Epilepsy Surgery Frequently Asked Questions

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1. What is epilepsy surgery?

A. Epilepsy surgery is a treatment option for people with seizures that are not adequately controlled with anticonvulsive drugs. Epilepsy surgery includes a variety of resective procedures, implantation of stimulation devices and other less invasive techniques. People with epilepsy who are candidates for surgery, after a complete evaluation, can have a reduction in the severity and frequency of seizures.

2. What are the requirements to determine if I am a candidate for surgery?

A. People with epilepsy in whom two or three anti-epileptic medications have been ineffective should be considered for epilepsy surgery. Seizures have different causes and characteristics; therefore, a pre-surgical evaluation is necessary to determine if you are a candidate and which is the most appropriate procedure.

3. How severe does epilepsy need to be to qualify?

A. Degree of seizure burden versus risk of surgery is a conversation to have between the person with epilepsy and the family. Secondary benefits may include reduction of medications, driving, and employment.

4. What presurgical evaluation is needed before epilepsy surgery?

A. Pre-surgical evaluation aims to identify the region where the seizures start and to prevent post-operative brain deficits. This includes a complete medical examination, pre-operative labs (blood work, etc.), imaging such as MRI and CT scan, video-electroencephalogram (EEG) recordings and neuropsychological assessments. Intracranial EEG recordings may be necessary for some patients.

5. What are the chances of becoming seizure free after epilepsy surgery?

A. The response to epilepsy surgery is highly dependent on the cause and characteristics of the seizures and where they start in the brain. The best chances of seizure control are with resection, and as mentioned, these results may vary depending on the cause and characteristics of the seizures. Other therapies may offer limited responses.

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6. Do these surgeries hurt?

A. Neurostimulation procedures and Stereo-electroencephalogram (SEEG) are minimally invasive and require only mild analgesics (pain killers) for a few days. Those who require craniotomy (opening of the skull) may complain of tenderness as well as muscle pain with chewing. Overall, these procedures are very well tolerated.

7. Are all surgeries available for children?

A. Yes, however, there are some limitations for very young patients due to the body anatomy and where the device is going to be placed. Generally, adolescents are candidates for all the procedures, including SEEG and neurostimulation.

8. If you are a candidate for neurostimulation, can you have multiple devices?

A. Yes, these are the options: You can get Vagus Nerve Stimulation (VNS) and either Deep Brain stimulation (DBS) or Responsive Neurostimulation (RNS).

9. Will I be awake during surgery?

A. Most epilepsy surgery is performed asleep, but if resection is recommended, it may be required to be awake to evaluate language or motor preservation.

10. Can you feel the neurostimulation devices?

A. The battery is implanted in the chest for VNS and DBS, which can be felt through the skin.Wires in the neck may be also felt in VNS/DBS.With RNS, the implant is over the skull, sometimes the wires may be palpable. Generally, these are minimally noticeable.

11. Can you feel the neurostimulation?

A. With RNS or DBS: Generally, not, but occasionally there are inaccurate effects. If this occurs, a change in programming may be needed, or in rare cases a revision of the lead. With VNS: Usually not, sometimes sensations of stimulation occur, but these can be associated with malfunction.

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12. Do you still take medication after epilepsy surgery?

A. The goal of surgery, in the best cases, is to achieve seizure control. This may be on or off medication. If seizure control is achieved, after 6 months to 1 year the neurologist may begin to reduce the medications. It is possible in some cases to be able to completely discontinue epilepsy medications after a few years of careful titration. But in some other cases, you may need to continue taking medication.

13. How long is the recovery time after epilepsy surgery?

A. The time of recovery depends on the type of procedure. You may need to stay in the hospital for a few days and it is recommended to perform light activity when you get back home.

14. What are the things you cannot do after epilepsy surgery?

A. In the immediate period after the surgery, it is recommended not to shower (for at least 5 days) and not submerge the wound (i.e.no swimming) for at least 7 days. For the first few weeks it is recommended light activity with no heavy lifting. Long term, after 6 weeks, there are no specific restrictions for the surgery. Driving is restricted per neurology recommendations related to epilepsy. Always ask the surgeon and healthcare team for special recommendations and instructions.

15. Will I be the same after surgery?

A. No, hopefully better. The goal of surgery is to decrease the severity of the seizures, minimize the side effects of both seizures and treatment, maintain your independence, and hopefully reduction in medications.

16. Can surgery improve quality of life?

A. The goal of surgery is to decrease the burden of uncontrolled epilepsy, prevent adverse events or side effects, and overall, improve your quality of life.