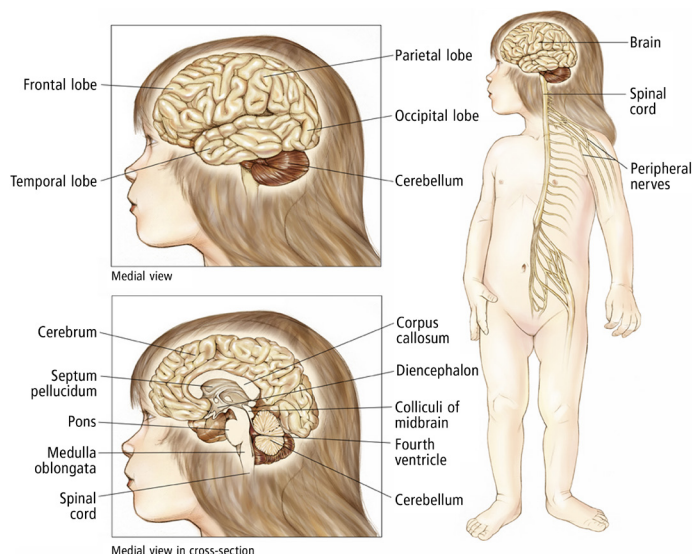


# Central Nervous System Tumors

## What is a central nervous system tumor?

The central nervous system (CNS) includes the brain and spinal cord. A CNS tumor occurs when healthy cells in the brain or spinal cord change and grow out of control and form a mass or lump. A CNS tumor can be malignant (cancerous) or benign (noncancerous). A malignant CNS tumor can grow fast and spread to other parts of the CNS. A benign tumor often grows more slowly and usually does not spread. The most common types of CNS tumors diagnosed in children are low-grade glioma (or astrocytoma), high-grade glioma, brain stem glioma, ependymoma, germ cell tumor, medulloblastoma, and primitive neuroectodermal tumors (PNETs).



## What is the function of the central nervous system?

The CNS controls all vital body functions. The brain is the center of thought, memory, and emotion. It controls the 5 senses, movement, and other basic functions, including heartbeat, circulation, and breathing. The spinal cord is made up of nerves that carry information back and forth between the body and the brain. It controls sensation and the ability to use muscles. Depending on where the tumor is located, a child with a CNS tumor may develop problems with any of the above functions.

## What does stage and grade mean?

The stage is a way of describing where the tumor is located and whether or not it has spread. Most CNS tumors are also described by their grade. For CNS tumors, grade describes how much the tumor cells look like healthy cells under a microscope and, sometimes, the specific genetic features of the tumor. The tumor grade relates to the aggressiveness of the tumor. Find more information at [www.cancer.net/cns](http://www.cancer.net/cns).

## How are central nervous system tumors treated?

The treatment of a CNS tumor for a child depends on the type of tumor, the size and location of the tumor, whether it is cancerous, whether the tumor has spread, risk of possible side effects, the family's preferences, and the child's age and overall health. Treatment options for CNS tumors may include surgery, radiation therapy, and chemotherapy medicines. The goal of surgery is to find out the type of tumor and to safely remove the tumor. If a tumor cannot be removed with surgery, called an inoperable tumor, radiation therapy and/or chemotherapy medicines may be used. Many times, malignant tumors are also treated with radiation therapy and chemotherapy. When making treatment decisions, consider a clinical trial; most children with cancer are treated as part of one. Clinical trials are an option to consider for treatment and care for all stages of cancer. Talk with your child's doctor about all treatment options. The side effects of CNS tumor treatment can often be prevented or managed with the help of your child's health care team. This is called supportive or palliative care and is an important part of the overall treatment plan.

## How can I help my child or teen cope with a central nervous system tumor?

Helping your child or teenager understand a cancer diagnosis is a key part of the coping process. Children and adolescents with a CNS tumor should be treated at a pediatric cancer center. These centers not only provide access to the latest treatments, they offer age-appropriate programs for social and emotional needs. Encouraging your child and other family members to share their emotions can be helpful in managing the diagnosis, treatment, and healing process.

## Questions to ask the health care team

Regular communication is important in making informed decisions about your child's health care. It can be helpful to bring someone along to appointments to take notes. Consider asking your child's health care team the following questions:

- What type of CNS tumor has been diagnosed? What does this mean?
- Where is the tumor located? Is it cancerous?
- Can you explain my child's pathology report (laboratory test results) to me?
- What grade is the tumor? What does this mean?
- Would you explain my child's treatment options?
- What clinical trials are available for my child? Where are they located, and how do I find out more about them?
- What treatment plan do you recommend for my child? Why?
- What is the goal of each treatment? Is it to eliminate the tumor, help my child feel better, or both?
- Who will be part of the treatment team, and what does each member do?
- How will this treatment affect my child's daily life? Will he or she be able to go to school and perform his or her usual activities?
- What short-term and long-term side effects may be associated with my child's treatment?
- What are the chances that the cancer will come back after treatment?
- What follow-up tests will my child need, and how often will he or she need them?
- If I'm worried about managing the costs of medical care, who can help me?
- Where can I find emotional support for my child? For my family?
- Whom should I call with questions or problems?

**Find more questions to ask the health care team at [www.cancer.net/cns](http://www.cancer.net/cns). For a digital list of questions, download Cancer.Net's free mobile app at [www.cancer.net/app](http://www.cancer.net/app).**

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## WORDS TO KNOW

### Benign:

A tumor that is not cancerous

### Biopsy:

Removal of a tissue sample that is then examined under a microscope to check for cancer cells

### Chemotherapy:

The use of drugs to destroy tumor cells

### Clinical trial:

A research study that tests a new treatment or drug

### Malignant:

A tumor that is cancerous

### Metastasis:

The spread of cancer from where it began to another part of the body

### Neurosurgeon:

A doctor who specializes in treating a brain or spinal cord tumor with surgery

### Pediatric oncologist:

A doctor who specializes in treating cancer in children and teens

### Prognosis:

Chance of recovery

### Radiation therapy:

The use of high-energy x-rays to destroy cancer cells

### Tumor:

An abnormal growth of body tissue

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