

What is Epilepsy?



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Epilepsy Ontario

What is Epilepsy?

- Epilepsy is the most common of the serious neurological disorders.
- It is a disorder characterized by spontaneous, recurrent seizures.

What is a seizure?

- A seizure is a period of self-sustained, but (usually) self-limiting, neural hyper-excitation.
- In EEG recordings, a seizure appears as a series of high-amplitude, abnormal spikes" or "spikes and waves". (the "electrographic seizure")

Low Seizure Threshold

- ❑ Seizures occur in people with epilepsy because they have a *chronic* low seizure threshold.
- ❑ In people with epilepsy, seizures can be triggered by stimuli that would not affect most people.

When Does Epilepsy Start?

- Epilepsy can start at any time in life.
- Most often, however, it has its onset before age 15 or after age 65.

How Long Does Epilepsy Last?

- “Benign” types are outgrown.
- Other types often last for life – but may also occasionally be outgrown.

How Many People Have Epilepsy?

- About 1% of the population has epilepsy at any given time.
- About 4% of the population will have epilepsy at some time in their life.
- About 10% of the population will have a single seizure at some time during their life.

What Causes Epilepsy?

- In about 30% of the cases, epilepsy is caused by some sort of clear-cut brain abnormality. (“symptomatic”)
- In about 70% of cases, epilepsy is caused by inherited factors. (“idiopathic”)
 - Inheritance is usually “multifactorial”.

Is Epilepsy “Catching”?

□ NO.

What Does a Seizure Look Like?

- ❑ It depends on the type of seizure.
- ❑ There are a number of different types.
- ❑ They look different and require different treatments.
- ❑ I'll deal with some of the very common types.

Tonic-Clonic Seizures (Convulsive)

- ❑ Tonic-clonic seizures involve a loss of consciousness with violent convulsions (no memory. (Old name: Grand mal).
- ❑ These are the seizure people think about when they think about epilepsy.
- ❑ Actually, they are not the most common type of seizure.

Complex Partial Seizures (Non-convulsive)

- ❑ The most common type of seizures in adults. (Old name: psychomotor)
- ❑ The person is not unconscious - but he/she is cut off from the environment.
- ❑ The person may stare blankly, smack lips, fumble with clothing, get up and walk around.
- ❑ There will be no memory for the period of the seizure.

Absence Seizures (Non-convulsive)

- ❑ Absence seizures are another type of non-convulsive seizure. (Old name: petit mal)
- ❑ They usually start in childhood, and are often outgrown by teenagers.
- ❑ The seizure consists only of a brief period of unconsciousness with blank staring.
- ❑ They look a lot like complex partial seizures, but require different drugs.

Simple Partial Seizures (Usually Non-Convulsive)

- ❑ Simple partial seizures usually an abnormal *sensation*. (Old name: cortical focal) Conscious. No loss of memory.
- ❑ Examples: buzzing noise, flashing lights, feeling of fear. The patient is conscious and will remember the seizure.
- ❑ Simple partial seizures may lead on to complex partial or tonic-clonic seizures. (Then they are called an "aura".)

Therapy for Epilepsy

- Anticonvulsant Drugs: Success about 60-70%.
- If the drugs fail:
 - Seizure Surgery
 - Ketogenic Diet
 - Vagal Stimulator
 - Deep Brain Stimulation

Seizures in the Workplace

- If people are well controlled on drugs, the company may never know that they have had seizures.

Seizures in the Workplace

- ❑ If a person is not well controlled, he/she faces the question of whether to reveal in the job interview.
- ❑ If he/she reveals, he/she is often not hired.
- ❑ A question for companies: If a person is talented, can the company put up with a few seizures?

Seizures in the Workplace

- First aid for seizures (generally not a major medical emergency):
 - Absence – no first aid
 - Complex partial – gently steer the person out of harm's way
 - Tonic-clonic – break the fall / protect the head / turn the person on their side at the end of the seizure
 - Status epilepticus – call 911 after 5 minutes

What does Epilepsy Ontario Do About Seizures?

- Educate (Google our website.)
- Counsel (in untenanted areas)
- Establish / nurture regional associations
- Lobby for better epilepsy care

What do *I* do About Seizures?

- ❑ Try to invent new drugs. (Unfortunately, the drug companies don't want them.)
- ❑ Try to invent new diets.
- ❑ Spread the word – which is what I'm doing today.

What can You do about Seizures?

- Just what you've done. Educate yourself, and others.
- Make sure I never have to say again "They're not catching".
- Work with your local epilepsy association.
- Thank you for listening today.

Questions?
