



EPILEPSY IN CHILDREN LEARNING AND SCHOOL PERFORMANCE

ABOUT THE EPILEPSY FOUNDATION

The Epilepsy Foundation is the national voluntary agency solely dedicated to the welfare of the more than three million people with epilepsy in the U.S. and their families. The organization works to ensure that people with seizures are able to participate in all life experiences; and to prevent, control and cure epilepsy through services, education, advocacy and research. In addition to programs conducted at the national level, people with epilepsy are also served by local Epilepsy Foundation affiliates across the country.

If you have any questions about epilepsy and seizure disorders, living with epilepsy, or helping a friend or family member who has epilepsy, please visit us on the Web at www.EpilepsyFoundation.org or call 800-332-1000.

Our Web site has information about the disorder, offers opportunities to network with others touched by epilepsy through our eCommunities forums and Web events. You can also subscribe to our bi-monthly magazine *EpilepsyUSA*. Each issue contains exciting developments for people affected by seizure disorders—new treatments and medicines, ground-breaking research, safety tips, personal stories, advice for parents and much, much more—all delivered right to your door.



LEARNING AND SCHOOL PERFORMANCE

Epilepsy is a common disorder that occurs in people of all ages. It is a term that describes a tendency to have seizures caused by brief disturbances in the brain. Seizures may affect awareness, movement, or behavior.

Most children with epilepsy have no learning problems and do well at school. However, for a variety of reasons, there's a higher rate of school performance difficulties in children with seizures.

Seizures themselves rarely cause these problems, but many factors related to seizures can affect learning. For this reason, all children with epilepsy should have their school progress monitored.

All learning problems, however, are not the same. When a child with epilepsy appears to be having trouble learning, it is important to:

- Test the child to find out what type of learning problem the child has and how severe it is.
- Look for any treatable, seizure-related factors that may be part of the learning problem.
- Draw up a plan for helping the child.

IDENTIFYING LEARNING PROBLEMS

In general, the sooner a child's learning difficulty is identified and evaluated, the better the long-term outcome. The parent, the teacher, and the physician will each have a contribution to make. And in most respects, trying to find out what is causing school performance problems in a child with seizures is no different from the approach that would be taken with any other child.

Search for Answers: First Stage

- Check the child's hearing and vision
- Describe the school problem in detail; for example:
 - Difficulty following directions or paying attention
 - Difficulty understanding and remembering new material
 - Difficulty with reading
 - Difficulty finishing tasks without help
 - Not turning in homework regularly
 - Difficulty with behavior in class
- Establish a homework routine for the child and stick with it

- Develop a simple form describing the child's performance and behavior for the teacher to fill out and send home each day
- Use some simple classroom teaching strategies or tutoring
- See whether there are any treatable causes of school problems related to the seizures. For example:
 - Is the child having side effects from seizure-medication?
 - Is he or she continuing to have seizures or sub-clinical seizures? (Sub-clinical means that seizures are occurring in the brain but are not obvious to other people but which may affect a child's awareness, attention, or memory.)
 - Is the child emotionally upset and unhappy about having seizures?

The child's doctor will be able to tell whether medication changes are needed to control the seizures better or to reduce side effects.

Counseling may help both the child and the family and reduce the emotional and negative feelings that may be causing changes in the child's behavior.

Search for Answers: Second Stage

If learning problems continue for several months after these first steps have been taken, an in-depth psychological and educational evaluation of the child should be performed.

This kind of evaluation is designed to pinpoint any learning disorder, disorder of attention or behavior, or emotional problem that the child may have.

Federal and state laws require schools and other testing agencies to assess a child's eligibility for special education services when his or her school performance is a lot lower than that of other children.

These evaluations are usually conducted by a team whose members bring different types of skills and information to the process.

When a child has seizures, it's helpful if someone with knowledge about epilepsy and the effect it can

have on learning and behavior is a member of the team. A psychologist who works in a medical setting might be helpful in this regard; a school nurse with specific knowledge of epilepsy; a physician who treats children with epilepsy or an epilepsy nurse specialist could also provide useful insight.

Once all the tests and interviews are completed, it's important for the results to be shared and discussed with all concerned, including parents, teachers, counselors and physicians.

The following areas are usually tested as part of a child's comprehensive evaluation:

Cognitive and Learning Ability. This evaluation is usually conducted by a psychologist. It commonly includes intelligence (IQ) testing. Tests to measure memory, attention, visual-motor (hand-eye coordination) and spatial abilities, problem solving skills, and speech and language development are usually among those given.

Educational Achievement. These tests measure how well the child is currently performing in reading, spelling, writing and mathematics. They compare the

child's achievement level with that of other children of the same age and grade level.

Behavioral and Social History. This is a summary of the child's family situation, emotional status, behavior and ability to interact appropriately with others. The information is gathered through interviews, observations of behavior, and other psychological tests. Often parents and teachers are asked to fill out behavior rating scales as part of the child's evaluation.

SEIZURE-RELATED FACTORS

As already noted, a child's actual seizures are rarely the major cause of difficulties in school performance. However, many seizure-related factors may be involved. Some are fixed and not likely to be changed by treatment; others may be treatable.

Fixed Physical Factors

- Underlying brain disturbances that cause both seizures and learning problems
- Malformations of the brain
- The side or area of the brain that is affected
- The child's age when seizures began



- Presence of a known epilepsy syndrome (epilepsy syndromes are distinct groups of symptoms, some of which have effects on learning.)

Often, the underlying disturbance in the brain that is causing the seizures is also causing the learning difficulty. This means that even when the seizures stop, learning problems are likely to continue.

Children whose seizures are the result of a known injury to the brain that happened early in life, or who have seizures that began at a young age, seem to be at increased risk of learning difficulties.

Certain learning disabilities (e.g., reading and other language-based difficulties) are more common when seizures come from the left side of the brain.

Factors That May be Treatable

- Frequent seizures or severe seizures
- Unrecognized (sub-clinical) seizures
- Side effects of medication (which may be related to how many medications and how much medication the child is taking)

- Emotional upset and negative feelings about having seizures

Effects of medication. Changes in medication may help to reduce learning problems caused by frequent seizures.

Many commonly used seizure medications produce side effects. Side effects like drowsiness, inattention and restlessness affect brain function and can make learning more difficult. In many cases the side effects do not last long and are well tolerated.

In others, the side effects do not go away. Some children may be more sensitive than others to a drug's effects, even when the level of medication is within the average range. And when children are taking several epilepsy drugs, side effects can add up.

Figuring out how an epilepsy medication is affecting learning can be difficult. Such effects hardly ever show up in standardized IQ or school achievement test results. Special tests of attention, memory and the speed with which a child processes information can be helpful, however.

So, if you think your child is having side effects from the seizure medication and that these are affecting school performance, it is a good idea to discuss your concerns with the child's doctor.

Emotional and psychosocial issues related to having epilepsy may interfere with learning. They may also be the result of a child doing poorly at school.

Living with epilepsy presents many challenges, both for the child and the family. Fears and misconceptions about epilepsy are still all too common and other people's negative attitudes towards children with epilepsy can be very stressful.

A child who has low self-confidence, or is anxious or depressed, is likely to learn less well and perform less well at school than might otherwise be the case.

When this happens, it's easy for a downward spiral to begin. As children continue to struggle at school, their confidence, behavior and emotional state may decline even more.

Counseling often helps children cope more effectively with epilepsy and the stresses that go with it.

Educating the other students, their families, friends and teachers with factual presentations about epilepsy often reduces teasing and stigma and makes the school a friendlier place for a child with epilepsy.

OTHER DISORDERS

Several disorders can affect a child's progress at school. These disorders occur in children with, or without, epilepsy. They include learning disabilities, attention deficit/hyperactivity disorder, mental handicap, developmental delay and autism.

Learning Disabilities

A child is said to have a learning disability when he or she has normal learning abilities in some areas and major learning problems in other areas.

There are many types of learning disabilities. The most familiar ones are those that affect reading, writing or math skills.

Some speech and language disorders are a type of learning disability. Other learning disabilities may affect motor coordination (ability to control movement),

social skills, and the ability to process shapes, patterns and other visual and nonverbal forms of information. Some children have only one type of learning disability; others may have several.

Approximately one in ten (10 percent) of all school aged children have learning disabilities, which often last into adulthood. Children with epilepsy also have these disorders, but at a somewhat higher rate.

Attention Deficit Hyperactivity Disorder

When a child or adult is continually inattentive, impulsive and/or hyperactive, they are said to have attention deficit hyperactivity disorder (ADHD).

Being continually inattentive means that a child is always easy to distract, does not pay attention, and is careless and forgetful. A child with this problem will find it hard to organize and finish tasks or to follow directions.

Being unusually impulsive and hyperactive means that the child is continually restless and fidgety, is always running, climbing and talking, and has difficulty taking turns.

Because every child does some of these things at times, ADHD should be diagnosed only if they last longer than six months and happen more often and are more severe than similar behavior in other children of the same age.

ADHD may exist with other learning disorders or it may be the only problem. It can be difficult to diagnose ADHD in children with seizure disorders because its symptoms may look a lot like features of the seizures themselves. Some seizure medications may cause or increase these behaviors.

Concerns have been raised that medications used to treat ADHD - which are usually stimulants - may increase the likelihood of seizures in some, but not all, children with epilepsy. At the same time, these medications are often used in children with epilepsy. Parents concerned about ADHD and stimulant medications should discuss their concerns with the doctor.



Mental Handicap

Mental handicap is diagnosed when most of a child's learning, self-care, and social skills are much lower than those of other children of the same age, and stay lower over time.

These children may be called slow learners or be described as having mental retardation. A diagnosis of mental handicap is given if a child's IQ and functioning scores fall below a score of 70, the average score being 100.

Mental handicap is different from a learning disability. In a child with mental handicap, most, if not all, learning skills are below the normal range. In a child with a learning disability, some learning skills are normal.

Developmental Delay

Developmental delay is a general term used to describe pre-school children whose learning, motor and social skills are below average for their age. The term typically includes children who are slow learners or who have mental handicap.

Autism

Autism is one category within a broad class of disorders called pervasive developmental disorder (PDD). PDD, or autism, is diagnosed when a child is unable to

communicate, cannot interact socially with others, and cannot take part in imaginative play.

Children with such difficulties often have limited speech, relate poorly to family and friends and play with toys in an inappropriate way. They often have patterns of behaviors and interests that they repeat over and over again, and have difficulty accepting change.

Approximately three out of four (75 percent) children with PDD or autism also will have mental handicap. Children with these conditions are at increased risk for seizures, and approximately one in four (25 percent) will have one or more seizures by the time they become adults.

PLANNING FOR SUCCESS

Again, it's important to keep in mind that most children with epilepsy do well at school and do not need special educational planning. Unfortunately, school administrators sometimes place children with epilepsy in slower classes to avoid stress, when such placement is not necessary.

The goal for all children should be to help the child achieve his or her highest potential. School placement should depend on the individual strength of each child and, to the greatest extent possible, be in regular classes.



When a child with epilepsy has problems with school performance and is not achieving at the expected rate at school, there are several ways in which that child can be helped.

Federal and, in some cases, state laws are designed to make sure that a child who meets the definition of being a child with a disability has extra help to meet educational goals.

Individuals with Disabilities Education Act (IDEA)

The federal government, through the Individuals with Disabilities Education Act (IDEA), regulates special education services provided through public school systems.

IDEA states that children whose tests show that they qualify for special education services under the act will have an Individualized Education Program (IEP) that describes the educational goals and the kind of services being provided. The IEP goals must enable the child to be involved in and progress in the general curriculum to the greatest extent possible. The IEP must outline the accommodations, modification, and supports to be provided by the school.

“Accommodations” in the context of this law means making changes in a school’s routine, environment, or instruction that will help a child overcome the particular barrier to learning that has been identified.

Under IDEA, the parents are assured an active role in their child’s IEP planning process.

Some students with epilepsy who have continuing difficulties in the regular classroom, but do not need or qualify for special education, may qualify for classroom accommodations to address an educational need through the Americans with Disabilities Act or Section 504 of the Rehabilitation Act.

The Americans with Disabilities Act

This is a federal civil rights law that says that public entities (including schools) can’t discriminate against anyone on the basis of a handicapping condition that impairs one or more major life activities.

Section 504 of the Rehabilitation Act

This law protects a child’s right to participate fully in school activities in the regular classroom unless it is clear that the child cannot achieve his or her educational goals



in such a setting. It also requires the school to take the necessary actions to guarantee an appropriate education.

If epilepsy is contributing to school performance problems, the child may qualify for a 504 accommodation plan within the classroom to enable that child to perform up to his or her potential.

Examples of 504 accommodations might include extra time for tests, sitting close to the teacher, and spoken rather than written responses on tests.

In all of these cases, the message is similar: working together, parents and teachers can identify problems and provide opportunities to help a child perform well at school without causing unnecessary dependence or lowering academic standards.

KEEPING A BALANCE

Sometimes all that is needed for a child to understand and remember what is being taught is a slower pace of instruction and extra time to practice. Tutoring after school or during the summer can help reinforce basic academic skills and build the child's confidence.

It's important, however, to keep balance in the child's and family's life. While parents want to do everything they

can to improve a child's performance at school, it's also important to identify and make time for activities that the child enjoys.

Encouragement, praise and an opportunity to succeed in many areas of life will help build a child's self-confidence and self-esteem—exactly the kind of qualities that will help him or her succeed at school as well.





*Epilepsy Foundations throughout the country have additional materials
and offer a variety of programs to help people understand this common disorder.
For further information about epilepsy and the name of the Epilepsy Foundation nearest you,
log on to **www.epilepsyfoundation.org** or call **800-332-1000**.*