

CRANIOTOMY

This leaflet is intended to provide you with general information. It is not a substitute for advice from your neurosurgeon. You are encouraged to discuss the benefits and risks of craniotomy with your neurosurgeon. This is an abridged version of the NSA patient education pamphlet: Craniotomy – a guide for patients. The complete pamphlet is available from your neurosurgeon.

A craniotomy is a procedure to open temporarily a part of the skull to expose the brain for surgery. Advances over the past 20 years have made craniotomy safer, simpler and more successful. Neurosurgeons can now operate in areas of the brain that once were thought impossible to reach. Craniotomy is performed as a part of the surgical treatment of many different conditions, including:

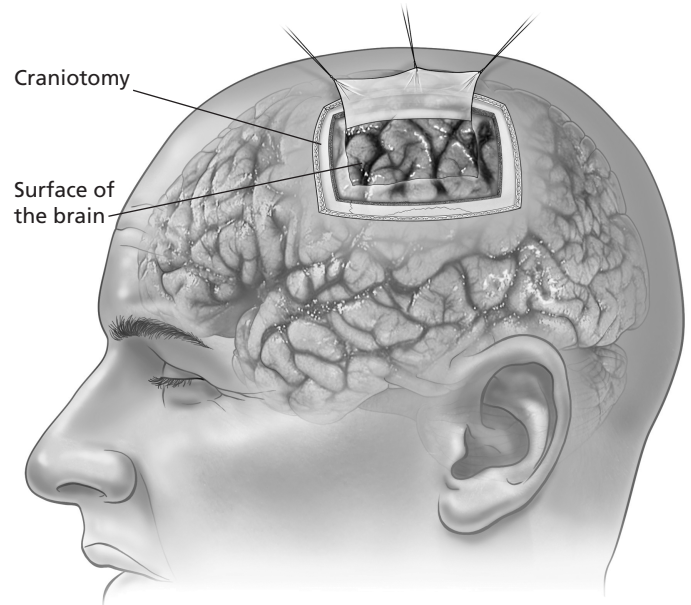
- a growth within the brain or from membranes that surround it.
- a blood clot pressing on the brain, often from an acute head injury.
- weakness in an artery, a cerebral aneurysm. An aneurysm forms when the weak spot bulges. In some patients, the aneurysm may enlarge, increasing the risk that it may rupture and cause major bleeding in the brain. Many aneurysms can be treated with procedures performed through the leg. In some cases, a neurosurgeon may place a titanium clip near the aneurysm to seal it from the normal artery. An untreated aneurysm may burst and cause life-threatening bleeding into the brain.
- an infection or abscess that needs to be drained.
- epilepsy, when not controlled by medication, can sometimes be treated by removing the site in the brain that is causing seizures.
- certain pain syndromes that may be treated by decompressing a nerve being compressed by an artery
- a swelling of the brain due to inflammation
- a fractured skull caused by trauma
- a foreign object that has penetrated the brain.

Craniotomies can vary widely from a few millimetres (keyhole or burrhole craniotomy) to several centimetres in width, depending on the problem and the treatment needed.

Skull-base surgery and craniotomy: The bottom of the brain rests on the skull base. To remove some types of tumours, the surgeon must access the skull base and perform a craniotomy. Although complex and usually requiring computers, skull-base surgery has advanced greatly in recent years, and the risks are more acceptable.

Diagnosis

Advanced imaging techniques and improved computer technology have led to more accurate diagnosis, exact locating of



The brain is protected by the skull and three membranes (meninges) between the skull and the surface of the brain: the dura mater, arachnoid and pia mater. Craniotomies may vary in width from a few millimetres to several centimetres, depending on the necessary treatment.

the problem, and precision surgery. The diagnostic imaging tests most commonly used prior to neurosurgery are: magnetic resonance imaging (MRI), computer tomography (CT), angiography and X-ray examination. One or more of these tests may be necessary.

Your medical history

Your surgeon needs to know your medical history to plan the best treatment. Tell your surgeon about any health problems you have. Some may interfere with surgery, anaesthesia or recovery.

A decision whether to have surgery

As you make the decision whether to have surgery, make sure that you understand the risks, benefits and limitations of surgery. If you do not have surgery, your symptoms and condition may continue to worsen. Only you can decide if surgery is right for you. If you have any questions, ask your surgeon.

Anaesthesia

Craniotomy is usually performed under general anaesthesia.

Possible risks and complications

Modern craniotomy procedures are safe but do have risks of side effects. Although uncommon, complications are possible. These are more fully outlined in the complete NSA patient education pamphlet and should be discussed with your neurosurgeon.