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## Multiple Medications, Surgery and Lengthy Seizures Increase Risk of Sudden Unexpected Death in Epilepsy (SUDEP) in Children, Study Finds

WASHINGTON, D.C. - Taking three or more different antiepileptic drugs (AEDs) at the same time, having had a seizure lasting longer than five minutes, or undergoing epilepsy surgery may increase the risk of sudden unexpected death in epilepsy (SUDEP) in children, suggests research being presented at the [American Epilepsy Society 71<sup>th</sup> Annual Meeting](#).

The research seeks to shed more light on identifying who is at risk for SUDEP, in which a person with epilepsy who is otherwise healthy dies suddenly of no known cause. Every year, 1 in 4,500 children with epilepsy die from SUDEP. While considered rare, SUDEP is more common than sudden infant death syndrome (SIDS), but far less known and studied.

"Many children with epilepsy and their parents are never told of the risk of SUDEP," said Kishore Vedala, first author of the study and a medical student at the Medical College of Georgia at Augusta. "Because it's uncommon, doctors might not want to frighten parents, but it's important that they learn about SUDEP and what they can do to decrease the risk."

Focused on identifying factors that may increase the risk for SUDEP, researchers at the Medical College of Georgia at Augusta University reviewed the medical records of 11 children who died of SUDEP and compared them to records of 53 living children with epilepsy. They analyzed the incidence of nine variables that have been proposed as SUDEP risk factors: mental retardation, seizure frequency, seizure type, prior status epilepticus (a seizure that lasts longer than five minutes), number of AEDs being taken, prior epilepsy surgery, vagus nerve stimulator (VNS) therapy, seizure progression, and heart rate variability while awake.

Researchers found that the risk of SUDEP was seven times greater in those who had previous status epilepticus and four times greater among those who had epilepsy surgery or were taking three or more AEDs at the same time. The other variables were not significant predictors of SUDEP.

The increased risk associated with children who had status epilepticus or were taking three or more AEDs likely reflects that they had epilepsy that was more difficult to control. And while it is unclear why surgery increases the risk, many of the patients continued to have frequent seizures following surgery, meaning the procedure was not successful, researchers said. That suggests unsuccessful surgery might increase the risk of SUDEP through unknown mechanisms, they noted.

"While we found surgery and a higher number of medications may increase the risk of SUDEP, it doesn't mean that people with epilepsy shouldn't continue with those treatments, which may be key to helping control seizures and improving quality of life," said Yong Park, M.D.,

senior author of the study on SUDEP risks and program director of child neurology at Medical College of Georgia at Augusta University. "Rather, our findings help identify those who may be at high risk and should be watched closely, such as by being monitored at night, when SUDEP is most likely to occur. If a seizure does occur, the family member or caregiver should roll the person on his or her side, provide rescue medications and call 911 if the seizure is prolonged."

There's a need for many more high-quality studies on SUDEP to determine risk as well as prevention, note researchers. "It's relatively rare, but that's little consolation to parents," Vedala said.

***About the American Epilepsy Society***

*Founded in 1946, the American Epilepsy Society (AES) is a medical and scientific society whose members are dedicated to advancing research and education for preventing, treating and curing epilepsy. AES is an inclusive global forum where professionals from academia, private practice, not-for-profit, government and industry can learn, share and grow to eradicate epilepsy and its consequences.*

*For more information, visit the American Epilepsy Society online at [aesnet.org](http://aesnet.org). Join the AES Annual Meeting social conversation today by following [@AmEpilepsySoc](https://twitter.com/AmEpilepsySoc) on Twitter and use the hashtag #AES2017.*

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