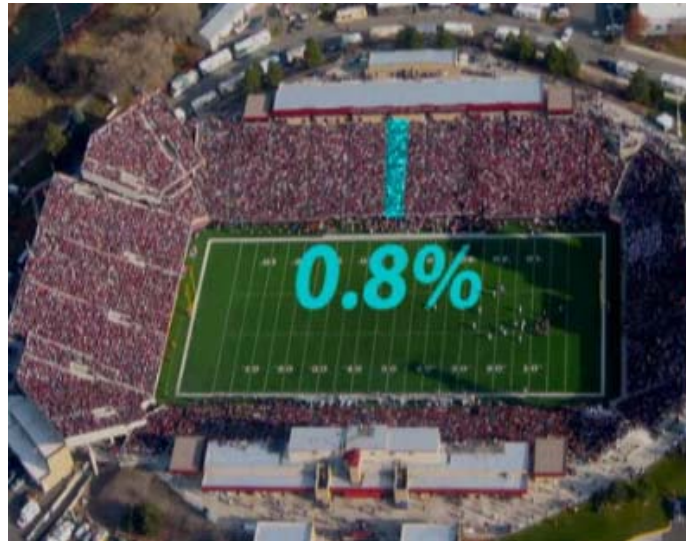
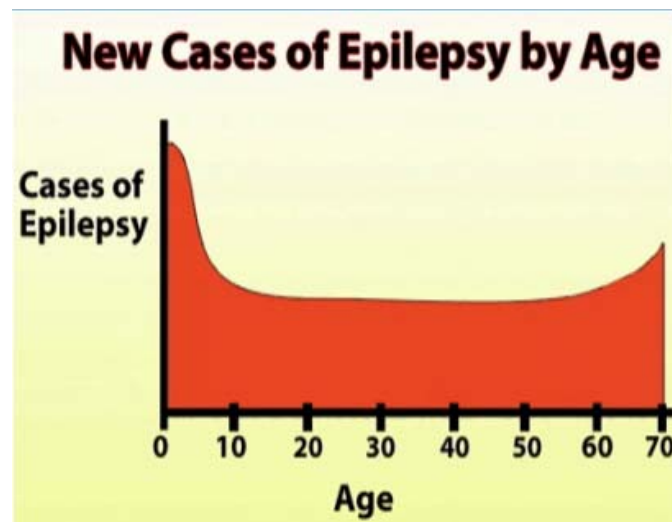


Epilepsy affects nearly 3 million Americans, but who is really at risk?

Epilepsy can develop in any person at any age. Almost 1% of people will develop epilepsy during their lifetime. That's 60 million people worldwide. In other words, out of a 60,000 person stadium, about 500 will have epilepsy.



New cases of epilepsy are most common among children, especially during the first year. The rate of new cases gradually declines until about age 10 and then become stable. After age 60, the rate starts to increase again.



Many famous people in history had or may have had epilepsy, including world leaders like Julius Caesar, writers like Lewis Carroll who wrote *Alice in Wonderland*, artists like Vincent van Gogh, and athletes like Chanda Gunn, goaltender for the US Olympic hockey team.

The causes of epilepsy can be divided into two groups: brain injuries and chemical imbalances in the brain. Anything that injures the brain can lead to seizures. But in over half the cases no cause can be identified.

The type of injury that can lead to a seizure is age-dependent. Seizures in children often are caused by birth traumas, infections, such as meningitis, congenital abnormalities or high fevers. Seizures in the middle years commonly are caused by head injuries, infections, alcohol, stimulant drugs or medication side effects. In the elderly, brain tumors and strokes cause a higher proportion of seizures.

Not all seizures result from a structural problem in the brain. Chemical imbalances also can cause seizures. Common chemical imbalances that can produce seizures include drugs like alcohol, cocaine and others, low blood sugar, low oxygen, low blood sodium or low blood calcium. Kidney failure or liver failure can also produce seizures. Doctors will evaluate you for these imbalances by taking a careful history and doing blood tests. Although these disorders and injuries can explain many cases of epilepsy, often the cause of epilepsy remains idiopathic, which is the medical term for unknown. About half the time no cause for seizure can be identified. Fortunately, we do not need to know the cause to treat the seizures.

Scientists increasingly recognize the importance of genetic factors in the origin of epilepsy. Genetics or heredity are most relevant to generalized seizures, including absence, generalized tonic-clonic and myoclonic seizures. Defects in genes don't directly lead to epilepsy, but they can alter the excitability of brain in a way to predispose to the seizures. Typically, epilepsy develops because of multiple gene abnormalities or because of a gene abnormality in concert with an environmental trigger.

Parents with epilepsy wonder whether their children will have epilepsy. In most cases they won't, but they do have a higher risk than others. If the mother has a generalized type of epilepsy, then the child's chance of having epilepsy may be as high as 5-20%. But if a parent has epilepsy due to a brain injury, the child's chance of having epilepsy is only about 5%.

If you or someone close to you is suffering from seizures, please see a physician.