



DR VANESSA SAMMONS
NEUROSURGEON



Guide to
BRAIN TUMOURS

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KEY FACTS

- Brain tumours are an abnormal growth of cells within the brain
- Brain tumours are caused by alterations in cell DNA but the cause is unknown
- Symptoms include headaches, nausea, dizziness, vomiting, seizures, limb weakness, speech problems, behavioural change, double vision
- Treatment options include conservative and minimally invasive procedures, as well as surgery
- Depending on the tumour size and location, patients may require a hospital stay of up to 10 days. Surgical recovery can take up to a month, with full recovery varying from patient to patient.

WHAT ARE BRAIN TUMOURS?

Tumours are an abnormal growth of cells within the brain. Depending upon their size and location, these growths can disrupt brain function with a variety of consequences. They are first categorised like this:

- **Benign** – A tumour that is free of aggressive cancer cells is labelled benign. It's unlikely to grow back after it's removed. A majority (66%) of brain tumours are benign but may still cause unwanted symptoms.
- **Malignant** – A tumour that contains cancer cells is labelled malignant. These cells typically spread to other nearby areas, and depending on the original site, can spread to other parts of the body. Many types of malignant tumours are likely to return even after being surgically removed.

Brain tumours are also classified based on where they develop:

- **Metastatic** – This type of malignant brain tumour originates from cancer cells in other parts of the body that have migrated (metastasised) to the brain.
- **Primary** – This type of malignant brain tumour originates in the cells of the brain itself. It may spread to other areas of the spine or brain, but tends not to affect other organs.

In all, there are more than 120 unique brain tumour types. Two of the most common are meningioma and glioma.

WHAT ARE THE SYMPTOMS OF BRAIN TUMOURS?

Brain tumour symptoms can affect different parts of the body and include:

- Headaches
- Seizures
- Nausea and vomiting
- Unsteadiness when walking
- Eyesight problems
- Trouble speaking or thinking
- Weakness
- Behavioural change

These symptoms vary depending upon:

- Tumour location
- Tumour size
- Rate of tumour growth
- Tumour stage (how advanced it is)

WHAT CAUSES BRAIN TUMOURS TO DEVELOP?

Brain tumours develop due to changes in cellular DNA, but researchers have not yet identified the cause of those changes. They have, however, identified certain risk factors:

- **Age** – risk increases with age
- **Chemical exposure**
- **Ethnicity**
- **Family history** (rare)
- **Radiation exposure**

The American Brain Tumor Association has found a decreased risk of brain tumours in people who contracted childhood chicken pox.

WHEN SHOULD I CONSULT A DOCTOR?

If you experience one or multiple symptoms of a brain tumour and the symptoms are persistent, reach out to your doctor immediately. Early diagnosis of any health condition, including a brain tumour, can help lead to improved recovery. Your doctor will also be able to identify any other underlying causes of your symptoms.

HOW ARE BRAIN TUMOURS DIAGNOSED?

Brain tumours can be difficult to diagnose until they have grown large enough to produce symptoms. When they do, initial symptoms may be similar to other medical problems such as migraine headaches. Patients may self-diagnose incorrectly, and delay making a consultation.

A consultation for a brain tumour includes a review of your symptoms and medical history, as well as a physical examination. The physical exam may include assessments of:

- Coordination
- Eye movement
- Mouth movement
- Muscle strength
- Reflexes
- Balance testing
- Speech testing

Beyond these in-office assessments, your doctor may also recommend:

- CT scan
- MRI
- Biopsy
- Blood tests
- Lumbar puncture

The information these tests provide is used to create an accurate picture of the brain tumour and to develop a targeted treatment plan.

WHAT ARE THE TREATMENTS FOR BRAIN TUMOURS?

Your doctor will determine the best treatment course for you based upon:

- The type of tumour you have
- The size of the tumour
- The location of the tumour

Surgery is generally appropriate to treat both benign and malignant tumours. It can be used to:

- Make an accurate diagnosis
- Remove the entire tumour
- Remove part of the tumour to slow its growth or reduce symptoms
- Drain a build-up of fluid on the brain
- Support other treatments such as chemotherapy

Small, benign tumours may be monitored for a brief period before they become large enough to require surgery to relieve symptoms. Malignant tumours should be removed urgently.

WHAT HAPPENS DURING BRAIN TUMOUR SURGERY?

Neurosurgeons are doctors who specialise in surgery to remove brain tumours without compromising healthy parts of the brain. The goal is to remove as much of the tumour as possible. This process may be made more difficult by the location of the tumour. Even partial tumour removal can be beneficial.

This surgery is called a craniotomy. The surgeon removes a small portion of the bone in the skull to provide access to the tumour. A variety of tools and techniques, including special scissors, an ultrasonic aspirator, suction and cautery are used to break up and excise the tumour. When the operation is complete, the bone is replaced and secured in place.

Awake craniotomy, a surgery in which patients are awake for part of the operation, is used to help check brain function during surgery. Patients are fully anaesthetised, and the anaesthetist and their nurse are on hand to monitor comfort levels.

WHAT CAN I EXPECT AFTER BRAIN TUMOUR SURGERY?

Immediately following your surgery, you will be taken to a recovery room where your progress will be monitored. You should wake feeling comfortable. After approximately two hours, you will be moved to your hospital room in the Intensive Care Unit. A typical stay in hospital is 3 to 10 days.

Whilst most patients are better post-operatively, it is possible to transiently feel worse before you feel better. You may even experience symptoms that you did not have previously. Dr Sammons and the medical team will work with you to determine your long-term prognosis.

WHAT SHOULD I DO AFTER BRAIN SURGERY?

In most scenarios, people recover well from their surgery. Many patients are better to some degree immediately after surgery and many feel neurologically normal very quickly. In some instances, however, healing of the involved brain can take many months, depending on the location. Some, depending on the success of their tumour removal, may continue to experience symptoms. Brain tumours can affect motor skills, speech, vision and thinking, making rehabilitation a necessary part of recovery for some patients. Support can be provided by:

- Occupational therapists
- Physiotherapists
- Speech therapists

WILL DR SAMMONS FOLLOW UP WITH ME?

Yes. Dr Sammons and your medical team will monitor your progress during your hospital stay and beyond. She will look in on you regularly and our staff will schedule follow up appointments for later in your recovery. Depending on the type of tumour, you will also be seen by other doctors who may need to provide further treatments.

DO BRAIN TUMOURS COME BACK AFTER SURGERY?

Non-malignant brain tumours removed by surgery are unlikely to reoccur. The same cannot be said for cancerous tumours. Malignant tumours that were completely or partially removed by surgery may recur and should be monitored on a regular basis. Supportive therapies such as chemo and radiation therapy may be prescribed.

Please call our rooms if you have any additional concerns or questions.



Hello!

I'm a Neurosurgeon at North Shore Private Hospital, Gosford Private Hospital, Brisbane Waters Private Hospital and the Sydney Adventist Hospital. I treat all neurosurgical conditions, but with a particular interest in Peripheral Nerve Surgery. I pride myself on providing personalised and thoughtful patient care and utilising my skills to achieve the best outcome possible.

I believe that a great neurosurgeon will ensure you feel listened to, will ensure that you understand what your surgery involves, and should also work together with your GP to achieve the best outcome for you.

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