

Eysz Announces Positive Results of NIH-Funded Study on Novel Absence Seizure Screening Tool

Data to be presented at American Academy of Pediatrics National Conference highlights 100% sensitivity of the Eysz HV Recorder in identifying absence seizures.

BERKELEY, CA, UNITED STATES, September 24, 2025 /EINPresswire.com/ -- Eysz, a digital health company, today announced the successful results of a clinical study testing the efficacy of its Eysz™ HV Recorder, a smartphone-based tool designed to screen for absence seizures in pediatric patients. This groundbreaking research, conducted in collaboration with the renowned Cincinnati Children's Hospital Medical Center, found the device demonstrated high accuracy compared to the gold standard of video EEG (VEEG). These findings will be shared at the upcoming American Academy of Pediatrics (AAP) Poster Session: Monday, September 29th, 2025, from 10-12pm MDT.

The study's goal was to evaluate how well-trained epileptologists could identify absence seizures from videos recorded during guided hyperventilation (HV) with the Eysz HV Recorder, as compared to VEEG. HV is a routine clinical method used to provoke absence seizures in 90% of patients with active Childhood Absence Epilepsy (CAE). The Eysz HV Recorder, an FDA Class I Software as a Medical Device, addresses the underutilization of this method by standardizing and gamifying the HV procedure, making it a practical screening tool for pediatric offices. By enabling earlier identification in primary care, it helps bridge the gap created by limited access to subspecialists and supports timely connections to care.

Key Findings

The study included 60 children—15 with absence seizures during HV and 45 without. Using Eysz HV Recorder videos, three reviewers identified seizing patients with high accuracy, achieving 100% sensitivity and 91% specificity compared to VEEG. These results show the Eysz HV Recorder can be used as a screening tool. By providing objective video evidence, it helps distinguish absence seizures from ADHD-related inattention, reducing diagnostic delays. Its use aligns with AAP guidelines to rule out CAE during ADHD evaluations and to identify CAE as a comorbidity after an ADHD diagnosis.

Study Methodology

In this comparative study, children aged 4–12 performed guided HV with the Eysz HV Recorder while undergoing VEEG. Three epileptologists reviewed only HV videos and another three reviewed only VEEG. Seizures were confirmed using the FDA clinical reference standard - the majority agreement among VEEG reviewers. Reviewer agreement was high: 90% for VEEG-VEEG, 87% for HV-HV, and 82% for HV-VEEG.

Clinical Impact

“Accurate and timely diagnosis is the critical first step in managing childhood absence epilepsy,” said Gewalin Aungaroon, MD, pediatric epileptologist at Cincinnati Children’s Hospital. “Our collaboration with Eysz helped validate a practical tool that provides objective evidence to guide care.”

“Partnering with Cincinnati Children’s was instrumental to this study and validates our mission,” said Rachel Kuperman, MD, CEO of Eysz. “The Eysz HV Recorder is a practical, easy-to-use tool that empowers primary care doctors. These data show it can help address a significant community need for accessible seizure screening, enabling faster, more targeted care for children.” Study results highlight the potential of the Eysz HV Recorder to improve diagnostic accuracy, reduce delays, lower costs, and facilitate timely referrals and treatment—helping bridge the gap between primary care and neurology.

Acknowledgement and Disclaimer

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About Eysz

Eysz is a digital health company focused on developing technology for the diagnosis and management of neurological and psychiatric conditions. The company’s initial product is the Eysz™ HV Recorder, a software as a medical device created to help administer hyperventilation to collect objective data for identifying absence seizures. This helps improve the diagnostic process for epilepsy and related conditions like ADHD. For more information, visit www.eyszlab.com.

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