

## A School Guide for Students with Brain Tumors

### What is a Brain Tumor?

A **brain tumor** is a mass of abnormal tissue growing in the brain. Brain tumors are the second most common form of childhood cancer. In North Texas, there are 80 – 90 children diagnosed with new brain tumors every year. Brain tumors in children can be either high-grade or low-grade. Both types are very serious, and can sometimes lead to severe and permanent disabilities or death. Fortunately, however, the majority of children with brain tumors will be long-term survivors, although they can have significant learning or behavior issues after treatment. Knowledge and understanding of the unique developmental, psychological and medical needs of children with brain tumors can improve their quality of life. Some signs and symptoms of a brain tumor include: seizures, weakness of the face, trunk, arms or legs, slurred speech, difficulty standing or walking, poor coordination, frequent headaches.

### Treatment Received

Most pediatric brain tumor patients require treatment with some combination of the surgery, radiation therapy and chemotherapy. The medical team members typically include: a pediatric neuro-oncologist (a doctor who specializes in treating cancers of the brain or spine), a pediatric neurologist (a doctor who specializes in disorders of the nervous system), a pediatric neurosurgeon (a surgeon who operates on the brain or spine), a radiation therapist (a specialist who administers radiation therapy), rehabilitation medicine specialists: speech, physical, and occupational therapists, psychologists and social workers.

### How can Brain Tumors affect School Performance?

Children with brain tumors are at risk for having trouble in the following areas:

- Attention/Concentration (distractible, impulsive)
- Processing Speed (takes longer to process information)
- Visual-Spatial Functions (copying from board; overwhelmed by crowded worksheets; having trouble finding his/her way around; handwriting difficulties)
- Executive functioning (planning activities, abstract thinking, solving problems with two or more steps, organization)
- Reading and/or reading comprehension
- Understanding math facts or remembering math facts
- Emotional implications such as: low self esteem; poor motivation; lower interest in school subjects; anxiety, depression or fear (before, during and after treatment)
- Physical complications such as: hair loss, mouth or throat sores, nausea and vomiting, diarrhea or constipation, anemia and fatigue, problems with eyesight or hearing, and the need for a wheelchair or prosthesis (artificial arm or leg).

Factors that can increase the risk of learning problems:

- Age of the child when the tumor was present
- Location of the tumor in the brain
- Associated complications, such as seizures or any infection following surgery
- Radiation treatment and/or chemotherapy
- Age of child when radiation and/or chemotherapy was given
- Child and family's social and emotional adjustment to the experience

### How can Schools Assist Students with Brain Tumors

#### Academic

- Start academic interventions right away under one of two laws: IDEA (Other Health Impairment) or Section 504
- Provide assessment to determine specific academic needs and provide appropriate accommodations and modifications necessary (including speech, OT, PT evals; Vision Impairment or Auditory impairment services, if needed)

- Provide homebound services, when necessary to help with instruction.
- Provide extra time for class work
- Assign a moderate workload that emphasizes quality vs. quantity
- Provide extended school year (during winter, spring and/or summer) to allow more time to complete assignments and to stay at peer grade level.
- Provide the student with an organizational checklist for routine activities, materials needed and steps to follow in order to assist with planning and organization.
- To assist with memory problems, use multiple modalities (auditory, visual, tactile) in the classroom. Also record information on tape and provide activities that practice recall skills.
- To assist with reading comprehension, teach the student to use context clues to identify the meanings of words or phrases. Also pre-record material, and highlight important points before reading.
- Review daily, those abstract concepts which have been previously introduced (such as math skills). Introduce the new concepts only after the student has a mastery of those previously introduced.

#### **Social/ Emotional**

- Allow student to wear hat or scarf (when hair loss is an issue)
- Provide counseling and guidance to address emotional/social effects.
- Reduce the emphasis on competition. Competitive activities may cause undue stress, then causing the student to hurry and make mistakes. The repetitive failure may cause the student to avoid situations, assignments, or responsibilities.
- Provide the student with various opportunities to achieve academic and social success, making adjustments, if necessary.

#### **Physical**

- Provide two sets of books – 1 for home, 1 for school (due to fatigue)
- Allow student to carry water bottle (to prevent dehydration)
- Allow bathroom and clinic passes, as needed.
- Provide an alternative to physical education activities that involve contact sports, strenuous exercises, and long distance running.
- Allow student to leave class 5 min. early to get to next class
- Allow student to have a mid-morning and afternoon snack, if needed.
- Provide a shortened work day or rest period, if needed
- Give the student a locker close to his/her classes, or 2 lockers if necessary.
- Provide the student a parking space close to the school entrance.
- Provide elevator access, when necessary.

In the years following a child's brain tumor, it is important to make sure that the parent/guardian and school are communicating well. Frequent parent-teacher conferences can be helpful to assess any changes in learning the child may experience as a result of treatment. When parents/guardians and schools know what learning problems may occur over time, they can better anticipate the needs of the child.

#### **For More Information:**

Please contact  
 School Services Department  
 Children's Medical Center of Dallas  
 1935 Medical District Drive  
 Dallas, Texas 75235  
 214-456-7733 – Dallas  
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#### **Resources**

*Anticipating and Understanding the Long-Term Effects of Radiation and Chemotherapy in Survivors of Childhood Brain Tumors by Dr. Peter Stavinoha & Dr. Deborah Doxey*  
*Kidshealth.org – Brain Tumors*  
*Learning and Living with Cancer: Advocating for your child's educational needs by The Leukemia and Lymphoma Society*

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