

# Brain Cancers



Brain tumours can be either primary (develop in the brain) or secondary (cancer from another part of the body spreads to the brain). A primary brain tumour occurs when abnormal cells form in the tissues of the brain. Brain tumours are the most common type of solid tumour that develops in children, and they can affect children of any age.

The brain and spinal cord are closely linked and together they form the Central Nervous System (CNS). The spinal cord connects the brain with nerves in every part of the human body. The brain controls many vital bodily functions.

*The brain consists of three major parts:*

- ⚔ **The cerebrum** is the largest part of the brain. It sits at the top of the head and controls learning, emotions, thinking, speech, reading, writing, and voluntary movement.
- ⚔ **The cerebellum** is the lower back part of the brain and lies near the middle of the back of the head. It controls balance, movement and posture.
- ⚔ **The brain stem** is the lowest part of the brain and is situated just above the back of the neck. It connects the brain to the spinal cord and controls heart rate, breathing, and all the muscles you use to walk, talk, hear, see, and eat.

Malignant brain tumours grow rapidly and are likely to spread into other areas of the brain very quickly. When a tumour grows into or creates pressure on part of the brain it may cause that part of the brain to stop functioning the way it should.

## Causes of Brain Cancer

Although brain tumours in children are the second most common form of childhood cancer, it is still unknown what the cause of most childhood brain cancers is.

## Signs and Symptoms

*Some of the typical signs and symptoms of Brain Cancer are:*

- ⚔ Excessive thirst and excessive urination

- ⚠ Eye problems, such as abnormal eye movements, blurring or double vision
- ⚠ Increase in the head size in an infant
- ⚠ Back pain not related to injury
- ⚠ Persistent vomiting without any known cause (usually in the morning), nausea
- ⚠ Growth retardation
- ⚠ Progressive weakness or clumsiness; neck tilt, squint
- ⚠ Seizures
- ⚠ Sleep apnoea (irregular stopping of breathing during sleep)
- ⚠ Unusual changes in personality or behaviour.
- ⚠ Unusual sleepiness or much less activity.
- ⚠ Vision, hearing, and speech problems
- ⚠ Walking, balance problems

## Tests and Diagnosis

***Brain Tumours can be diagnosed using the following tests and procedures:***

- ⚠ **Physical Exam and History:** The doctor will give the child a physical examination, to check the general health as well as checking for anything unusual or signs of cancer, and a complete medical history will be taken
- ⚠ **Neurological exam:** The doctor will ask a series of questions and perform certain tests to check brain function, nerve function and the spinal cord. Tests will check mental status, the ability to walk normally, coordination and how well the senses, muscles and reflexes are functioning.
- ⚠ **MRI (Magnetic Resonance Imaging):** An MRI or nuclear magnetic resonance imaging (NMRI), is a procedure whereby a series of detailed pictures is taken of the inside of the body using a computer, a magnet and radio waves

Other tests may be done including a CT scan, blood tests, or a Serum Tumour Marker Test.

## Treatment Options

Because there are various types of brain tumours, the treatment will not be the same for every child. One treatment or a combination of treatments may be necessary.

***Treatment options consist of:***

- ⌘ **Surgery:** A neurosurgeon can often remove most of the tumour by cutting it out. A fine tube called a shunt may then be inserted to drain excess fluid from the brain into the lining of the abdomen to stop any rise of pressure in the brain.
- ⌘ **Chemotherapy:** The use of a combination of anti-cancer drugs to destroy ~~or shrink~~ cancer cells is the preferred treatment for children, and may be done after surgery if the tumour could not be completely removed by the operation
- ⌘ **Radiotherapy:** High-energy rays that destroy the cancer cells.

## **Awareness Ribbon Colour**

The awareness ribbon colour for Brain Tumours is Grey

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