



BRAIN TUMOUR

THE BRAIN

The brain is a soft, spongy mass of tissue. It is protected by:

- The **bones** of the skull
- Three **thin layers of tissue** (meninges)
- **Watery fluid** (cerebrospinal fluid)

When most normal cells grow old or get damaged, they die, and new cells take their place. Sometimes, this process goes wrong. New cells form when the body does not need them, and old or damaged cells do not die as they should. The build up of extra cells often forms a mass of tissue called a **growth** or **tumour**.

Primary brain tumours can be benign or malignant:

- **Benign** brain tumours do not contain cancer cells but may become malignant.
- **Malignant** brain tumours (also called **brain cancer**) contain cancer cells:
 - Malignant brain tumours are generally more serious and often are a threat to life.
 - They are likely to grow rapidly and crowd or invade the nearby healthy brain tissue.
 - Cancer cells may break away from malignant brain tumours and spread to other parts of the brain or to the spinal cord. They rarely spread to other parts of the body.

GRADING

Doctors group brain tumours by grade. The grade of a tumour refers to the way the cells look under a microscope:

- **Grade I:** The tissue is benign. The cells look nearly like normal brain cells, and they grow slowly.
- **Grade II:** The tissue is malignant. The cells look less like normal cells than do the cells in a Grade I tumour.
- **Grade III:** The malignant tissue has cells that look very different from normal cells. The abnormal cells are actively growing (anaplastic).
- **Grade IV:** The malignant tissue has cells that look most abnormal and tend to grow quickly.

RISK FACTORS

Studies have found the following risk factors for brain tumours:

- **Ionizing Radiation:** Ionizing radiation from high dose x-rays (such as radiation therapy from a large machine aimed at the head) and other sources can cause cell damage that leads to a tumour.

- **Family History:** It is rare for brain tumours to run in a family. Only a very small number of families have several members with brain tumours.

SYMPTOMS

The symptoms of a brain tumour depend on tumour size, type, and location. These are the most common symptoms of brain tumours:

- Headaches (usually worse in the morning)
- Nausea and vomiting
- Changes in speech, vision, or hearing
- Problems balancing or walking
- Changes in mood, personality, or ability to concentrate
- Problems with memory
- Muscle jerking or twitching (seizures or convulsions)
- Numbness or tingling in the arms or legs

DIAGNOSIS

You may have one or more of the following tests:

Neurologic exam: The doctor checks your vision, hearing, alertness, muscle strength, coordination, and reflexes. Your doctor also examines your eyes to look for swelling caused by a tumour pressing on the nerve that connects the eye and the brain.

MRI: A large machine with a strong magnet linked to a computer is used to make detailed pictures of areas inside your head.

CT scan: An x-ray machine linked to a computer takes a series of detailed pictures of your head.

Other tests may include:

- Angiogram
- Spinal tap
- Biopsy

TREATMENT

The treatment options for brain tumour are surgery, radiation therapy, and chemotherapy. Many people get a combination of treatments. The choice of treatment depends mainly on the following:

- The type and grade of brain tumour
- Its location in the brain
- Its size
- Your age and general health

Surgery: Done to remove part or the entire tumour. Before surgery, discuss with the doctor the plan for pain relief with your health care team.



After surgery, you may experience the following:

- Headache
- Weakness
- Tiredness

Less common problems include:

- Brain swelling or fluid build up
- Infection
- Problems with thinking, seeing, or speaking
- Personality changes or seizures

Radiation therapy: The use of high energy radiation (x-rays, gamma rays, neutron or protons) to kill the brain tumour cells.

Chemotherapy: Treatment with drugs that kill cancer cells. Can be administered in the following ways:

- By mouth or vein (intravenous)
- In wafers that are put into the brain



TIPS:

Seek a second opinion - Before starting treatment you might want to get a second opinion on diagnosis and treatment plan.

Nutrition - You need to eat well as it will help you feel better and have more energy.

Supportive care (comfort care/ palliative care/ symptom management) - This is care given to improve the quality of life of patients who have a serious or life-threatening disease.

Supportive care for people with brain tumour can be given for the following:

- Swelling of the brain
- Seizures
- Fluid build-up in the skull
- Sadness and other feelings

Rehabilitation

The goals of rehabilitation depend on your needs and how the tumour has affected your ability to carry out daily activities. Several types of therapists can help:

- **Physical therapists:** help people regain strength and balance.
- **Speech therapists:** help people with trouble speaking, expressing thoughts, or swallowing.
- **Occupational therapists:** help people learn to manage activities of daily living, such as eating, using the toilet, bathing, and dressing.
- **Physical medicine specialists:** help people with brain tumours stay as active as possible.

Follow-up care

You will need regular checkups after treatment for a brain tumour.

SOURCES OF SUPPORT

- Doctors, nurses, and other members of your health care team.
- Social workers, counsellors, or members of the clergy
- Support groups
- Cancer Institutions such as the Africa Cancer Foundation and Faraja Cancer Support Trust.

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