

Dr. E. Starreveld, MD

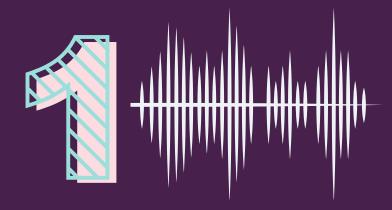


Introduction

## Dr. Starreveld, MD



### Overview



Jim's Story

The Brain

What is Epilepsy?

What are Seizures?

Main Types of Epilepsy



Seizure Triggers

Frequency of Seizures

Open Surgery vs Laser-Surgery

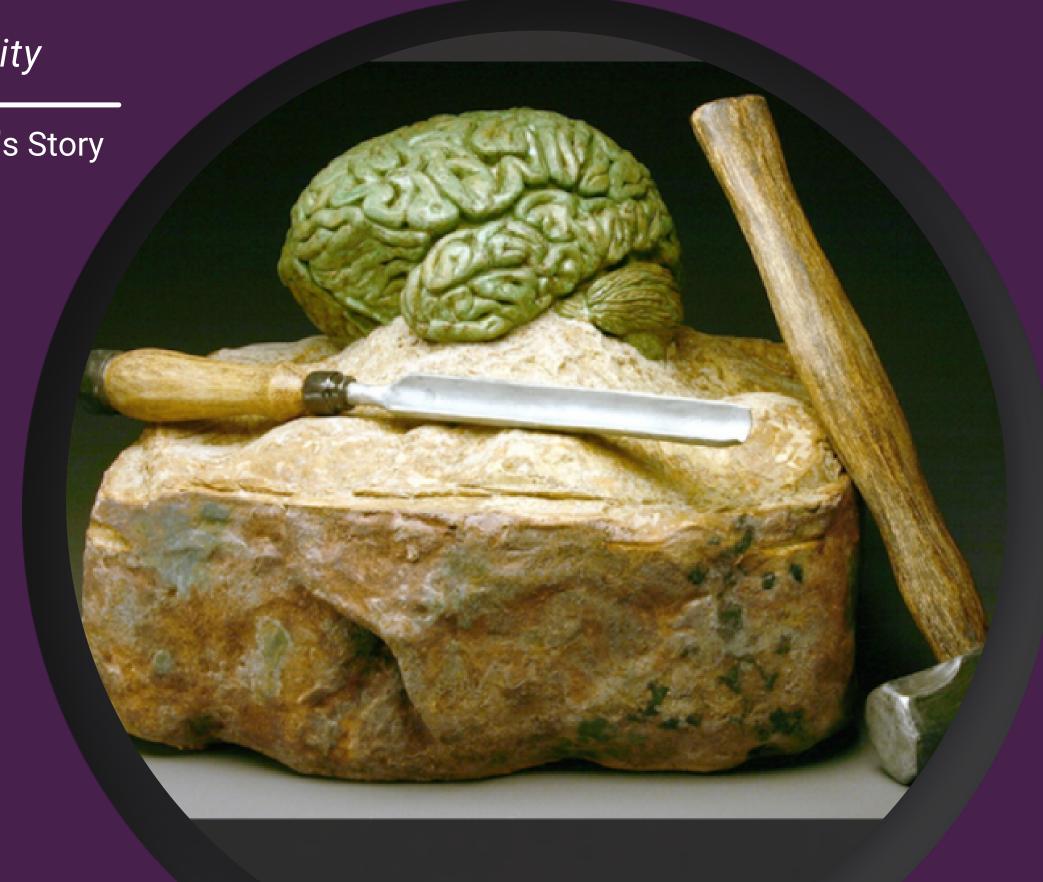
Oscar, Booklets and EEA



Jim's Story

## Discovering the source

• Jim Chambliss

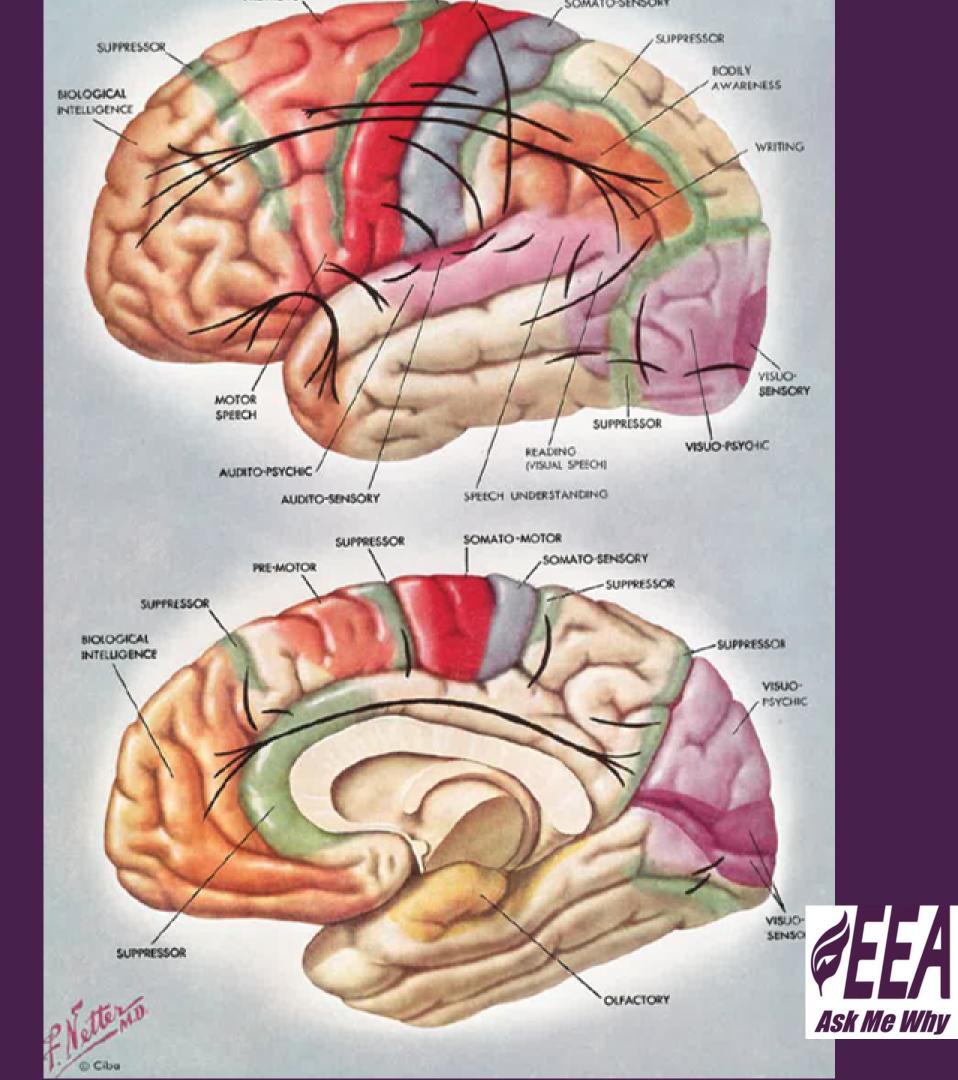




The Brain

## The brain

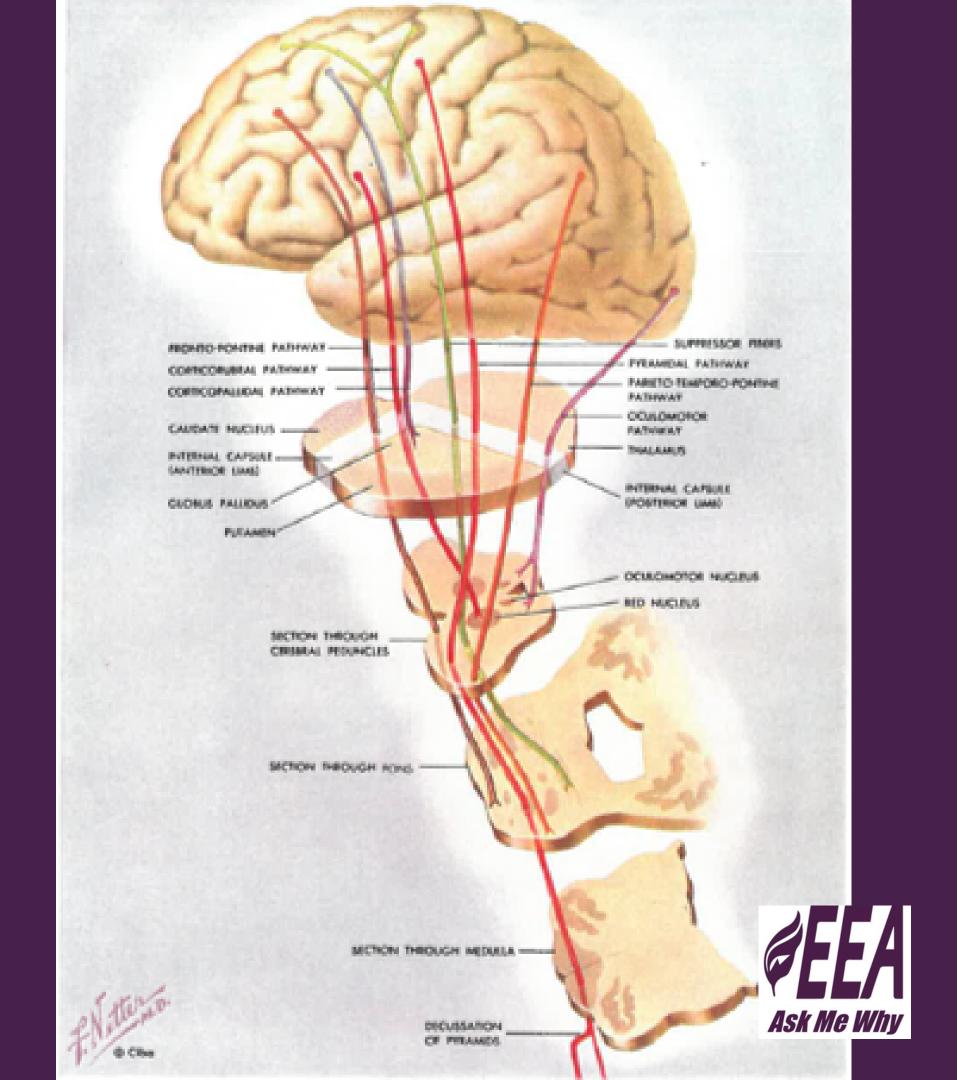
- 15 billion neurons
- Electrical generator



The Brain

### The brain

- 1500 grams in weight
- 2% of body weight
- 20% use of oxygen
- 80% use of glucose

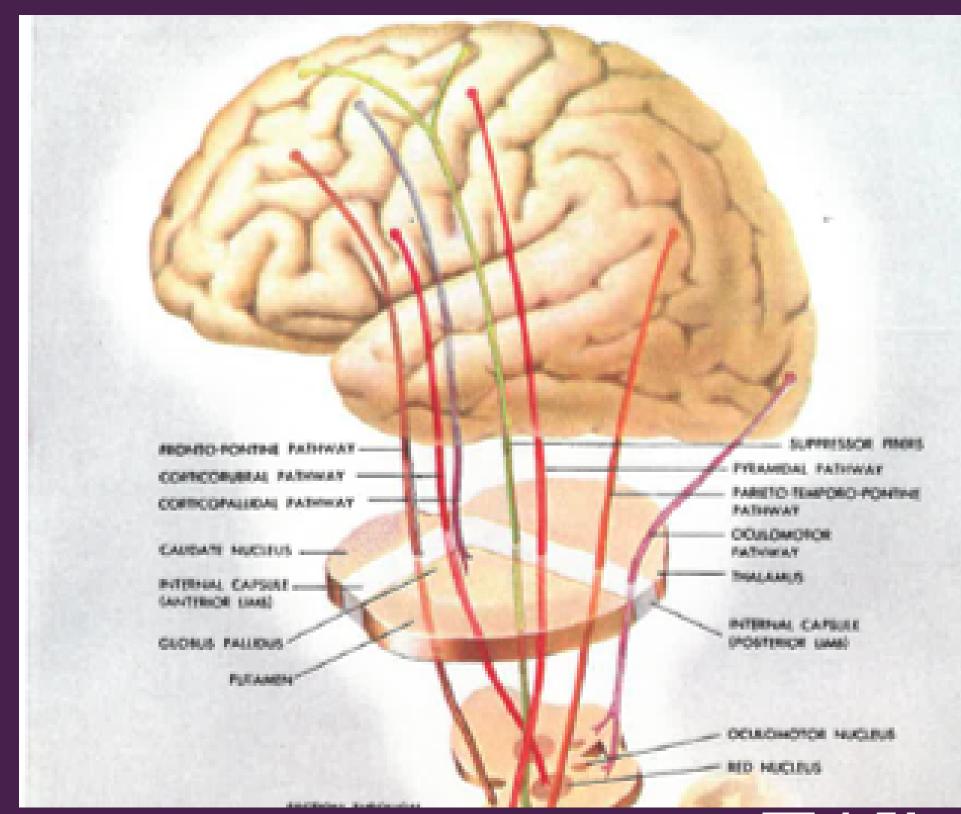


The Brain

## The brain

 Only organ in the body that discharges electricity





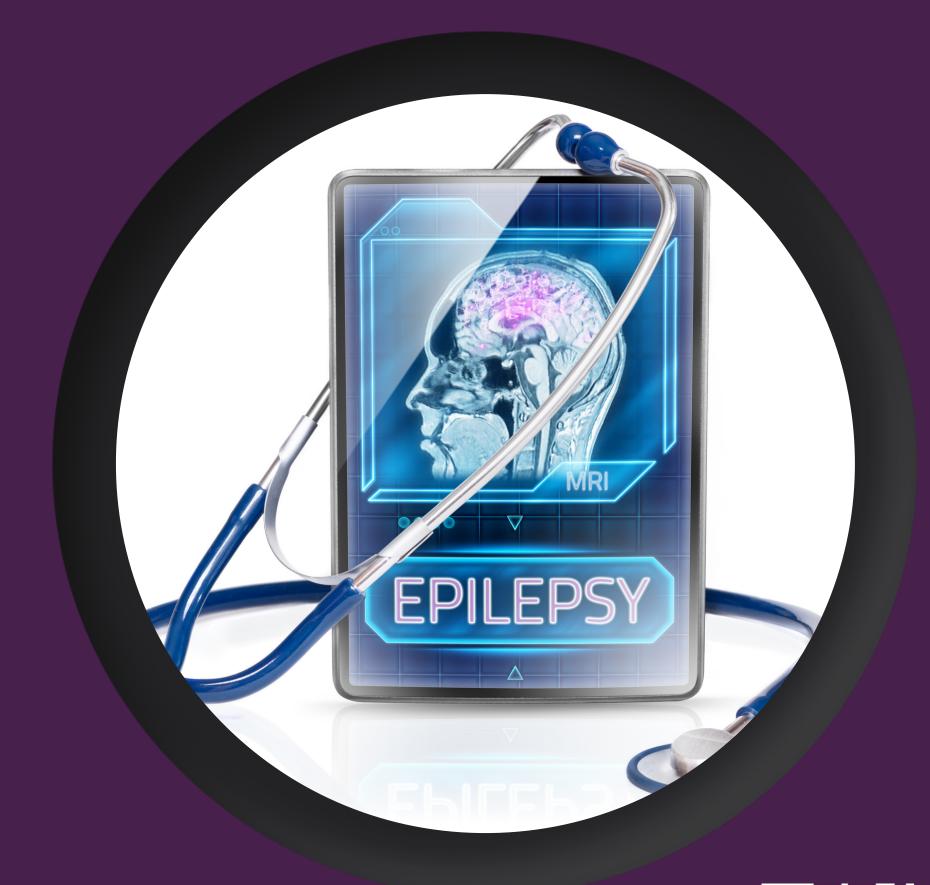


What is Epilepsy?

## Epilepsy

 Condition of recurrent, nonprovoked seizures







What are Seizures?

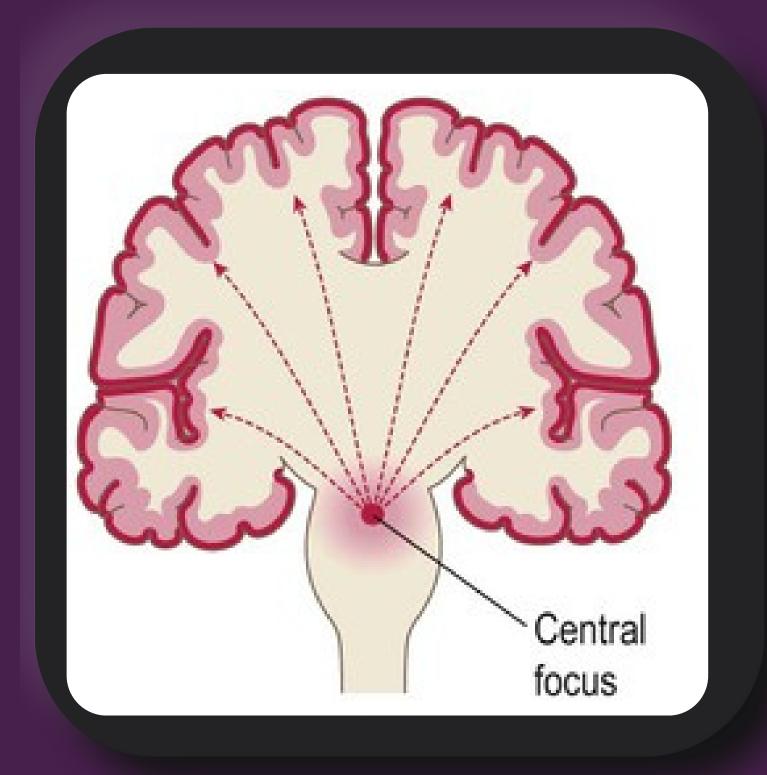
## Seizures

• Clinical manifestation of abnormal electrical discharges in the brain





Main Types of Epilepsy

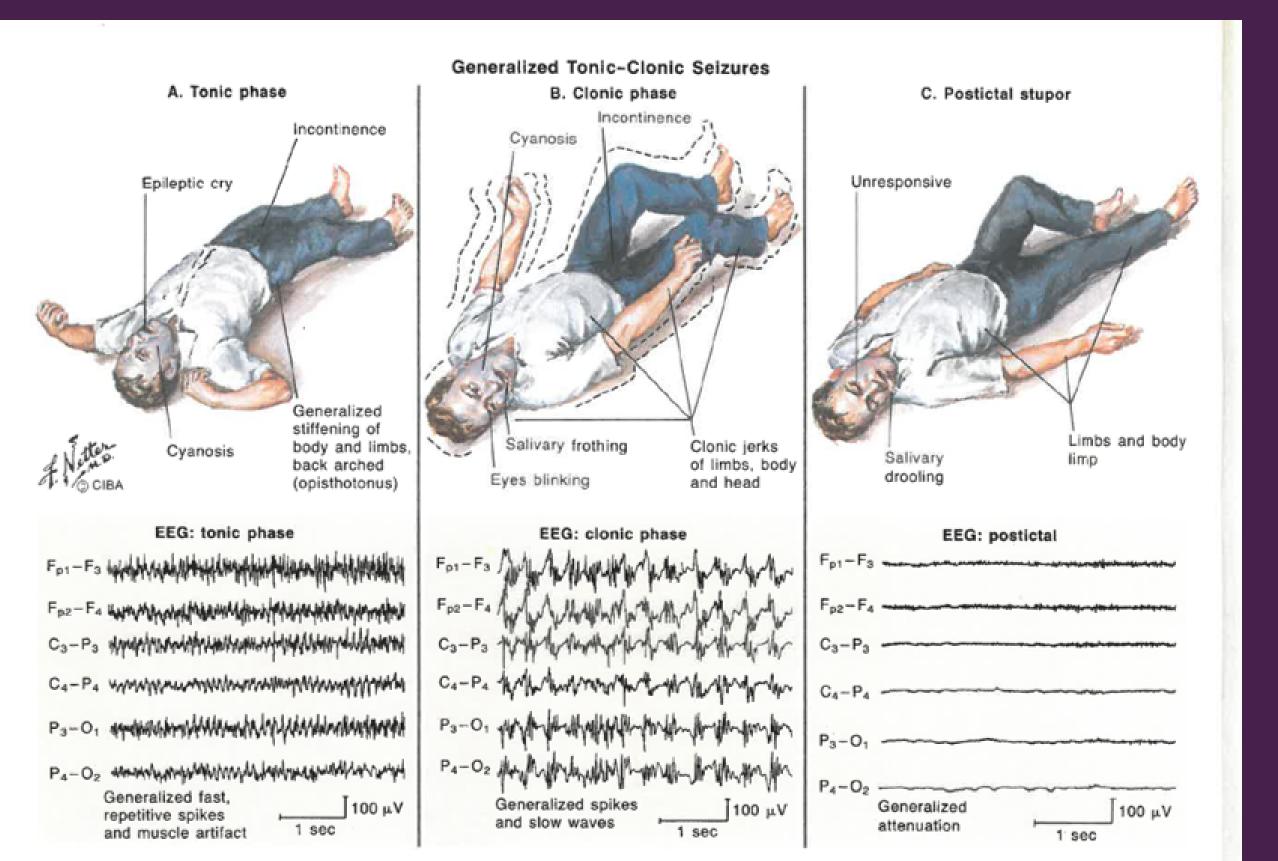


## Primary Generalized

- Petit Mal
- Grand Mal
- Absence
- Tonic Clonic Epilepsy
- Idiopathic Epilepsy



#### Main Types of Epilepsy

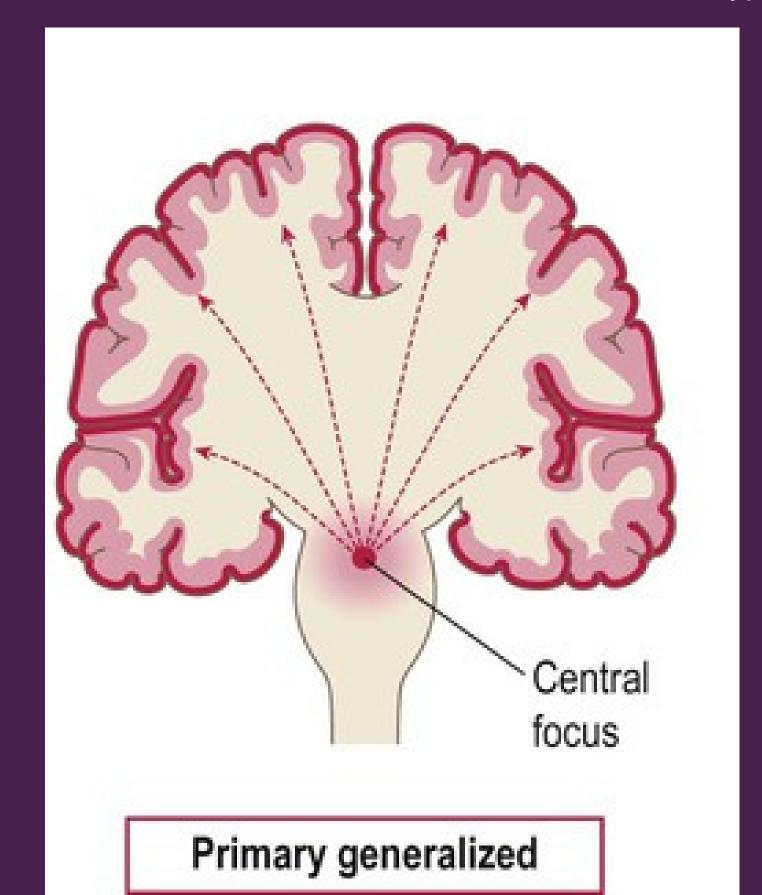


## Primary Generalized

Also called Grand Mal Seizure



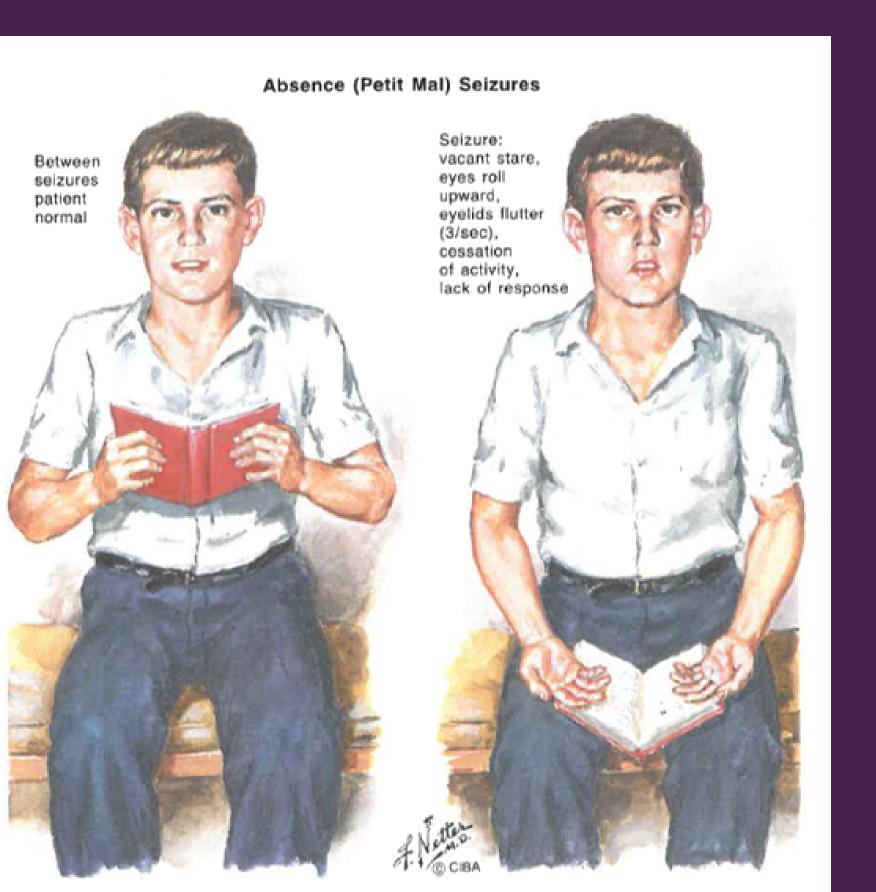
Main Types of Epilepsy



### Absence Seizures



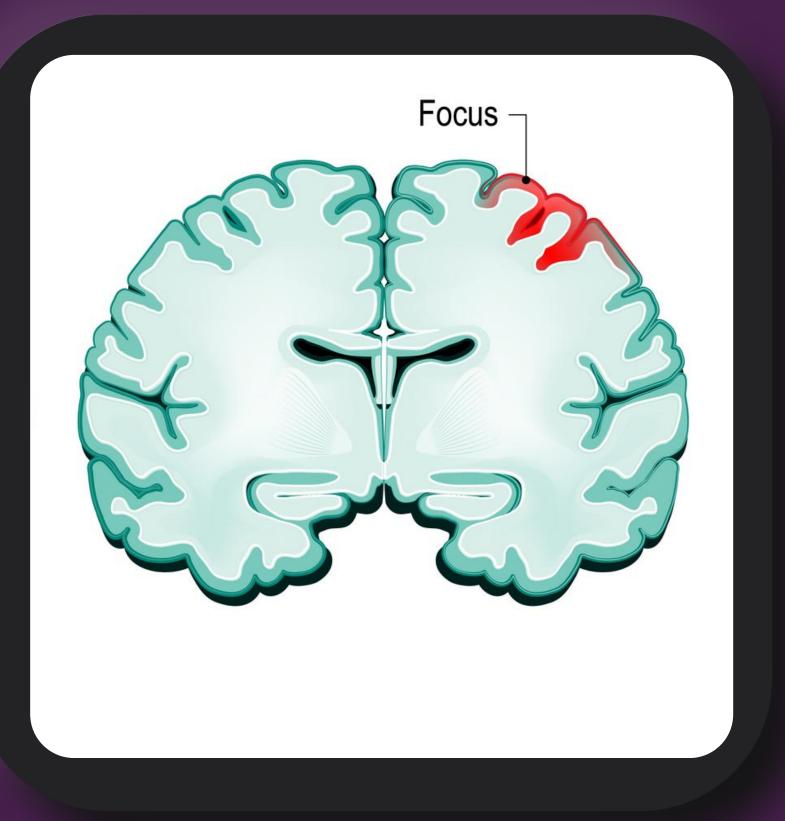
#### Main Types of Epilepsy



### Absence Seizures



Main Types of Epilepsy

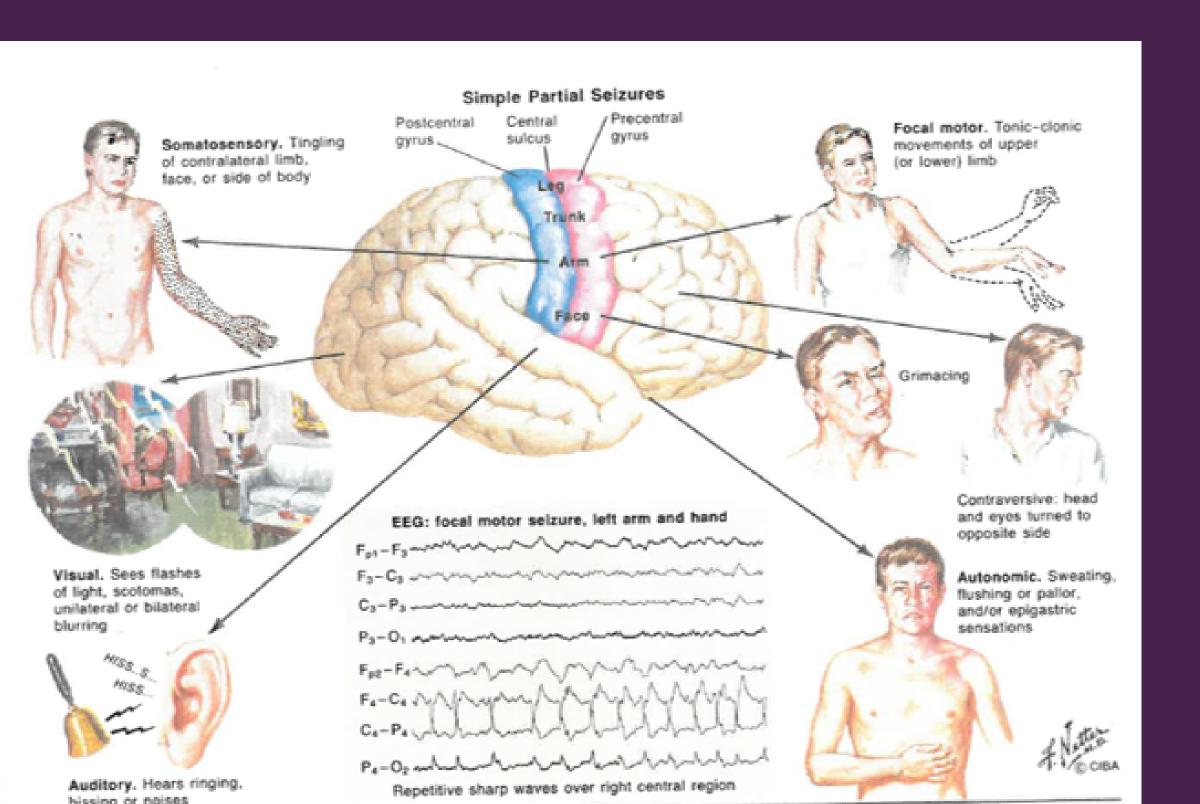


## Focal (Partial)

- Focal epilepsy
- Temporal epilepsy lobe
- Psychomotor
- Automatic epilepsy



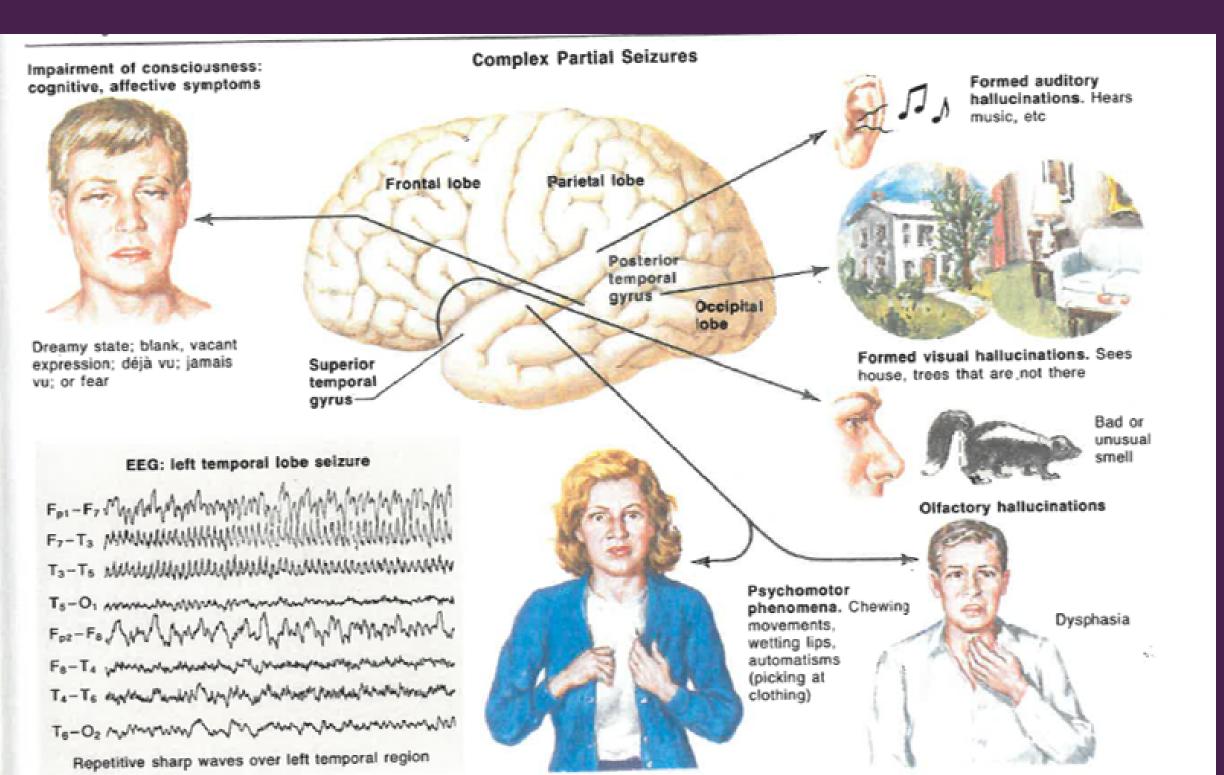
#### Main Types of Epilepsy



## Simple Partial Seizures



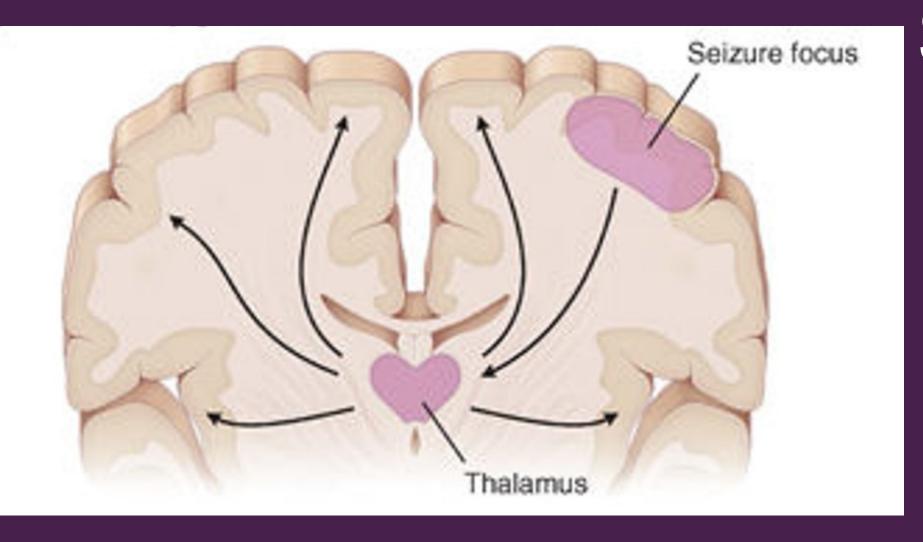
#### Main Types of Epilepsy



## **Complex Partial**



Main Types of Epilepsy



## Secondary Generalized



Seizure Triggers



## Common Seizure Triggers

- missed medication
- sleep deprivation
- missing meals
- illness or fever
- excessive alcohol consumption
- flickering lights
- medication
- street drugs
- hormonal changes

Frequency of Seizures



## Epilepsy in Canada

- 330,000 people live with epilepsy
- 40,000 people live with epilepsy in Alberta
- 65% medically Controlled
- Medication-controlled Seizures not seizure free.
- 15% uncontrolled Seizures

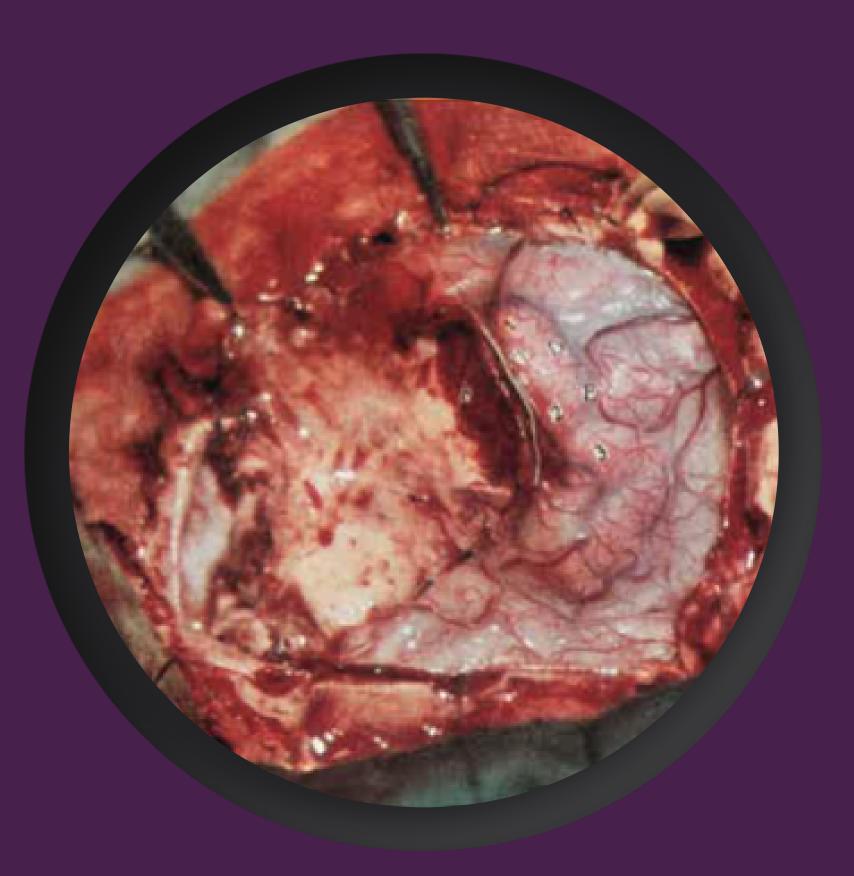
Open Surgery vs Laser-Surgery



## Brain Surgery

• 2% of people with epilepsy undergo surgery to control their seizures

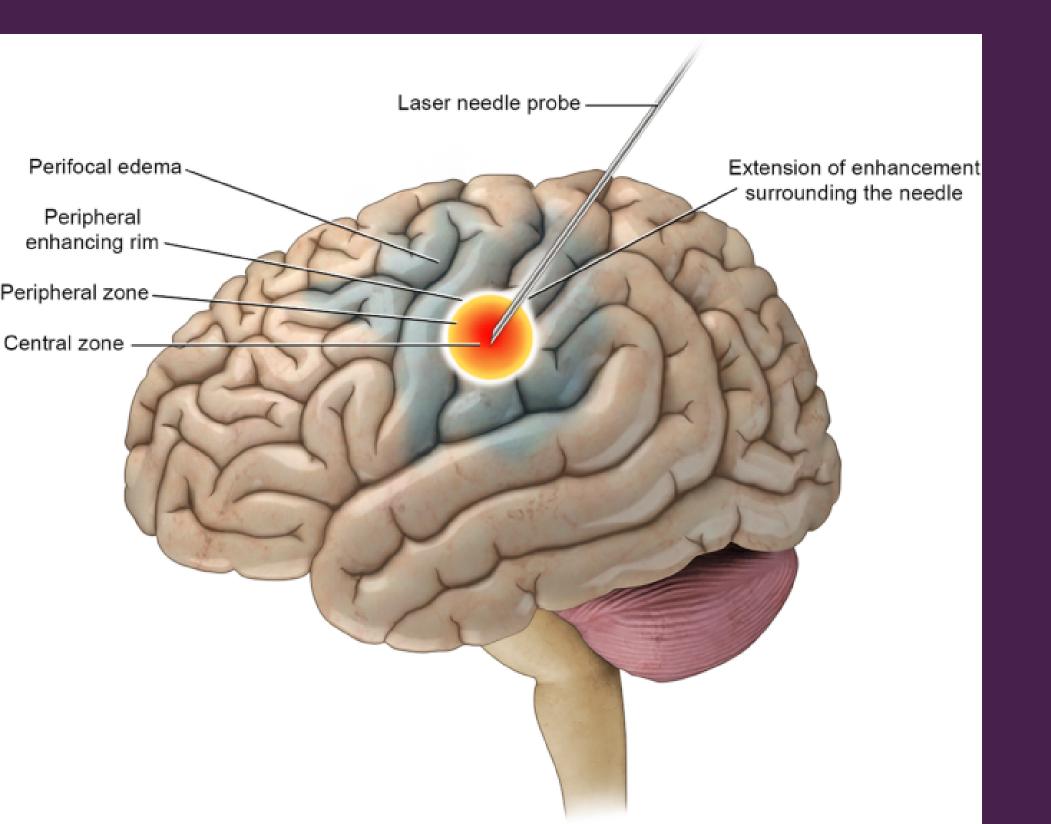
Open Surgery vs Laser-Surgery



## Open Brain Surgery

Open Surgery vs Laser-Surgery





## Stereotactic Surgery with Laser Wire

Oscar, Booklets and EEA

## Oscar and His Second Life

**A Novel** 





Oscar, Booklets and EEA





#### Oscar, Booklets and EEA

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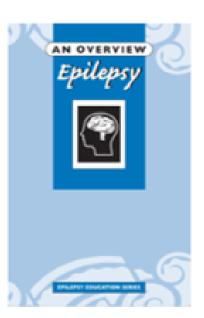
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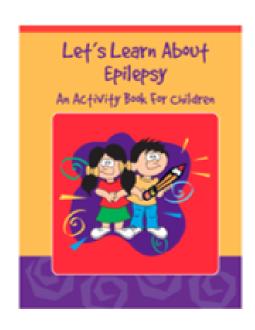
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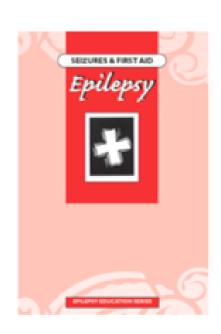
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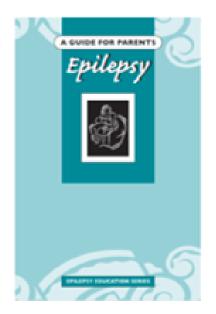
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Let's Learn About Epilepsy



**Epilepsy Seizures First Aid** 



**Epilepsy A Guide for** 

## The Edmonton Epilepsy Association





Questions

