

## In Brief

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The trial assessed 145 children aged between 2 and 16 years who had at least daily seizures (or more than seven seizures per week), had failed to respond to antiepileptic drugs, and had not been treated previously with the ketogenic diet. Seventy-three children were put on the diet immediately while 72 were assigned to the diet after an interval of three months. The delay group acted as the control group during the three-month delay. Using the baseline figures as 100 percent, researchers found that the number of seizures in the diet group dropped by more than a third (62 percent of seizures recorded compared with baseline), while the control group saw their seizures rise by more than a third. Twenty-eight of the 54 children who completed three months with the diet had more than a 50 percent reduction in the number of seizures they experienced, compared with just four of 49 children in the control group. Five children in the diet group saw a seizure reduction of above 90 percent, compared to none in the control group. The most frequent side-effects reported at three months were constipation, vomiting, lack of energy and hunger.

The authors said, "We have shown that the diet has efficacy and should be included in the management of children who have drug-resistant epilepsy. However, the diet is not without possible side-effects, which should be considered alongside the risk benefit of other treatments when planning the management of such children." They added, "We stress this is a diet which should only be undertaken on medical advice and under medical and dietetic supervision."

Max Wiznitzer, M.D., of Rainbow Babies and Children's Hospital in Cleveland, said more information is needed about the long-term effects of the ketogenic diet, including changes in blood fat concentrations and persistent ketosis. He added, "Better identification of epilepsies that benefit from starting early on the ketogenic diet and comparisons between the choices of ketogenic diet are needed."

SOURCE: THE LANCET NEUROLOGY

# BE A PART OF HISTORY

*The Epilepsy Phenome Genome Project is the largest epilepsy study of its kind. Researchers hope the information they uncover will help improve epilepsy diagnosis and treatment.*

BY LISA BOYLAN, EDITOR, *EPILEPSYUSA*

Do you have epilepsy? Does your brother or sister have epilepsy? If you answered yes to both of these questions, you may be eligible to participate in the first and largest study of its kind to identify the genes that influence the development of epilepsy and genes that modify the response to epilepsy. A



team of scientists recently received a \$15 million grant from NIH to conduct the Epilepsy Phenome Genome Project ([www.epgp.org](http://www.epgp.org)) over a 5-year period. They will strive to understand the causes of epilepsy that occur for no obvious reason, and the factors that determine why medications do or do not work for specific individuals.

The goal of EPGP is to collect, anonymously, a repository of clinical and genetic information on siblings with epilepsy in order to improve the diagnosis and treatment of epilepsy. Researchers at 13 epilepsy centers around the country are looking for siblings who both have epilepsy to make the genetic analysis more powerful. Daniel Lowenstein, M.D., professor and vice chairman in the Department of Neurology at the University of California, San Francisco, and a principal investigator in the study said, "For us to reach our goal in EPGP, this has to be a giant collaboration among all of the people with epilepsy in our country."

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Dr. Lowenstein said one of the biggest challenges in the care and treatment of people with epilepsy is the difficulty in predicting what type of drug will be most effective and also what the potential side effects of that drug might be. He said, "It's quite clear that a person's genetic makeup is an important determinant of those two issues."

The idea for the study began germinating at NIH's first Curing Epilepsy conference in 2000 where one of the benchmarks was to carry out a large phenotype/genotype study in patients with epilepsy. This type of study compares a person's genetic code to the physical expression of a disease. Dr. Lowenstein said, "Our dream is that, in the not-too-distant future, we will be able to do a gene profile before we ever make a decision about which drug to use on a patient." He said that information would help guide doctors in choosing medications that are more effective and cause fewer, if any, side effects for patients.

Participation involves donating a blood sample and answering questions about your epilepsy. If you would like to participate in EPGP call: 888-279-EPGP (toll-free), or visit [www.epgp.org](http://www.epgp.org) for more information.