For people with tough-to-treat epilepsy, seizure dogs may reduce seizures

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For people with drug-resistant epilepsy, having a dog companion trained in detecting seizures and other epilepsy-related tasks may reduce the amount of seizures they have, according to new research published in
Neurology. For the study, researchers looked at adults with severe epilepsy who had been unable to find effective treatment to reduce seizures.

"Despite the development of numerous anti-seizure medications over the past 15 years, up to 30% of people with epilepsy experience persistent seizures," said study author Valérie van Hezik-Wester, MSc, of Erasmus University Rotterdam in the Netherlands.

"The unpredictable nature of seizures is often the most disabling aspect of epilepsy. Seizure dogs are trained to recognize seizures and respond when they occur. The tasks that these dogs perform along with their companionship may reduce seizure-related anxiety, also potentially reducing seizures caused by stress, the most common trigger for seizures."

For the study, researchers looked at 25 people with tough-to-treat epilepsy who had a high risk of seizure-related injuries. They were followed for up to three years.

At the start of the study, participants were observed in their usual care conditions before being assigned a seizure dog in a randomized order. Participants could choose between being coached in training a puppy at their own home or receiving a dog that had finished socialization and obedience training that only needed training for epilepsy-specific tasks.

Seizure dogs are trained to recognize seizure activity by observing movements and sounds. Dogs can be trained to activate an alarm, fetch medication or a phone, block the person's movement or change the person's body position. The dog can also provide companionship as the seizure subsides, when the person may feel disoriented and anxious.

Participants recorded the frequency and types of seizures in a diary and
completed surveys every three months. The survey measured factors including seizure severity, health-related quality of life and well-being.

Researchers found that participants had an average of 31% fewer seizures during the last three months when they had seizure dogs, with seven participants achieving a 50-100% reduction. At the start of the study, participants had an average of 115 seizures per 28-day period compared to 73 seizures per 28-day period after being partnered with a seizure dog.

They also found an increase in the number of days with no seizures, from 11 per 28-day period before to 15 after working with a dog.

"These findings show that seizure dogs can help people with epilepsy," said van Hezik-Wester. "However, we also found that this partnership with seizure dogs might not be the right fit for everyone, as some people discontinued their participation in this program. More research is needed to better understand which people can benefit from working with seizure dogs."

A limitation of the study was that participants reported their own seizure information and they may not have remembered all the information accurately.

**More information:** *Neurology* (2024).

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