

Research study aims to identify new ways to treat human seizures

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Researchers hope the study, called Human Epilepsy Project (HEP) 2, will help better understand the long-term challenges of living with focal seizures and better pinpoint severity and treatment response.



Singapore – Lenox Hill Hospital and The Feinstein Institute for Medical Research have been chosen as study site to identify biomarkers for focal seizures in patients with treatment-resistant epilepsy. Researchers hope the study, called Human Epilepsy Project (HEP) 2, will help better understand the long-term challenges of living with focal seizures and better pinpoint severity and treatment response.

Approximately 3.4 million people in the United States have epilepsy. Patients with epilepsy experience a disturbance in their brain's electrical and chemical activity that leads to seizures. Focal seizures — the most common type of epilepsy seizures — occur when a person experiences a convulsive attack in one location of their brain. One third of all people with epilepsy live with uncontrollable seizures because no available treatment works for them.

"Having uncontrolled epilepsy can be challenging for patients as they do not know when a seizure will strike," said Ruben Itamar Kuzniecky, MD, lead investigator of the study who is a Feinstein Institute member and director of Research & Clinical Trials in the Department of Neurology at Lenox Hill Hospital. "With seizures causing issues like loss of consciousness, loss of speech and loss of mobility while they occur, it can negatively impact patients' lives. We hope through identifying biomarkers or biological indicators for focal seizures, we can not only figure out what current medications could be effective for patients, but discover new, possibly better, therapies for them."

The HEP2 study, will monitor 200 people over eight sites with treatment-resistant focal seizures over a two-year period to measure changes in seizure frequency, treatments used, presence of comorbidities — such as depression and anxiety — health care costs and quality of life. HEP2 is the second in a group of registry-based studies called the Human Epilepsy Project, a joint initiative of the Epilepsy Foundation and the Epilepsy Study Consortium to improve the care of people with epilepsy.

