

Patient Information Leaflet

Awake Craniotomy

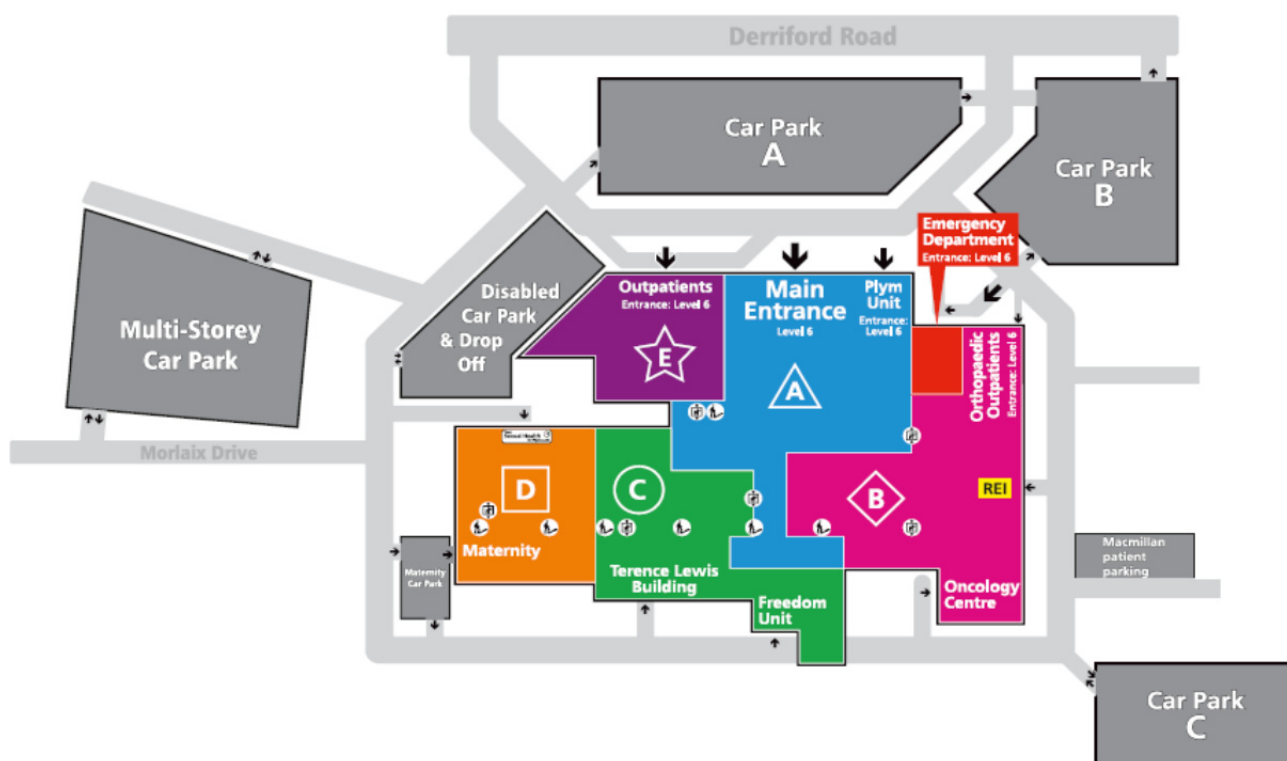
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www.plymouthhospitals.nhs.uk



Coming in to Hospital

Derriford is a large hospital which is divided into 5 zones based around different stairs and lifts, each with a different shape and colour shown in the below map. The following pages give you the zone and level of our departments. The key wards you will visit are shown in the table below.



Ward	Floor	Zone	Telephone Number	Visiting Times
Fal (pre-op)	4	B		N/A
Moorgate	4	A	0845 155 8136	2pm-7pm
Pencarrow (ICU)	4	C	01752 431439	10am – 8pm
Recovery	4	C		N/A

Awake Craniotomy

This leaflet is **for those** patients who are having awake craniotomy surgery. **The aim of the leaflet** is to tell you about the operation, its risks and benefits and what to expect whilst you are in hospital and during your recovery period. It also tells you what to do if you have any questions or worries.

My **provisional** admission date is:.....

My expected discharge date is:

My Specialist Nurse is:

What is an awake craniotomy procedure?

A craniotomy is the removal of part of the skull, called a bone flap, to expose the brain. This is to allow removal of a tumour.

In awake craniotomy surgery, the patient is usually sedated at the start of the operation, while the surgeon exposes the brain. The sedation is then stopped so that the patient **slowly** wakes up. The rest of the operation continues with the patient awake so that they can interact with the team.

This interaction is the most reliable way to ensure that the **surgeon** does not damage healthy tissue while removing as much of the tumor as possible. This is to maintain as much **neurological** function as possible. The neuropsychologist **is in the operating theatre with the patient** asking the patient to answer questions and perform simple tasks, to make sure their motor and speech function remains intact.

The overall aim of being awake is to reduce the risk of damage to vital areas of the brain during the operation.

Patient's are carefully selected for an 'awake' rather than an 'asleep' operation by the team. You may not be suitable **for an awake operation** due to factors to do with the tumour, or with your general health.

What preparation is needed before the procedure?

Before you are considered for an awake operation you will need to meet with the surgeon to discuss the procedure.

Following your clinic review you will be sent a number of appointments:

- You will meet the neuropsychologist who will perform some 'baseline' tests (of movement, speech or both) which will be used for the operation.
- You should also expect to meet the anaesthetist **who will talk through the process of having an awake operation.**
- **You may also need to undergo a functional MRI (brain mapping)**
- **Attend Erme ward for a pre assessment appointment**

On the day of the operation you will meet your anaesthetist and the surgeon. This team can then answer any further questions you might have.

If you smoke, we strongly advise you to stop as this will help your recovery as well as your general health. We can offer support and information about stopping smoking.

You may be given a course of steroids to treat any swelling in the brain caused by the tumour. This treatment will continue after your surgery for a period of time on your surgeon's instructions. The steroids may cause stomach irritation. To reduce this, take the tablets with food or a glass of milk. You may be given medication to help prevent stomach irritation.

We will advise which medications, if any, you need to stop before surgery.

You should avoid taking any blood thinning medications in advance of your operation and the pre assessment team/anaesthetist will be able to advise.

Day of Admission

When you come into hospital for an operation you will go to Fal ward on level 4 in zone A. Soon after you arrive you will be seen by the following people: -

A Nurse, who:

- Will check your details and give you an identity bracelet.
- Will direct you to the appropriate waiting area.
- May measure your legs for a pair of surgical stockings to wear.
- May give you medication supplied by the anaesthetist.
- May give you a drink if permitted.
- Thirty minutes before you're due to go to theatre we will escort you to a private room where you can change into a theatre gown

Your Anaesthetist, who:

- Will check your details and **clarify** the operation you are expecting.
- Will ask about your general health, medical history, medication and allergies.
- Will discuss the anaesthetic/pain relief available
- May prescribe some medication

Your Surgeon, who:

- Will check your details and clarify the operation you are expecting.
- Will check/gain your consent for the operation (this will involve
- **Will go through the consent form before signing**, you will be given a copy for your records
- May mark the site of your operation with a marker pen
- Nothing will happen to you until you understand and agree with what has been planned for you. You have the right to refuse if you do not want the treatment suggested.

When you are taken to theatre, your belongings will be taken to your designated **post-operative** ward and will await you there.

What does the operation involve?

Anaesthetic:

You will go to the anaesthetic room next to theatre where some checks will be carried out. You will have a drip (iv line) inserted in to you hand or arm and given drugs that will make you feel relaxed and then **you will** go off to sleep.

A urinary catheter may be inserted into the bladder to drain away any urine whilst you are asleep, **however if possible we will try to avoid this.**

Surgery:

While you are asleep the surgeon will shave off some of your hair and clean the skin. Local anaesthetic will be inserted around the scalp to make **the area** go numb. Your head will then be fixed in a special clamp using pins in the scalp so that it is held still during the operation.

A piece of skull bone (the bone flap) is removed using a special drill and the area of brain exposed. Your anaesthetist will then turn off the medicines keeping you asleep and gently wake you up.

The top of your head will be covered by clear drapes but you will be able to see your anaesthetist and the neuropsychologist who will be looking after you. You will be able to talk to them **during this stage of your procedure.**

The operation will then continue. **During this stage** you may experience **some** discomfort such as headache, pressure near the operation sight or word finding difficulties.

continues overleaf 

Sometimes you may feel like you need to pass urine but cannot. If you feel any discomfort **you must** let the anaesthetist know **and they will** be able to help you. There will be lots of people in the operation and some noises coming from above your head but you only need concentrate on the team looking after you including any instructions from the surgeon.

The neuropsychologist will get you to do some simple tests (such as naming pictures, simple sums or performing hand or leg movements). You will have practiced these tests before during you clinic appointment.

The skull is usually replaced at the end of the procedure and held in place by very small titanium screws.

What happens after the operation?

At the end of the operation you will be taken to 'theatre recovery'. After a period of observation, you will be taken to the ward (Moorgate ward, level 4, zone A). You will be able to eat and drink when you feel able to.

How will I feel after the operation?

You may have some headaches for several days or weeks after the operation. These should be controlled by simple painkillers (such as paracetamol).

You may feel more tired than usual for several weeks. Some of the symptoms you had before the operation can get worse temporarily, **this can be quite normal, but we would want you to inform us of any new symptoms or concerns either via the specialist nurse team or the GP service.**

What happens after discharge home?

You will have an outpatient appointment arranged **for you to see your Consultant several weeks after the operation. This appointment will be sent in the post. If you are unsure of the follow up plan please contact your consultants secretary.**

This appointment is to check on your recovery, allow you to ask any questions you may have and for the Consultant to give you any results gained from the operation (such as tissue samples). You will have the opportunity to discuss any long term problems with the surgical team, if there are any.

You may have a further scan arranged, either an MRI or CT, **your Consultant will advise you on this prior to discharge home or at your follow up clinic consultation.**

You will also receive a follow up appointment to see the neuro psychologist following your discharge home.

What are the risks of the operation?

The risks of having an awake surgery for a brain tumour are the same as those for those patients having a **general anaesthetic** surgery. There is a small risk of a fit (seizure) during the surgery: this may require conversion to a general anaesthetic (going off to sleep).

Sometimes it is safer for a patient to be kept asleep for the whole procedure, rather than be woken up, if there are challenges during the operation.

Your surgeon will explain to you the particular risks associated with your operation. These will vary depending on the size, site and type of tumour being removed, as well as your general health.

Complications of a craniotomy procedure include:

Temporary or permanent neurological injury (stroke), including paralysis or speech difficulty; seizures, brain swelling; infection; chest infection; deep vein thrombosis (clot in leg); pulmonary embolus (clot in lung)

Complications caused by the anaesthetic include:

Sore throat, damage to teeth/lips, nausea/vomiting, or a severe allergic reaction.

After the operation specifics

Activity

You will be given individual instructions before you go home, but our general advice is: -

- Increase your level of activity slowly.
- Avoid activity that causes you to hold your breath and push, for example, lifting or moving heavy objects, or straining during bowel movements.
- Remember to rest when you feel tired. Avoid over-exertion. Think about whether family or friends could help with childcare, housework, shopping and preparing meals.

Driving

If you have had brain surgery it could affect your fitness to drive. You must inform the Drivers Medical Unit of the DVLA (Driver and Vehicle Licensing Authority). Your doctor will have access to the restriction details and will be able to advise you. Up to date information can be found at:

www.gov.uk/driving-medical-conditions

Reports

A tissue sample may be taken for testing during the operation. The results are usually ready in 7-10 days. Your doctor will discuss these with you **in clinic once they are available.**

Wound Care

Keep your wound clean and dry. You will need to ask someone to check it every day for the first couple of weeks after surgery.

If there are any signs of inflammation / infection you should arrange to see the GP for a wound review.

You can wash your hair but be careful to avoid knocking or rubbing off any scabs. Dry your hair nearest to your scalp by dabbing gently with a clean dry towel. Avoid direct heat from a hair-dryer for the first couple of weeks.

Do not apply any lotions, ointments or other products to the wound and avoid hair dyes for up to 12 weeks.

We will tell you when the stitches or clips **are due** to be removed. You will need to make an appointment **at your GP surgery.**

Things to look out for

If you have any of the following symptoms they will need to be investigated urgently **you** should contact your GP if:

- Feeling increasingly unwell
- Feeling increasingly drowsy
- Weakness in your legs, arms or face or difficulty moving/walking
- Confusion or memory problems
- Double vision or blurred vision
- Neck stiffness
- High temperature or fever
- Excessive sensitivity to light
- Severe headache
- Persistent vomiting
- Your surgical wound showing signs of redness, swelling, any leaking of fluid or feeling hot to touch
- Productive cough with yellow or green phlegm
- Pain, swelling or redness in your calf or thigh
- Any signs of fits or seizures, such as twitching or jerking movements or numbness and tingling in a part or several parts of your body

How to find further information

Further information can be found at the Brains Trust, a UK brain tumour charity.

<http://brainstrust.org.uk/advice-surgery>

Please use this space to write down any questions you want to ask:

**This leaflet is available in large print and other
formats and languages.
Contact: Administrator
Tel: 0845 155 8136**