What is a brain tumour?

A tumour is an abnormal growth caused by cells dividing in an uncontrolled manner. There are approximately one hundred different types of brain tumour and they are usually named after the type of cell they started from. The information on this fact sheet gives a brief outline of some of the most common types of brain tumour. If you have been diagnosed with a type of brain tumour that is not covered in this fact sheet, please contact our Information and Support team.

# In this fact sheet:

* The difference between primary and secondary brain tumours
* The difference between [benign](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_B) and [malignant](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_M) brain tumours
* How brain tumours are graded
* An outline of some of the most common types of brain tumour

## The difference between primary and secondary brain tumours

Primary brain tumours begin somewhere in the brain, whereas secondary brain tumours are the result of a cancer elsewhere in the body spreading to the brain.

## What is a benign brain tumour?

A benign brain tumour is confined to a specific area. It does not grow into
the substance of the brain and does not spread to other parts of the brain
or body.

## What is a malignant brain tumour?

A malignant brain tumour is one that may spread to surrounding tissue and other parts of the brain. It is very rare for a malignant brain tumour to spread to other parts of the body. Rather than referring to a tumour as benign or malignant, health professionals often prefer to talk about brain tumours in terms of grading (see below). This is because brain tumours may change grade over time.

## Grading

Brain tumours are graded from 1 - 4. The [grading](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_G) refers to the degree of ‘malignancy’ (the speed at which they are growing). Grade 1 and 2 tumours are known as ‘low grade’ (i.e. slower growing), while grades 3 and 4 are known as ‘high grade’ (i.e. faster growing). Some tumours contain a mixture of cells with different grades. The tumour is graded according to the most malignant cell it contains, even if the majority of it is low grade.

## The most common types of brain tumour

There are many different types of brain tumour. This fact sheet outlines some of the most common types. If you would like information on any other type, please contact us.

## Glioma

A [glioma](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_G) is a tumour of the [glial cells](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_G). Glial cells support and protect the [nerve cells](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_N) in the brain. Glioma is the most common type of brain tumour. There are three main types of glioma:

### ****Astrocytoma****

[Astrocytomas](http://www.thebraintumourcharity.org/support-information/Information-new/jargon-buster.htm), the most common type of glioma, develop from cells in the brain called astrocytes. Astrocytes are a star-shaped type of glial cell that support the nerve cells in the brain. An astrocytoma can be high grade or low grade. High grade, malignant astrocytomas can be grade 3 (‘anaplastic astrocytomas’) or grade 4 (‘glioblastoma’). [Glioblastoma](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_G) is the most ‘aggressive’, fastest growing type of brain tumour and is more common in adults than children. Glioblastomas arise from glial cells, which support and protect nerve cells in the brain.

### ****Ependymoma****

This type of tumour develops from ependymal cells, which repair any damage to nerve tissue. Ependymal cells are found in the fluid - filled areas of the brain. [Ependymomas](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_E) can be high grade or low grade. As the ependymal cells are in fluid, a tumour of these cells can spread within the central nervous system (brain and spinal cord) via the fluid, although this is not common.

### ****Oligodendroglioma****

This type of glioma develops from cells called oligodendrocytes, which produce a fatty, protective covering of nerve cells in the brain. [Oligodendrogliomas](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_O) can be slow growing with well defined edges, or they can be faster growing (when they are referred to as ‘anaplastic oligodendroglioma’ or sometimes ‘grade 3 anaplastic oligodendroglioma’).
It is also possible to have what is known as a ‘mixed glioma’, which is a tumour that contains more than one type of cell (astrocytes, [ependymomas](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_E), and oligogodendrocytes).

## Meningioma

A [meningioma](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_M) is a type of brain tumour that begins in the [meninges](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_M). Meninges are a set of membranes that cover and protect the brain and spinal cord. The majority of meningiomas are low grade (‘benign’).

## Schwannoma or Acoustic Neuroma

A schwannomma, also sometimes called an ‘acoustic neuroma’ is a tumour that begins in the schwann cells in the brain. Schwannomas grow on the acoustic nerve, which is involved in controlling balance and hearing; therefore, both of these functions can be affected by a schwannoma. Schwannomas tend to be slow growing (‘benign’) and do not generally spread from the site that they begin to grow from.

## CNS lymphoma

A lymphoma is a tumour of the lymph nodes. Lymph nodes help the body fight against infection. There are many different types of lymphoma. A lymphoma of the CNS (central nervous system, which consists of the brain and spinal cord) is usually high grade and is called ‘non Hodgkin lymphoma’. (Hodgkin lymphoma is a different illness entirely. It is important for your doctors to tell you which type of lymphoma you have).

## Pituitary adenoma

A [pituitary adenoma](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_P) is the most common type of pituitary tumour and starts
in the pituitary tissue. The pituitary is a gland that is found towards the base of the brain. It controls other glands within the body that in turn control the body’s functioning. Some pituitary adenomas produce hormones, others
do not. Treatment will partly depend on whether your pituitary adenoma produces hormones or not. Most pituitary adenomas are slow
growing (‘benign’).

## Medulloblastoma

[Medulloblastomas](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_M) originate from poorly developed brain cells. The majority of them start in the [cerebellum](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_C) (a structure towards the back of the brain that controls balance and coordination). Medulloblastomas are fast growing (‘[malignant](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_M)’) and are more common in children than adults.

## CNS PNET

Central Nervous System Primitive Ectodermal tumours (otherwise known as CNS [PNET](http://www.thebraintumourcharity.org/NR/exeres/05EFEFD0-1D42-4972-BF9A-3F7FB7C3012F%2Cframeless.htm?NRMODE=Published#MainControl_Glossary_ZoneMain_GlossaryPlaceholderControl1_ctl00_PresentationModeControlsContainer_SECTION_P)) occur in the brain or the spine. They are more common in children than adults, accounting for around 3-5% of childhood brain tumours. CNS PNETs develop from cells that are left over from a baby’s development in the womb and whilst they are normally harmless, they can develop in to cancer on rare occasions. Medullablastoma is a type of PNET.

# What if I have further questions?

If you require further information, any clarification of information, or wish to discuss any concerns, please contact our Support and Information Team.

* Call 0808 800 0004 (free from landlines and most mobiles including 3, O2, Orange, T-mobile, EE, Virgin and Vodafone)
* Email support@thebraintumourcharity.org
* Join our online forums at [www.thebraintumourcharity.org/forums](http://www.thebraintumourcharity.org/forums)

# About us

The Brain Tumour Charity makes every effort to ensure that we provide accurate, up-to-date and unbiased facts about brain tumours. We hope that these will add to the medical advice you have already been given.

Please do continue to talk to your doctor if you are worried about any medical issues. We are the UK’s leading brain tumour charity. We fund scientific and clinical research into brain tumours and offer information and support to those affected, whilst raising awareness and influencing policy.

We rely 100% on charitable donations to fund our vital work. If you would
like to make a donation, or want to find out about other ways to support us including fundraising, leaving a gift in your will or giving in memory, please visit us at [www.thebraintumourcharity.org](http://www.thebraintumourcharity.org) or call 01252 749043.

# About this fact sheet

This fact sheet has been written and edited by The Brain Tumour Charity’s Support and Information Team. The accuracy of medical information has been verified by a leading neuro-oncologist. Our fact sheets have been produced with the assistance of patient and carer representatives and up-to-date, reliable sources of evidence. If you would like a list of references for any of the fact sheets, or would like more information about how we produce them, please contact us.

# What is a brain tumour?

# Your notes



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