





The brain and spinal cord

The brain and spinal cord together are called the *central nervous system* or *CNS*. They serve as the main “processing center” for all of the nervous system.

The brain and spinal cord are surrounded and protected by a special liquid, called *CSF* or *cerebrospinal fluid*. The brain is also protected by the skull. The spinal cord is protected by the stack of spinal bones called *vertebrae*.

Different parts of the brain control different things, like the way we see, move, or think. The spinal cord connects to nerves all over the body to carry messages back and forth between the brain and the body.

Are there different kinds of brain and spinal cord tumors in children?

There are many [kinds of brain and spinal cord tumors](#)². Some types are more common in children than in adults. Some types of tumors tend to start in certain parts of the brain or spinal cord. Some are more likely to grow and spread than others.

Your doctor can tell you more about the kind your child has. Here are some of the more common types and how to say them:

- Astrocytoma (AS-troh-sy-**TOE**-muh)
- Glioblastoma (GLEE-o-blast-**O**-muh)
- Brain stem glioma (glee-**O**-muh)
- Ependymoma (ih-PEN-dih-**MO**-muh)
- Oligodendroglioma (AHL-ih-go-DEN-dro-gee-**O**-muh)
- Medulloblastoma (**MED**-yew-lo-blas-**TOE**-muh)
- Meningioma (muh-NIN-jee-**O**-muh)
- Craniopharyngioma (CRAY-nee-0-fuh-RIN-jee-**O**-muh)
- Ganglioglioma (GANG-lee-o-gee-**O**-muh)
- Schwannoma (shwah-**NO**-muh), also called neurilemmoma (NOR-uh-leh-**MO**-muh)

Questions to ask the doctor

- How sure are you that my child has a brain or spinal cord tumor?
- Is there a chance he/she doesn't have one?
- Would you please write down the kind of tumor you think my child has?
- What will happen next?

How does the doctor know my child has a brain or spinal cord tumor?

- What tests will my child need?
- Who will do these tests?
- Where will they be done?
- Who can explain them to us?
- How and when will we get the results?
- Who will explain the results to us?
- What do we need to do next?

How serious is my child's tumor?

For many types of cancer, the stage (extent) of the cancer is used to decide what type of treatment is best and how likely it is that a person will get better. But brain and spinal cord tumors are not staged like most cancers.

Some of the things that doctors use to decide on treatment and

What kind of treatment will my child need?

Treatment for brain and spinal cord tumors depends on things like the type of tumor and where it is.

Surgery

[Surgery](#)

There are different ways to give radiation treatments.

- Radiation can be aimed at the tumor from a machine outside the body. This is called **external beam radiation**. The radiation may be given all at once or in smaller doses given over a few days or weeks. Each treatment is a lot like getting an x-ray. The radiation is stronger, but your child will not feel it.
- Less often, radiation can be given by putting tiny seeds of radiation into or near the tumor. This is called **brachytherapy**.

Side effects of radiation treatments

Radiation might cause some children to feel tired, or feel sick and throw up. If it is given to large parts of the brain, it might also affect thinking and learning. This can be a bigger problem in very young children.

Most side effects get better after treatment ends. Some might last longer. Talk to your child's cancer care team about what to expect during and after treatment. There may be ways to ease side effects.

Chemo

[Chemotherapy](#)⁷, or just chemo, is the use of drugs to fight cancer. The drugs are often given through a needle into a vein or taken as a pill. These drugs go into the blood and spread through the body.

Chemo can also be put right into the CSF during surgery. Ask the treatment team how your child will get chemo.

Chemo is most helpful for fast growing tumors.

Chemo is often given in cycles or rounds. Each round of treatment is followed by a break. Sometimes more than one chemo drug might be given. Treatment often lasts for many months.

Side effects of chemo

Chemo can make your child feel very tired, sick to their stomach, or cause their hair to fall out. It might also cause other problems. But these tend to go away after treatment ends.

There are ways to treat most chemo side effects. If your child has side effects, talk to the cancer care team so they can help.

Targeted drugs

[Targeted drugs](#)⁸ are made to work mostly on the changes in cells that make them cancer. These drugs affect mainly tumor cells and not normal cells in the body. They may be used to treat certain types of brain and spinal cord tumors.

Side effects of targeted drugs

Side effects depend on which drug is used, but they tend to go away after treatment ends.

There are ways to treat most of the side effects caused by targeted drugs. If your child has side effects, talk to the cancer care team so they can help.

Drugs to help with symptoms

by asking the doctor if your child's clinic or hospital conducts clinical trials. See [Clinical Trials](#)¹⁰ to learn more.

What about other treatments that I hear about?

When your child has a tumor, you might hear about [other ways](#)¹¹ to treat it or treat symptoms from it. These may not always be standard medical treatments. These treatments may be vitamins, herbs, diets, and other things. You may wonder about these treatments.

Some of these are known to help, but many have not been tested. Some have been shown not to help. A few have even been found to be harmful. Talk to your child's doctor about anything you're thinking about using, whether it's a vitamin, a diet, oring about using, whe

treatment ends, your child will still need to see their doctor. At first, visits may be every few weeks or months. Then, the longer your child is tumor-free, the less often the visits are needed.

Be sure to take your child to all of these follow-up visits. The doctors will ask about symptoms, do physical exams, and may do tests to see if the tumor has come back. They may also test your child to see if the tumor or its treatment has caused any long-term problems. If needed, they will help you and your child learn to deal with the changes.

[For connecting and sharing during a cancer journey](#)

Anyone with cancer, their caregivers, families, and friends, can benefit from help and support. The American Cancer Society offers the Cancer Survivors Network (CSN), a safe place to connect with others who share similar interests and experiences. We also partner with CaringBridge, a free online tool that helps people dealing with illnesses like cancer stay in touch with their friends, family members, and support network by creating their own personal page where they share their journey and health updates.

Hyperlinks

[trials.html](#)

11. www.cancer.org/cancer/managing-cancer/treatment-types/complementary-and-integrative-medicine.html
12. www.cancer.org/cancer/types/brain-spinal-cord-tumors-children/after-treatment/follow-up.html
13. www.cancer.org

Words to know

Biopsy (BY-op-see): Taking out a small piece of tissue to see if there are cancer cells in it.

Central nervous system: The brain and the spinal cord, which serve as the main “processing center” for all of the nervous system. Often called the CNS.

Cerebrospinal fluid (suh-**REE**-bro-SPY-nuhl FLEW-id): The clear liquid that surrounds and cushions the brain and spinal cord. Often called CSF.

Neurologist (nur-AHL-uh-jist): A doctor who specializes in treating nervous system problems or diseases.

Neurosurgeon(**NUR**-o-SUR-jun): A doctor who specializes in using surgery to treat nervous system problems or diseases.

Neuroradiologist (NUR-o-ray-dee-**AHL**-uh-jist: A doctor who specializes in using imaging tests to look at the nervous system.

Ommaya reservoir (o-MY-uh REZ-er-vwahr): A plastic, dome-shaped drum that’s put just under the scalp during surgery. A tube attached to it goes into the brain where it reaches the CSF. Doctors and nurses can use a thin needle to give chemo through the drum or to take out CSF for testing.

VP shunt: Also called a ventriculoperitoneal (ven-TRIK-yew-lo-pair-ih-tuh-**NEE**-ahl) shunt. A thin tube used to drain extra CSF to ease pressure in the brain. Surgery is done to put one end of the shunt in the brain and the other end in the abdomen (belly). The tube runs under the skin of the neck and chest. The flow of CSF is controlled by a valve in the tubing. Shunts may be short-term or permanent.

How can I learn more?

We have a lot more information for you. You can find it online at www.cancer.org¹³. Or,

you can call our toll-free number at 1-800-227-2345 to talk to one of our cancer information specialists.

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