A young girl with dark hair and eyes, wearing a brown tank top, is smiling warmly at the camera. She is holding a small green plant with a single white flower bud in her hands. The background is slightly blurred, showing a person's face and a blue shirt. The entire image is framed by a thin orange border.

Understanding the Behavioral Aspects of Epilepsy



**EPILEPSY
FOUNDATION®**

Not another moment lost to seizures™

Children and adults with epilepsy are more likely to have emotional and behavioral problems than other people. Unfortunately, such problems may be harder to recognize and diagnose than more visible disorders. Since these epilepsy-related problems can be hard to see, it is difficult to determine what type of treatment might be most effective and whether or not treatment makes the patient better. This is unfortunate, because emotional and behavioral health can be just as important to the patient's quality of life as other things—like their seizure control—and this applies to children as well as adults.

A person's emotional and behavioral problems might be caused by factors not directly related to epilepsy. However, **having epilepsy** can significantly contribute to psychological and behavioral problems even if seizures are totally controlled. Epilepsy may change the way certain brain chemicals, such as neurotransmitters and serotonin, work. These chemicals influence both feelings and behavior. Other influences may be: the **cause of the epilepsy**, such as brain infection or severe head trauma; **frequent seizures**; and **medication** used to treat seizures. In addition, personal and family/peer reaction to having epilepsy can lead to unwanted behaviors and feelings such as shame and embarrassment.

Children with epilepsy may have difficulty with attention and learning that can add to their behavior problems. Also, other children might treat them differently because they have epilepsy and that can lead to unwanted behaviors and feelings such as shame and embarrassment. Overall, statistics have shown that children with epilepsy are twice as likely to have behavior problems than those with other chronic illnesses, and four times as likely to have behavior problems as children without health issues.

Five major mental health problems associated with epilepsy are:

- Attention disorders
- Depression/Mood disorders
- Anxiety disorders
- Psychoses
- Personality disorders

Perhaps the most common behavioral problem that is found in children with epilepsy involves the ability to maintain attention—such as Attention Deficit Disorder (ADD) and Attention Deficit/Hyperactivity Disorder (ADHD). This problem can be present before or after the onset of seizures. If the problem is significant (creating a problem in school), then treatment may be useful. Behavioral as well as medical treatments are available. There is minimal, if any, risk of worsening seizure control with the available medications.

Depression is one of the most common **mood disorders** for people who have epilepsy, as well as for those without epilepsy. Depression and other mood disorders can actually have a greater affect on quality of life than the number of seizures a person is having. There are a lot of reasons people with epilepsy can have mood disorders—or be at risk for them—including:

- Living with a **chronic condition**
- Having a **particular type of epilepsy**
- Being **genetically predisposed** to depression
- Taking certain antiepileptic drugs (for instance, phenobarbital)
- The **parts of the brain** that are affected by the epilepsy or cause it
- **Stress and poor communication** within the family—especially for adolescents, who can also respond to such situations with inappropriate behavior
- **Hormonal issues** that typically affect women, particularly those of childbearing age, more than men

It is important to note that **depression increases a person's risk of suicide**, so anyone who is depressed and feels, or seems, suicidal should seek help as soon as possible. Furthermore, depression and other mood disorders are treatable, particularly with:

- **Education** about symptoms and danger signals and how to respond to them
- **Reevaluation of any medicines** the person is taking
- **Appropriate use of antidepressants and psychotherapy**, depending on the severity of the problem

With children signs of depression are often different than in adults so starting education for the child and parent early in therapy may help with mood disorders and prevent behavioral problems, while also reducing stress and anxiety for both parents and children.

Anxiety is common in individuals with epilepsy, but it can be difficult to separate an anxiety disorder from the anxiety that accompanies a chronic disease, especially one, like epilepsy, characterized by unpredictable interruptions in activities. In addition, some people experience anxiety during their seizures, but this is self-limited and should not require treatment other than that given for seizures.

It is important to determine if a person has an actual anxiety disorder that is out of proportion to that expected to accompany their condition, and if it seems to be affecting quality of life independently of the seizure disorder. It is only through knowing this that the anxiety can be properly treated. As with depression, anxiety treatments can include both medications and psychotherapy.

Fewer than 10 percent of people with epilepsy have psychotic disorders, that is, those that interfere with being able to distinguish false perceptions and beliefs from real ones, and that may result in major changes in personality and behavior. Furthermore, a minority of patients may experience these symptoms temporarily, such as after a cluster of seizures. Risk factors for developing psychosis include, but are not limited to:

- Developing epilepsy at an **early age**
- Experiencing **different types of seizures**—or seizures that severely limit participation in normal life activities
- Having a **family background of psychosis**
- Having an **intellectual disability** related to the epilepsy or the cause of the epilepsy

Occasionally, psychotic or mood disorders may paradoxically begin or worsen after seizure control improves, either from medication changes or from non-medical approaches such as surgery for epilepsy. Even in this unusual circumstance, these problems typically respond to standard treatments.

The good news is that the two-thirds of all people with epilepsy who become seizure free with surgery or medication have a quality of life similar to people in the general population.



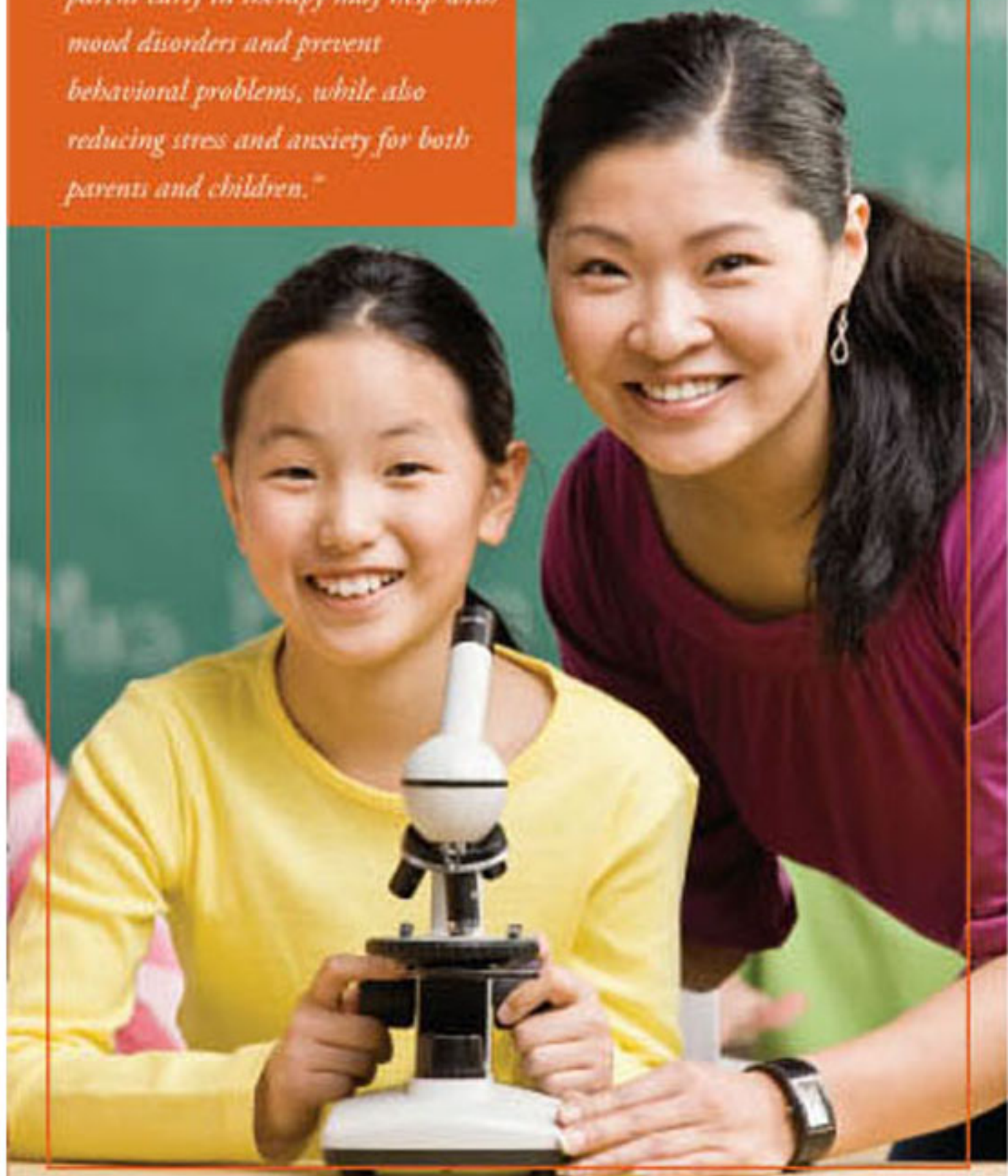
How can I find out more?

You can contact the Epilepsy Foundation. Call 1-800-332-1000 or visit www.epilepsyfoundation.org. Through the Web site or the toll-free number, you can also find the Epilepsy Foundation affiliate closest to you.

This pamphlet is intended to provide basic information to the general public. It is not intended to be, nor is it, medical advice. Readers are warned against changing medical schedules or life activities based on this information without first consulting a physician.



"With children signs of depression are often different than in adults so starting education for the child and parent early in therapy may help with mood disorders and prevent behavioral problems, while also reducing stress and anxiety for both parents and children."



This publication was made possible by a grant from the Centers for Disease Control and Prevention (grant number 5U58DP000606-04) and its contents are solely the responsibility of its author and do not necessarily represent the official views of the CDC.

©2009, 2010 Epilepsy Foundation of America, Inc

The Epilepsy Foundation gratefully acknowledges the contributions of Dr. Edward Bromfield to this publication prior to his death.



800-332-1000

www.epilepsyfoundation.org