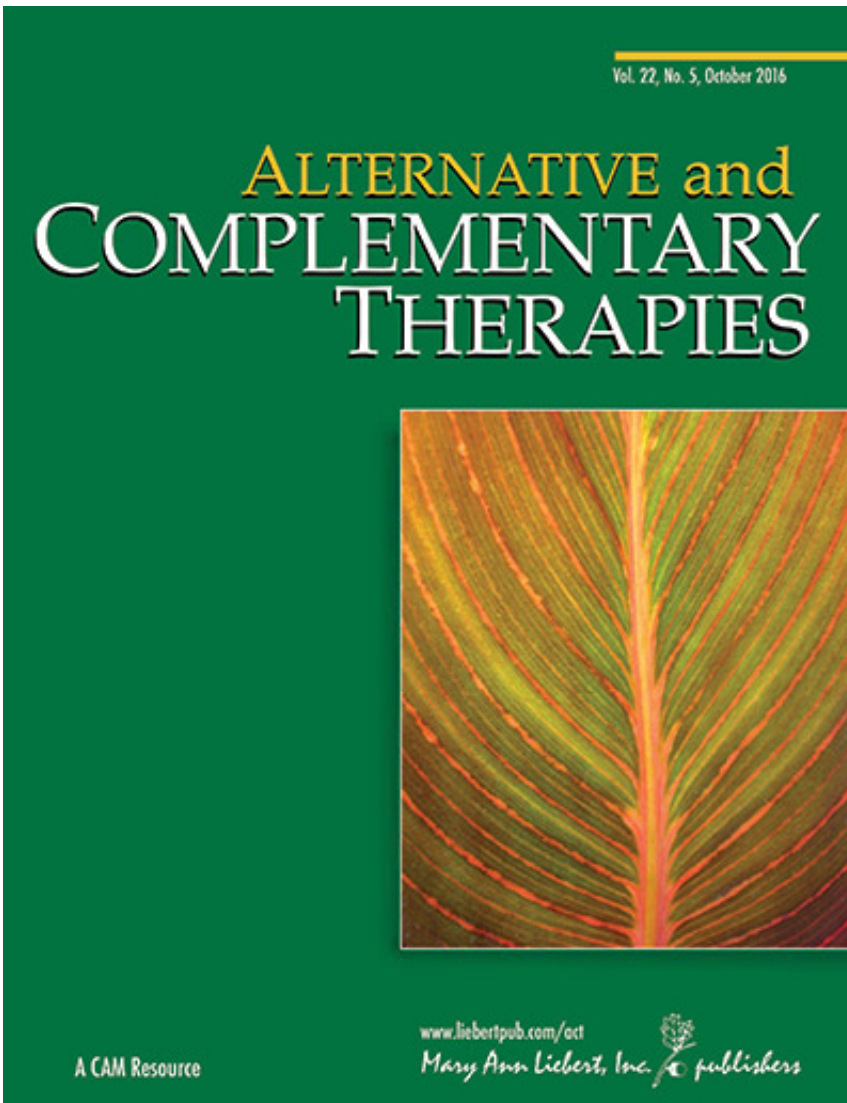


New understanding of brain plasticity may lead to novel treatment approaches

November 16 2016



Credit: Mary Ann Liebert, Inc., publishers

A growing understanding of the highly "plastic," changeable nature of the brain—from the level of DNA, proteins, neuronal connections and networks, up to communication across brain regions—is driving the development of new therapeutic approaches to treat chronic pain, stroke, Parkinson's disease, and a variety of other disorders described in an article in *Alternative and Complementary Therapies*.

In the article "Neuroplasticity and Healing: A Clinical Conversation with Norman Doidge, MD, and Robert Rountree, MD" Norman Doidge, MD, University of Toronto, Canada, and Center for Psychoanalytic Training and Research, Columbia University, New York, NY, describes therapeutic interventions such as the noninvasive delivery of patterns of light, sound, or electrical energy to resynchronize damaged neurons in the brain that may be firing at an irregular or incorrect rate can be contributing to disease symptoms.

Neuroplasticity can occur at micro or macro levels of the brain and can allow one neuronal pathway or area of the brain to take over a function when another suffers damage from disease or trauma. Behavioral change and even [bad habits](#) are linked to neuroplasticity.

"Many of our bad habits, and even certain [chronic pain](#) syndromes, some psychiatric symptoms such as obsessions and compulsions, and many of the movements problems that people with strokes, dystonias, or Parkinson's have, are actually a function of neuroplasticity gone awry," says Dr. Doidge in the article in *Alternative and Complementary Therapies*.

More information: , Neuroplasticity and Healing: A Clinical Conversation with Norman Doidge, MD, and Robert Rountree, MD, *Alternative and Complementary Therapies* (2016). [DOI: 10.1089/act.2016.29077.ndo](https://doi.org/10.1089/act.2016.29077.ndo)

Provided by Mary Ann Liebert, Inc

Citation: New understanding of brain plasticity may lead to novel treatment approaches (2016, November 16) retrieved 26 April 2024 from <https://medicalxpress.com/news/2016-11-brain-plasticity-treatment-approaches.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.