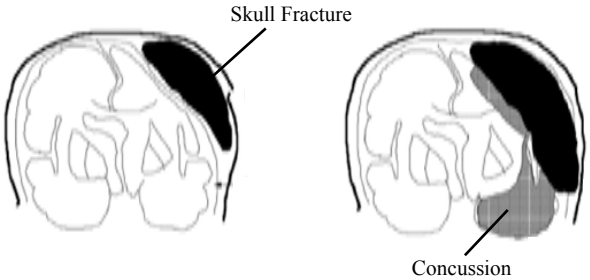
What is a skull fracture?

The skull is a tough, resilient, group of bones which provide protection for the brain. A skull fracture occurs when one of the bones of the skull breaks. It is usually caused by a heavy blow to the head from a car accident, fall or assault. It may be accompanied by injury to the brain.



Types of skull fractures

Linear fracture: This is the most common type of skull fracture and resembles a thin line along the skull bone similar to a "crack in china". They usually don't cause any problems but sometimes they can cause damage to blood vessels underneath and result in a blood clot on the surface of the brain.
If the fracture extends to the base of the skull or sinuses it can result in problems (see paragraph on base of skull fractures below).

Compound fracture: This break in the skull involves a tear in the skin and splintering of the bone.

Depressed fracture: This fracture involves fragments of bone being pushed downwards and can press on the brain below. This can cause damage to the underlying brain tissue. These types of fractures can sometimes result in seizures if there is an injury to the brain.

Base of skull fracture: This fracture occurs at the bottom of the skull and can involve the bones around the sinuses and ears. Often the bones in this area are fragile and are attached to layers that contain fluid that surround the brain. A fracture to these bones can result in leak of fluid from the nose or ears. There can be a small risk of developing meningitis with these fractures if a tear occurs.

What are the signs and symptoms of skull fracture?

- Headache
- Bleeding from wound, ears, nose, or around eyes
- Drainage of clear or bloody fluid from ears or nose
- Loss of consciousness
- Confusion
- Seizures (fit)
- Restlessness, irritability
- Drowsiness
- Slurred speech
- Difficulties with balance
- Visual disturbances
- Nausea
- Vomiting
- Swelling
- Bruising behind the ears or under the eyes
- Changes in pupils (sizes unequal, not reactive to light)
- Stiff neck

Note: The only symptom may be a bump on the head.

Diagnosis

Fractures can be seen on a plain X-ray of the skull. Sometimes a CT scan may be required also especially if there is a question of an underlying brain injury.

Treatment

Treatment of fractures depends on the type of fracture you have. Not all fractures require an operation and will heal over time especially most linear fractures.

A depressed fracture that is pressing deeply into the brain is usually repaired and requires surgery to elevate the bony pieces and to inspect the brain for evidence of injury. The bone is lifted back and secured in position.

Leaks of brain fluid often resolve spontaneously after 7- 10 days. However sometimes surgery may be required to find the leak and repair it if possible.

If the wound is open and dirty and the bone fragments are loose then an operation may be performed to clean and repair the wound.

The fractured bone may be removed if it is too damaged or infected and may be left out for a while until infection settles down. Should you require further surgery more detailed leaflets are available.

Possible risks and complications following a skull fracture.

Commonly after a fractured skull you will experience pain, tenderness, swelling and bruising. These effects should usually subside within 5-10 days after your injury. Please refer to the Recovering after a Brain Injury leaflet regarding advice after discharge.

Fluid Leak: If you notice clear fluid leaking from your nose or ear you should report it to your local G.P. or Accident and Emergency services.

Meningitis: This usually means that you have a leak of fluid from the brain or that bacteria have entered the brain possibly through one of the sinuses or injury site. If infection has spread to the brain as a result of a leak you may be treated with antibiotics often given via a drip and then you may have surgery to repair the leak. If you develop any symptoms of meningitis such as neck stiffness, headache, raised temperature or unable to tolerate bright lights you should have someone bring you to A+E immediately.

Seizures: If you have a seizure following a skull fracture you may be commenced on anti- seizure medication to control the seizures.

Recovery

The length of time you will have to stay in hospital will depend on how long you it will take to recover from any other injuries. Should you require surgery, you will have to stay in hospital for a few days after your operation.

It is not possible to predict how long it will take or to what extent someone will recover. Recovery depends on the type of injury and the amount of brain injury that has occurred as a result. If you have been transferred from another hospital to Beaumont for treatment you may be transferred back, once stable, to that same hospital while you recover before you return home.

Other publications about **Recovery after Brain Injury and Seizures and Brain Injury** are also available from the Neuroscience Department in Beaumont Hospital.

Long-term problems

The majority of patients will recover well and will not experience any long term problems. However some people may experience problems that can last for the longer term. This will be discussed with you in greater detail by your doctors and nurses if applicable.

This leaflet was developed in order to provide you with information on your condition. Whilst you are in hospital, you will be reviewed regularly by your doctors. If you have any questions, we encourage you to speak to a member of the nursing staff or your doctor.

Contact Details

Beaumont Hospital Tel: 01 8093000
Acquired Brain Injury Nurse Tel: 01 8092913

Further information and advice is available from:

Headway Ireland
The National Acquired Brain Injury Association
National Helpline: 1890 200 278
Email: info@headwayireland.ie
Website: www.headwayireland.ie

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Patient Information on Skull Fracture

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