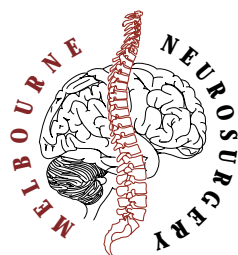


## PROCEDURE INFORMATION

# SURGICAL REPAIR OF A SKULL FRACTURE



### WHAT IS A SKULL FRACTURE ? (also see leaflet on skull fracture)

This is when one of the skull bones breaks. To get a fracture you usually require a heavy blow to the head and the commonest reason is a car accident or a fall. Hitting the head with or onto a blunt object can cause a local fracture and this does not need to be a heavy blow.

#### TYPES OF SKULL FRACTURE

##### LINEAR FRACTURE

Like a crack in a piece of china. This does not need repair. Sometimes they can damage a blood vessel and produce a blood clot over the surface of the brain. These can be life threatening.

##### DEPRESSED FRACTURE

When the bone fragments are pushed into the head. They cause problems because they can damage the underlying brain. If this has happened even with repair of the fracture with an operation the brain may not recover. This is because the bone has usually penetrated deep inside the brain at the time of the injury. These fractures also have the tendency to cause seizures because of the damaged brain.

##### COMPOUND FRACTURE

When the skin over the fracture is cut (lacerated) down to the bone. In compound fractures the skin is open and bacteria can get into the brain and around the broken bits of bone. This can cause infection in the brain or its fluid. The bone can also get infected and need to be removed. This is then replaced with plastic or another substance.

##### DEPRESSED AND COMPOUND FRACTURE.

Combination of above fractures

##### BASE OF SKULL FRACTURE

Fracture of the bones at the bottom of the skull. These may involve the ear bones or the bones around the air sacs (sinuses) of the nose. If they involve the sinuses then they can allow the fluid that bathes the brain to leak out and the bacteria to get in and produce meningitis. If the bone involved is near the ear not only can the above occur but there can also be problems with hearing or facial movements. Sometimes the side of the face may stop working completely. This may recover over time.

### WHEN DO YOU NEED SURGERY ?

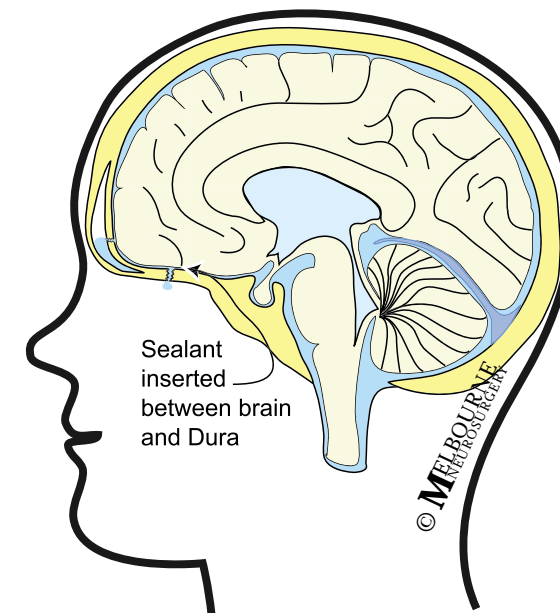
If you have a depressed fracture greater than the thickness of the skull then this should be repaired.

If your fracture has brain fluid leaking through then this should be fixed.

If the scalp is cut and the bone is loose underneath then this should be cleaned and repaired in theatre.

With fractures through the bone of the ear if the fluid is leaking it usually stops in about 2-5 days so this may be watched rather than repaired.

If the fracture involves the front of the brain and the air spaces there we find that there is a high risk of infection and so we usually explore these to find and repair any leak.



Midline picture of brain showing fluid(C.S.F) leaking through into top of nose and into sinus above nose

## **OPERATION TYPES ?**

This depends on the type of fracture and your surgeon will discuss this with you.

Typically there are two types of operation

### **ELEVATION OF DEPRESSED FRACTURE**

+/- Dural Repair

This is where the bone of the top of the skull is repaired

### **REPAIR OF BASE OF SKULL FRACTURE**

From either above the nose or ear.

This is where the part of the skull that is repaired is like the illustration.

### **ELEVATION OF DEPRESSED FRACTURE**

You are given a general anaesthetic. The skin over the fracture and any cut is cleaned and shaved and prepared with antiseptic. We cover you with drapes so only the incision can be seen. Any cut is enlarged and we find the depressed bone. We cut around the bone just enough to lift it up. If the lining of the brain(dura) is torn or the brain has been damaged we lift the bone out while we clean and repair all of this. The bone is plated back into position if it is not too damaged or infected. Some times we will leave the bone out for a while until any infection settles down. The skin is then closed either with nylon suture or with special staples.

### **REPAIR OF BASE OF SKULL FRACTURE**

You are given a general anaesthetic. The scalp over the incision is shaved and prepared with antiseptic. We cover you with drapes so only the incision can be seen. The skin is cut to the bone and using a special drill a disc of bone is removed to allow us to get to the dura, this is cut and the brain lifted up to allow us to get underneath to the fracture. This can be seen as a tear in the dura. A patch is then laid down over this and sutured into place. The brain is allowed to sit back on the patch and the dural opening is repaired. The bone is plated back into position. The skin is then closed either with nylon suture or with special staples.

You will wake up in recovery and after about 1 hour you will be transferred to the ward. The nursing staff will be continually checking your pulse/blood pressure/limb strengths and level of alertness looking for any changes to indicate a complication. During the first night on the ward you will be woken for these observations. You will have intramuscular and oral analgesia. Operations on the head do not often hurt much.

Sometimes you will have difficulty passing water and a you may require a catheter(this may have been inserted for the operation).

In the next day or so the drip in your arm will be removed. Usually the day after surgery. The same day you will be encouraged to go for a walk. Gradually over the next two days you will be able to get around as normal. When you are comfortable you will be able to go home. You may have a repeat scan of your head before going home. The sutures are usually removed about 5 - 10 days after the surgery.

## **HOW LONG WILL YOU BE IN HOSPITAL**

This will depend on how long it takes to recover from any other injuries. If there are no other injuries or serious injury to the brain then you will be discharged about 5-7 days post-operatively.

On discharge you will be able to perform most tasks of daily living (e.g. showering/dressing/etc.) Depending on how quickly you recover from any preoperative disability you may require rehabilitation.

## **WHAT ARE THE RISKS?**

### **Discuss these and others with your surgeon**

THE COMMON RISKS ARE

Infection (treated with antibiotics)

Post operative blood clot requiring drainage.

Stroke

Seizure

Death (rare)

Clot in the legs(can travel to the lungs[uncommon])

Complication not related directly to the surgery

e.g. Pneumonia  
Heart attack  
Urine infection

## **WHAT YOU SHOULD NOTIFY YOUR DOCTOR OF AFTER SURGERY**

Increasing Headache

Fever

Fitting

Swelling or infection in the wound.

Fluid leaking from the wound/nose.

Weakness or numbness

Drowsiness

## **WHAT HAPPENS WHEN YOU GO HOME ?**

You will be tired

It is common to require a rest in the afternoon

You may have intermittent headaches.

These will all improve with time.

**DO NOT DRIVE UNTIL YOU ARE REVIEWED**

You will be reviewed at 4 - 6 weeks post operatively.

YOU WILL BE ASKED TO SIGN A CONSENT FORM TO SAY THAT YOU UNDERSTAND THE RISKS . IF YOU ARE NOT SURE ASK BEFORE YOU SIGN.

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