

Epilepsy - causes, seizures, and treatment

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The paper “Epilepsy - Causes, Seizures, and Treatment” is a wonderful example of a term paper on health sciences & medicine. This paper attempts to explore epilepsy, different types of seizures that may be characterized by epilepsy, their causes and treatment plan mostly adopted. Epilepsy is a common social and medical and social disorder or group of disorders with unparalleled characteristics. Epilepsy is generally defined as a disposition to perennial seizures. It is derived from Greek and Latin words for “to seize upon” or “seizure”. This entails that “epilepsy is an ancient disorder; indeed, in all civilizations, it can be traced as far back as medical records exist” (Reynolds, 2005, 15). In fact, epilepsy can happen in any mammalian species, perhaps more often as brains have turned more complex. It is also remarkably distributed in a uniform manner all around the world. It may occur at all ages; in both sexes, especially in adolescence and childhood and progressively in aging populations (Reynolds, 2005).

Types of seizures

A seizure is usually referred to as the clinical expression of an excessive, abnormal, hyper-synchronous outpouring of a collection of cortical neurons. Epilepsy is characterized by types of seizures as though individuals may have the same epilepsy diagnosis but they may vary in the seizures experienced. These seizures may be broadly classified as Partial seizures and Generalized seizures. Partial or Focal seizure can be further divided into simple partial seizures where the consciousness is not affected; complex partial (psychomotor or temporal lobe seizure) where the impairment in consciousness results and evolving partial seizure to secondarily generalized category. The generalized seizures, on the other hand, may be divided into <https://assignbuster.com/epilepsy-causes-seizures-and-treatment/>

Petit mal or absence seizures, clonic, myoclonic, tonic, tonic-clonic and atonic seizures. There exists a third category that corresponds to types of seizures that are yet unclassified (Reynolds, 2005).

Causes

Once a person has been diagnosed to have the epileptic disorder, its causes are explored. Epilepsy can be caused due to various reasons depending upon the type of epileptic disorder and the age of the patient. In around two-thirds of the epileptic patients, the disorder is deemed idiopathic i. e., without any known cause. However, idiopathic epilepsy rarely occurs in adolescence and childhood. Epilepsy may occur due to abnormal brain wiring, an imbalance of neurotransmitters and in an attempt of the brain to recover from a head injury, stroke. The cell membrane of neurons is also suggested to cause epilepsy due to an abnormality in the inwards and outwards movement of molecules or in the process of repair and nourishment of cell membrane. Besides disruption in the neurological circuits, genes are also suggested to be a cause of epilepsy which is further enhanced due to environmental conditions. Exposure to certain chemicals like carbon monoxide, lead and other poisons may also cause seizures. Similarly, drugs, overdoses of antidepressants may result in seizures and they may also result due to alcohol consumption, hormonal changes in the menstrual cycle and lack of sleep (Appleton & Marson, 2009).

Treatment

Medications are referred to as an effective treatment means, while in a few cases where medication does not help, brain surgery may be suggested. Antiepileptic drugs are the main medications used in the treatment.

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Treatment surgery may involve the resection or removal of epileptogenic tissue or multiple subpial transections in the constrained area of the cortex to disrupt synchronous neural activity causing a seizure. Another surgical process that may be utilized is vagus nerve stimulation (VNS), in which an electrical stimulator is implanted in the neck to direct intermittent pulses to the vagus nerve. Another method increasingly utilized for the treatment of epileptic children is a Ketogenic diet consisting of low carbohydrate, high fat and protein consumption. Neurofeedback mechanism is also used for treating epilepsy (Appleton & Marson, 2009).