

# Research reveals effectiveness of seizure treatments for children with autism

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Physicians will have a better guide for more effectively managing treatment of children experiencing seizures related to autism with the results of a study by researchers at Arizona State University and the University of Texas-Houston.

From 25 to 35 percent of people with autism will eventually experience full-scale seizures. Many others will have seizure-like brain activity, in which there is no obvious effect on muscles but potential effects on brain functioning, such as temporary loss of attention.

Little has been known about which traditional treatments for [epileptic seizures](#) and commonly used non-traditional [alternative treatments](#) are most effective for treating seizures or [epilepsy](#) specifically in children and adults with autism.

The new study provides insight into which treatments are most beneficial in such cases, says James Adams, a professor in the School for Engineering of Matter, Transport and Energy, one the ASU's Ira A. Fulton Schools of Engineering.

Adams conducted the research with Richard E. Frye, a physician specializing in child and behavioral neurology in the Department of [Pediatrics](#) at UT-Houston.

The complete study is published in the medical journal *BMC Pediatrics*, and is available online at

<http://www.biomedcentral.com/1471-2431/11/37/abstract>

Adams says the study "suggests that several non-traditional treatments, such as special diets – ketogenic, Atkins, and gluten-free, casein-free diets, in particular – are worth further investigation as supportive treatments" for managing the health of people with autism who suffer from seizures.

Adams and Frye surveyed 733 parents whose children with autism experience seizures, epilepsy and/or seizure-like [brain activity](#). They asked parents to rate the effectiveness of 25 traditional and 20 non-traditional medical treatments for seizures.

The survey also assessed the effects –and side-effects – of those treatments. Overall, antiepileptic drugs were reported by parents to reduce the occurrence and severity of seizures but worsened problems with sleep, communication, behavior, attention and mood.

Non-antiepileptic drugs were perceived to improve other symptoms but did not reduce occurrence of seizures or make them less severe to the same extent as the anti-epileptic drugs.

Four anti-epileptic drugs – valproic acid, lamotrigine, levetiracetam and ethosuximide – were reported to most often reduce the number or lessen the severity of seizures, and on average have little positive or negative effect on other symptoms of autism.

Certain traditional non-anti-epileptic drug treatments, particularly the ketogenic diet, were perceived to both lessen the number and reduce the severity of seizures and other symptoms.

Provided by Arizona State University

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