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human health care

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Epilepsy Fact Sheet

About Epilepsy

- Epilepsy is a neurological condition that causes people to experience repeated seizures.
- Epilepsy has been recognized as a medical condition for thousands of years. Hippocrates, considered the “father of modern medicine,” wrote about epilepsy around 400 BC.

Prevalence

- Epilepsy is one of the most common neurological disorders. About 3 percent of people will develop epilepsy in their lifetime.
- About 50 million people worldwide have epilepsy.
- More than 2.5 million Americans of all ages have epilepsy.
 - About 1.4 million are adults aged 15 to 64.

Seizures

- Seizures are not a disease in themselves. Seizures are a symptom of epilepsy. They may vary in type, duration, intensity and frequency.
- There are generally two types of epileptic seizures:
 - *Generalized seizures* begin on both sides of the brain simultaneously and there is a loss of consciousness.
 - *Partial seizures* affect only one area of the brain. There are two types of partial seizures – simple and complex. Partial seizures can develop into generalized seizures.

Age of Onset

- Epilepsy presents itself commonly in children. About 25 percent of the 181,000 new cases of epilepsy every year begin in childhood, particularly in early childhood or adolescence.
- The incidence of epilepsy is highest under the age of 2 and over 65.
- Generalized seizures are more common in children under the age of 10; afterwards more than half of all new cases of epilepsy will have partial seizures.

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Risk Factors

- There are many different causes of epilepsy. In 70 percent of cases, the cause is never identified.
- Some risk factors for epilepsy include:
 - Brain tumors
 - Genetic conditions
 - Serious head injury or lack of oxygen to the brain
 - Central nervous system infections, such as meningitis or encephalitis
 - Cerebral palsy

Societal Cost

- An estimated \$12.5 billion is spent annually in the United States on direct and indirect costs related to epilepsy, such as treatment, new research, lost work productivity, etc.

Treatment

- Medication can control seizures in most people. About 70 percent of people treated with seizure medication could remain seizure-free for at least five years.
- Anti-epileptic drugs (AEDs) are the most common form of treatment. AEDs work by helping to prevent seizures from occurring.
- Different medications control different types of seizures. People who have more than one type of seizure may have to take more than one drug.
- AEDs are intended to help raise a person's resistance to having seizures. They work best when they reach a certain level in the body, and that level must be maintained in order to help achieve maximum seizure control. The goal of taking an AED is to keep the drug level high enough to prevent seizures from occurring, but not so high that the treatment causes side effects.
- Appropriate AED dosage and a longer "half-life" help to ensure consistent therapeutic levels in the blood and prevent breakthrough seizures. [Half-life is the time in which the drug concentration in the blood decreases to one-half of its initial or maximum concentration.]
- Noncompliance with AED therapy is a common cause of breakthrough seizures in people with epilepsy.

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