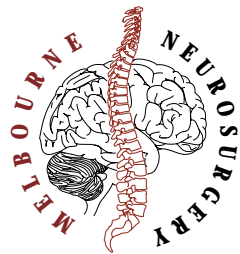


## INFORMATION LEAFLET

# MENINGIOMA



### WHAT IS A MENINGIOMA ?

This is a tumour that has grown from one of the tissues that line the brain (called meninges). The particular layer of the meninges is said to be the Arachnoid Layer (called this because it is spider web like in appearance). It is probably the most common type of brain tumour at about 17% of the total. It is unclear what causes the meningioma to occur.

### What are the types of meningioma ?

There are two ways of looking at meningiomas; The first is by the place in the brain that they appear (location), and the second is by what they look like when viewed under the microscope (histological type). The histological type is decided by a pathologist. Their behavior is based not only on their histological type but also on their location.

#### LOCATIONS (some)

Convexity	(over the surface of the brain)
Olfactory groove	(under the brain, just above the nose)
Parasagittal	(in between the two lobes of the brain)
Sphenoid wing	(under the brain, just behind the eye)

#### HISTOLOGICAL TYPE (some)

Syncytial	(very cellular)
Fibroblastic	(fibrous)
Angioblastic	(lots of blood vessels)
Malignant	(aggressive and invades brain)

### IS IT A MALIGNANT TUMOUR ?

Malignant usually means that the tumour spreads to other parts of the body. Except for the rare malignant type the others are benign tumours but by the nature of their location some may behave like a malignant tumour. It very rarely spreads to other parts of the body.

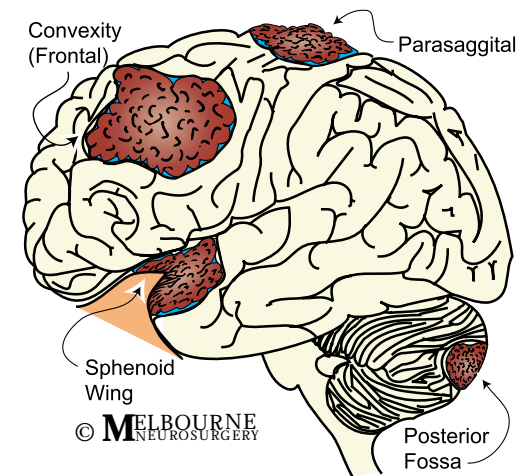
### HOW DOES THE TUMOUR GROW ?

It generally grows as a lump (like a golf ball) but it can invade the dura (lining of the skull), the skull bone and sometimes the brain.

### HOW DO WE KNOW IT IS THERE ?

The tumour often causes problems with the brain  
You may have had a seizure (fit)  
It may be preventing part of the brain working (like a stroke)  
It may be causing headaches.

The CAT scan is the first test and shows most tumours. If it does not show on the CAT scan an M.R.I. will be performed. Even when we know there is a tumour on the CAT scan we may still do an M.R.I. (more sensitive) to see how extensive the tumour is, to confirm it is a meningioma and to help plan surgery.



### What normally happens ?

You have normally been seen by your local doctor and he has organised a CT scan otherwise you have presented to the emergency department. If your local doctor discovered the lesion in the brain he will send you for an opinion. At this stage it is only presumed that the lesion is a meningioma (it usually has a typical appearance on CT).

What happens next depends on the size and location of the tumour.

If it is a large tumour and it is causing swelling in the brain you are started on DEXAMETHASONE. This is a steroid drug that will reduce the swelling around the tumour. Some of its' side effects are to make you hungry and also to give you the hiccups. Your symptoms of e.g. headache / weakness usually improve on these. The other drug we give you is an ANTI - EPILEPTIC. This is because the tumour may irritate the brain and cause a seizure (fit). The fit may have been the reason the lesion was found in the first place.

If it is a small tumour and not causing any pressure on the brain then you are not started on any medications.

If you have not had an M.R.I. then this is organised. If you are not well and need urgent treatment the M.R.I. may be done after surgery and the CAT scan used for the procedure. After the M.R.I.:

- (i) If it is small we may plan to observe it.
- (ii) If the lesion is large and/or causing problems then surgical removal may be planned.
- (iii) If it is in a dangerous part of the brain Then we may observe it or plan other treatment options prior to surgery

### Why surgery ?

If the lesion can be completely removed then a cure can be obtained.

If the tumour is large it may be compressing the brain to cause either weakness or drowsiness. Hopefully any weakness that you have is from compression and not invasion of the important parts of the brain.

In all tumours the aim is to remove what is safe. With some tumours they have grown around some of the important nerves or arteries of the brain. Sometimes the risk to these is to great at surgery so some of the tumour may be left behind. With other tumours they have spread over such a large area that complete removal would be too big an operation. Usually the bulk can be removed and this will remove the pressure on the surrounding brain. With this the swelling in the brain goes down substantially. If your weakness is due to pressure this usually gets better in the next few days after the surgery.

The Surgery is usually a Craniotomy and Excision of the tumour (see Operation Leaflet CRANIOTOMY FOR MENINGIOMA).

### After surgery

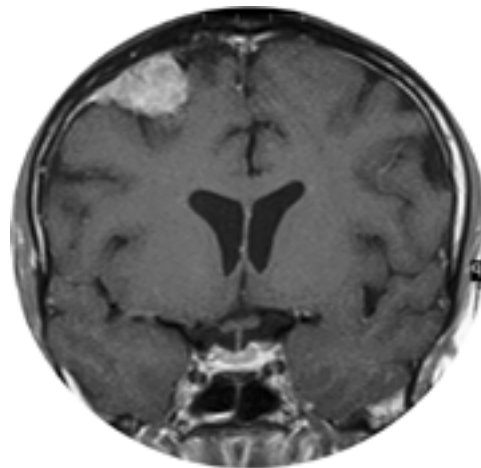
You will be slowly taken off any steroids that you are on and may need to stay on the anti-convulsants for life but we try to remove these if we can.

If the tumour has been totally removed then you will be told this and we will do follow up scans of the brain to confirm this. These are performed for the next five years. The initial scan is at 6 months.

If subtotal removal we still do regular scans and this is to watch the tumour to see how fast it grows. Some grow very slowly and may remain the same size for 10 or more years. Others may grow quickly and the histology may give us a clue to this.

### What happens if it comes back after surgery ?

If it can be treated with further surgery then this is usually the first choice. If we know it will continue to regrow then other options are Radiotherapy / Chemotherapy / Radiosurgery. If the tumour comes back quickly after the surgery/radiotherapy this is a bad sign. You will be followed up with a CT scan at about 3 months. The timing of the next scan depends on the results of this. If your symptoms return early the scan is done earlier.



**M.R.I. BRAIN  
showing  
right frontal  
Meningioma**

## PROGNOSIS

This depends on a few major criteria

The most important is the extent of resection. If all the tumour and the place it has grown from can be removed then it is unlikely to come back. The tumour in the convexity are of this type, their location permits total resection. Tumours around the base of the brain usually involve important structure and are difficult to remove completely( the advantage is that these tend to grow slowly).

The Histology is important in that if there is evidence of dead cells in the tumour this suggests that it is growing quickly and faster than it can develop a blood supply for nutrients. The other important factor is if it has invaded the brain this means that it is invasive unlike the benign variant that grows with a type of capsule around it.

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