

Pediatric Epilepsy: Depression, Anxiety, and Attention Deficit Hyperactivity Disorder (ADHD)

Tatiana Falcone, MD

Epilepsy is the most common childhood neurological disorder, affecting up to 1% of children younger than age 16. Seizures are the most identifiable feature of epilepsy, but behavior, mood, attention, and other thinking skills can also be affected.

Living with a chronic medical condition, such as epilepsy, can be very difficult for people as well as their family members. Seizures can affect attention, concentration, social interaction, and daily activities. Research has shown that many children and adolescents with epilepsy also experience symptoms of depression, anxiety, and/or Attention-Deficit Hyperactivity Disorder, also known as ADHD.

Characteristics of depression in children and adolescents include:

- Emotional symptoms, including: irritability, anger, sadness, or feelings of rejection
- Behavioral symptoms, such as: social isolation, regression, reckless behavior, loss of interest in social activities, or substance abuse
- Cognitive symptoms, like: poor self-esteem, feelings of worthlessness, guilt, feelings of not being loved, problems concentrating, declines in school performance, and recurrent thoughts of death or suicide, and finally
- Physical symptoms, such as: problems with appetite, sleep, or multiple physical complaints

Depression can have a negative impact on quality of life. If you notice any symptoms of depression, please notify the physician so that he or she can explore appropriate treatment options. If there are ANY reports about suicide, it is important to contact the doctor immediately or seek treatment at the nearest emergency room. There are very effective treatments for depression in children and adolescents.

Symptoms of anxiety can include:

- Excessive worry
- Difficulty controlling worry
- Feeling restless
- Being easily tired
- Irritability
- Difficulty concentrating
- Muscle Tension, and/or
- Sleep disturbances

Avoidance of school or social interactions may also indicate anxiety. A common source of anxiety is worry or fear about having a seizure in public. There are many effective interventions that can make a huge impact in the life of someone with anxiety.

Finally, symptoms of ADHD include:

- Inattention, including: Failing to give close attention to details, making careless mistakes in school, difficulty sustaining attention, not listening, difficulty organizing activities, avoiding homework, losing things necessary to complete activities, being easily distracted, and being forgetful
- Hyperactivity, such as: Fidgeting with hands or feet, leaving one's seat in the classroom, running excessively, difficulty playing quietly, being "on the go", or talking excessively and finally
- Impulsivity, like: blurting out answers before questions have been completed, difficulty taking turns, or interrupting others

Environmental factors may contribute to all of these symptoms in children with epilepsy. For example, they may be treated differently at school and may be subjected to teasing or bullying by schoolmates. This, in turn, may result in feelings of depression or anxiety. Children may become depressed because seizures have an effect on their school performance. Missed school days or changes in class placement related to seizures may have a significant impact on self-esteem and confidence. Freedoms are limited. For example, teenagers may have trouble getting a driver's license, and activities like swimming and contact sports may be off limits.

However, it is important to realize that symptoms of depression, anxiety, and/or ADHD in children with epilepsy can also be related to the seizures themselves. In fact, in some cases, children and adolescents began experiencing mood, anxiety, and/or inattention symptoms even before their seizures began. Children and adolescents with epilepsy may be more likely than the general population to experience emotional changes and irritability, particularly if their seizures occur frequently. Emotional changes may occur before, during, or after a seizure. These changes may also be related to where in the brain the seizure is occurring.

Medicines that prevent seizures sometimes affect mood, anxiety, and/or thinking skills. Changes in sleep habits, energy level, and fatigue can be medication side effects. Therefore, it is important to discuss any of these symptoms or changes with treating doctors to determine if medication adjustments can be made.

Here at the Cleveland Clinic Epilepsy Center, we recognize the high prevalence of depression, anxiety, and attention problems in our pediatric patients and are actively working to address these issues with a team approach to treatment. In addition to the epileptologist, there are nurse practitioners, nurses, social workers, child life workers, neuropsychologists, psychiatrists, and many support staff to work together with our patients and their families to manage epilepsy and ALL the related symptoms.

A psychiatric assessment is part of the presurgical evaluation process for patients 5 years and older. Younger patients may also be seen if there are concerns about social interaction, attention,



impulsivity, or mood. Most families will meet with our pediatric social worker to assess educational needs, family support system, coping patterns, current life stressors, or other concerns. Our social worker can be helpful by providing emotional support or brief counseling

and by assisting with practical matters, such as identifying community resources. A weekly support group is also provided for parents whose children are admitted to our monitoring unit.

Living with epilepsy can be challenging enough, let us work with you and your family regarding any other symptoms or concerns.

Here is a list of the members of the Pediatric Epilepsy Behavioral Team. We look forward to meeting you during your presurgical evaluations. Feel free to contact us if you have any concerns or questions.

- **Tatiana Falcone, MD – Psychologist**
- **Denise Hagen, LISW – Social Worker**
- **Jennifer Haut, PhD – Neuropsychologist**
- **Patricia Klaas, PhD - Neuropsychologist**