

Understanding the Impact of Epilepsy Surgery

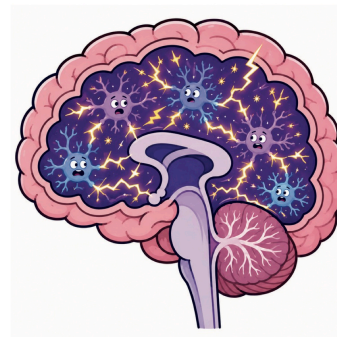
An introduction to common challenges caused by epilepsy and epilepsy surgery.

What are seizures?

Electrical storms in the brain.

What is epilepsy?

Repeated seizures and abnormal electrical patterns that typically happen when part of the brain is damaged or malformed.



The problem with epilepsy ...

- 1 Interrupted thinking**
During seizures, parts of the brain that are storming are not doing their regular functions – i.e., not generating speech, not laying down memories, not directing attention, etc...
- 2 Damaged brain cells**
Seizures are way more powerful than everyday brain activity. and like lightning or a monsoon, seizures can overload our infrastructure to a degree that it is permanently damaged.
- 3 Overcrowding & limited resources**
Like refugees from a storm, activities of damaged / removed areas are taken over by alternate brain areas. To take on extra activity, brain areas may sacrifice less critical functions.
- 4 Overwork & burnout**
The remaining healthy brain tissue not only takes on the activities of lost areas, it aids healing and recovery of the entire system and it doesn't have any other backup.

The benefits of seizure reduction ...

- ✦ Less cognitive interruption = better focus and learning ... improvements compound over time.
- ✦ Fewer storms = less additional brain damage
- ✦ Brain areas develop new expertise = this may allow them to resume de-prioritized activities
- ✦ Less time in crisis = more time for building up reserves and resilience
- ✦ Greater predictability = more opportunities to participate in travel, school, work, etc ...

Why brain surgery?

Because uncontained epilepsy is more dangerous than removing part of the brain and because surgery is the best option for stopping or reducing seizures.

Common challenges following epilepsy surgery

Motor



Hemiplegia with secondary joint & muscle complications: require devices & assistance

Vision & Sensory



Loss of visual field; impaired visual tracking; disrupted sensory perception.

Cognitive Difficulties



Inconsistency across cognitive skills. Impairments which may or may not improve.

Energy & Endurance



Compensating for weakness, coping with discomfort and self-advocacy is tiring!