

SEIZURES AND TEENS: Maximizing Health and Safety

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Introduction: As parents and caregivers, our job is to help our children become happy, healthy, and productive members of society. We try to balance the desire to protect our children with their need to become independent young adults. This can be a struggle for parents of teens with seizures, since there are so many challenges they may face. This article will explore some of the factors that may affect a teen's safety and ways to lessen these risks. How to create a safety management plan that will help maximize your teen's health and safety will be introduced.

Seizures and Safety

Teenagers with seizures have many of the same issues and challenges as teens without epilepsy. They are at a critical developmental age where they want to fit in and be like everyone else. They feel invincible and believe that nothing can harm them. They may be rebellious and just not want to do things recommended by their parents or doctors. They want to stand on their own and be independent. Many teens also live "in the moment," displaying more impulsivity and risky behaviors than desired by adults.

These normal adolescent behaviors and needs may conflict with parental attempts to keep their teen with seizures safe. If the teen has other cognitive or behavioral difficulties, they may be more impulsive than other teens and have difficulty problem solving or showing appropriate judgment thus complicating safety concerns. The unpredictability and sudden nature of seizures can be challenging as well. A seizure that occurs out of the blue doesn't help the teen fit in with their peers. There may be real-life safety risks, depending on the type and frequency of seizures, which may limit a teen's independence and the type of activities they can pursue.

Helping your teen stay safe does not mean you have to severely limit their activities or make them stand out from their peers. However, it will take more preparation and planning on behalf of the whole family. It is a matter of arming yourself, and your teen, with the proper facts about seizures and safety and adapting that knowledge to the teen's lifestyle and environment.

Seizure Risk Factors

While most seizures end on their own within seconds to a few minutes, injuries can occur during or after one. It's important to remember that not all people hurt themselves, and not all seizures result in injury. The most common types of injuries are burns, cuts, or bruises;

however, choking on food, head injuries, and broken bones may also occur. The type and severity of injury may depend on the type of seizure and where it occurs. For example, if a teen has a complex partial seizure at home, she may burn her hand on a hot stove or iron, fall down the stairs, or wander out a door. If it occurs while walking on the street, the teen could walk into traffic or fall on a concrete sidewalk. If a teen has a tonic-clonic (grand mal) or atonic (drop) seizure, they may fall and hit their head, get cut on sharp objects, or get bruises, sprains, or even broken bones.

Other seizure-related factors that affect safety include the presence of a warning to the seizure, a person's awareness during or after the event, and the predictability of the seizure. Teens who have a warning to their seizure or who don't lose awareness may be able to take steps to protect themselves. They may be able to sit down or get themselves to a safe place and call for help. But if a person is confused during or after the seizure and is alone, they may be at greater risk of injury. In these situations, consideration should be given to what types of activities the teen is doing alone and how he or she would call for help, if needed.

The predictability of seizures can be critical. Some teens can notice a pattern to their seizures. For example, seizures may occur only at night, with sleep deprivation, if doses of medicines are missed, or with stress or other illnesses. Others may not notice a predictable pattern or seizures may occur only when lots of things occur at once. If a teen can identify when they are at risk for seizures, they may be able to take steps to lessen the chance of injury at these times.

Some teens may have other problems that affect their safety. For example, falls and injuries can occur in teens who have difficulty walking due to weakness or balance problems. Sensory or perceptual problems can also lead to falls or place teens at greater risk of burns from not being able to feel changes in water temperature. A teen with cognitive difficulties may not be able to recognize safety risks as easily as others or know what type of precautions to take. Parents or caregivers of teens with seizures and other neurological problems must consider all these issues when assessing their injury potential.

Medicine Side Effects

Seizure medicines may have side effects that can lead to injury or other health problems. For example, some medicines can cause dizziness, lightheadedness, or blurry vision, and these problems can increase the chance of falling or injury. Sometimes these side effects can be eliminated or decreased by certain "tricks of the trade" (like decreasing the dose, changing the times medicines are taken, or taking the medicine with meals). Other side effects may be chronic, meaning that they may occur after a period of time or last a long time. While these problems may sound serious, it is important to know that these do not occur in everyone and many happen very infrequently. Some people can be at greater risk for thinning of the bones from certain seizure medicines. When this happens, broken bones can occur more easily. Weight gain or loss can affect body metabolism and lead to other health problems, while low sodium levels can lead to dizziness and falls. Changes in blood counts may be seen with some medicines, most often with some of the older seizure medicines.

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Symptoms such as fatigue, a tendency to bruise or bleed easily, or a tendency to develop infections may be seen when certain blood counts are affected. If any of these problems occur, it is very important that the doctor is notified so the problem can be evaluated and watched, and changes in medicines can be made, if needed.

Death and epilepsy?

One topic that is difficult to discuss is the possibility of death. This is not a common problem, but a very real one that needs to be talked about openly. Death may occur from severe injuries such as head injuries, choking, or drowning but may also occur as a result of a prolonged seizure or seizure emergency. A very small number of people with epilepsy may die for no known reason. This is called SUDEP or sudden unexplained death in epilepsy. Unfortunately, we don't know exactly who is at greater risk of dying, but certain types of seizures and people with frequent seizures are at greater risk than others. This is one of the most critical reasons why teens, their families, doctors, and other health care professionals should keep trying to find ways to reduce and get rid of seizures and medicine side effects.

The Role of Lifestyle

An adolescent's lifestyle may be erratic and unpredictable just like seizures! Certain lifestyle factors and the activities the teen may want to pursue can increase a teen's risk of injury and worsen seizure control. Understanding the role of the teen's lifestyle will help the parent and caregiver know what type of safety precautions to suggest. For example, the teen who plays contact sports or likes to ride a bike will have different concerns than the teen who does not. Teens who are having seizures may be cautioned against doing certain high-risk activities such as skydiving, mountain climbing, or swimming alone. Many other activities may be fine to pursue, depending on the individual and if appropriate safety precautions can be taken.

Since injuries are less likely to happen in people with well-controlled epilepsy, parents and teens should think about ways to modify lifestyle to limit seizure triggers as well as prevent injury. Unfortunately, habits and lifestyle can be hard to change. Sleep deprivation, a common trigger to seizure activity, happens in many teens who stay up late or have irregular sleep patterns. However, for a teen with seizures, getting adequate rest and sleep is imperative in trying to improve seizure control. Always getting eight hours of sleep may be impossible, but they may be able to modify their schedule so they aren't constantly sleep deprived or having irregular sleep when they are at high risk of seizures. Eating and drinking healthy foods and beverages can help lessen seizures and some medicine side effects, but how often do teens eat healthy meals consistently? As a parent, helping your teen avoid foods that may aggravate seizures or plan meal times to avoid long periods without food may be easier to do than mandating a specific diet. Other teens may be on a special diet as part of their treatment regimen (such as the ketogenic diet) and will need to be much more stringent in managing their food.

Avoiding alcohol and recreational drugs is a must as these substances can aggravate seizures in some people and do not mix well with many seizure medicines. For example, most seizure medicines will increase the

effects of alcohol so the teen can get inebriated much more easily. All teens with seizures should be counseled on the risks of substance abuse and how to deal with peer pressure from not engaging in these activities.

Talking to teens about their lifestyle or habits may be a struggle as they strive to be independent and in control of their life. Helping them see how their lifestyle may affect their seizures and how they can have more control over their epilepsy will be more effective than restricting activities altogether.

Driving and Epilepsy

Obtaining a driver's license is a major milestone for adolescents. Yet it is also a privilege that can be denied to people with uncontrolled seizures or other events with loss of consciousness. While driving laws may vary from state to state, most often people must be seizure free before being able to drive, with seizure free periods across the United States ranging from 3 months to 2 years. The risks of driving are obvious. Seizures while driving can result in accidents and pose serious risk of injury and death to the driver as well as other people. Additionally, adolescents may face serious legal and financial ramifications if they are found to be driving without a valid driver's license or if seizures occur while driving.

Environmental and Home Safety

Understanding the risks of living with epilepsy also includes looking at the environment in which the teen lives and will spend most of their time. Families can conduct their own safety evaluation by looking at what might happen if their teen should fall or be unconscious, if only for a few moments. Questions to ask may include: Is there enough room to fall? Are there sharp objects where he can get hurt? Are there ways to keep him from falling down stairs? Can he easily call for help? Bathrooms and kitchens seem to be common sites of injury and are important to look at carefully. Home safety evaluations can also be obtained from most visiting nurse organizations that may also offer tips to improve home safety.

Seizures can also occur outside of the home. Parents and teens should learn how to look at and assess the school, playing fields, camps, or work places that a teen frequents to identify high-risk places. If it is not possible to adapt the environment, the teen may be able to take extra safety precautions in that location. As the environment is being evaluated, think about how help can be obtained should a seizure occur in that location. For example, if a teen will be attending camp, make sure counselors know about your teen's seizures, proper seizure first aid, and when to call for help.

Developing a Safety Management Plan

So, now that you have assessed your teen and identified some areas for improvement in helping your teen stay safe, what do you do with this information? The first step is to talk with your teen for their ideas. Do they agree? What are their priorities? Are they willing to look at ways to stay safe so they can participate in the activities they enjoy? These discussions can set the stage for developing a safety management plan together. It's often best to start with a visit to the epilepsy doctor or nurse to get their view on safety, particularly the teen's seizure triggers and risks for injury.

A safety management plan can then be developed to highlight

your teen's safety needs in different circumstances. This plan should be tailored to each person and needs to include lifestyle and environmental changes as well as appropriate safety precautions. Ideally, this plan should be agreed upon by everyone involved and should be shared with relevant caregivers and health care providers. Since a teen's activities and risks may change as they grow up, safety plans should be reviewed and adapted on a regular basis.

Table 1 highlights some examples of safety tips that can be grouped into three areas – personal, home, and environmental safety. These are just a few suggestions to consider.

More detailed safety tips in relation to specific situations can be found at Epilepsy.com (<http://www.epilepsy.com/epilepsy/safety.html>). Physical and occupational therapists as well as organizations that specialize in adaptive aids and technology can also be a wealth of information, especially for teens with multiple medical or safety concerns.

Conclusion: It is possible to maintain a balance between your teen's desire to fit in and be independent and their safety. Learning how to assess risk factors for injury and what to include in a safety management plan will help parents and caregivers minimize the limitations placed on their teens. Teens must be involved in the development of these plans to make them relevant and usable. At the very least, safety plans can serve as a useful communication tool to tackle the difficult topics of day-to-day life. •

Table 1: Tips for Safety Management

Personal Safety


- Helmets for teens at risk of head trauma
- Helmets and protective gear for recreational sports
- Wheelchairs or walking aids for people with difficulty walking or who are at risk for falls
- Avoidance of cigarette smoking, alcohol, and recreational drugs
- Emergency response systems to call for help more easily

Home Safety

- Remove clutter, sharp edges on furniture, and throw rugs
- Avoid stovetop cooking while alone; use a microwave oven
- Use plastic dishes and cups
- Avoid baths and hang bathroom doors to swing outwards
- Keep door locks out of reach of teens who wander during a seizure


Environmental Safety

- Play on soft surfaces whenever possible
- Ride bikes or run with a buddy on streets or paths away from heavy traffic
- Wear life jackets when swimming or boating
- Don't sit near campfires or open flames
- Wear seat belts and don't drive without a doctor's permission
- Make sure that friends know seizure first aid
- Carry emergency medical information cards or jewelry



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