

## Epilepsy – The Sacred Disease

The Newcastle University-led CANDO project is developing a new therapy to try and treat the neurological condition epilepsy. But what, if anything, do you know about epilepsy? Read the following text from the CANDO project website ([www.cando.ac.uk](http://www.cando.ac.uk)) and then answer the questions.

Epilepsy is a condition of the brain, characterised by abnormal patterns of electrical activity that build up and interfere with brain function. These sudden and recurrent episodes are called seizures. In fact, the word Epilepsy comes from Greek meaning "to be seized upon".

Although the ancient Greek physician Hippocrates suggested a physiological basis for seizures, the historical treatment of epilepsy was largely based on spiritual beliefs. The first documented record of a seizure— in around 2000 BC —was attributed to the influence of a moon god. Since then epilepsy has been connected with spiritual realms, and suggestions of possession by higher powers led to the condition being known as the 'Sacred Disease'. However, despite this name, the history of epilepsy is one largely of persecution and exclusion for sufferers. Even today, there are common misperceptions about the condition. For example, in a recent study, over half of respondents incorrectly believed that one should put something in the mouth of a person having a seizure to prevent them from biting or swallowing their tongue.



Epilepsy is a very broad condition. Symptoms vary depending on the type of epilepsy and area of brain affected, meaning every person with epilepsy experiences the condition slightly differently. Some people may simply have an odd feeling or be in a "trance-like" state for a few seconds or minutes. Others may be more severely affected, losing control of their body and even consciousness. Because the occurrence of seizures is unpredictable, epilepsy can have a big impact on people's ability to enjoy life to the fullest.

It is not always possible to identify the reason someone develops epilepsy. Some cases may result from faulty or damaged DNA (the genetic code used to build the body). Other causes include damage to the brain following a stroke or severe head injury. While epilepsy can affect people of all ages, it is more commonly found in children and older adults.

The treatment of epilepsy has been transformed over the last century by the development of anti-epileptic drugs. While these drugs cannot cure epilepsy, they are effective in controlling seizures for around 70% of people. Surgery to remove the part of the brain responsible for seizures provides another option for some, but many brain areas cannot be removed without serious side effects. There is, therefore, an ongoing need to discover new therapies for treating epilepsy.

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## **Questions**

1. What is epilepsy characterised by? **(1 mark)**
2. Why was epilepsy known as the 'Sacred Disease'? **(1 mark)**
3. Where does the word epilepsy come from? **(1 mark)**
4. What should you not do to someone having a seizure? **(1 mark)**
5. Why do people with epilepsy experience the condition differently?  
**(1 mark)**
6. Describe three different types of seizure? **(3 marks)**
7. Is it possible to always identify the cause of a person's epilepsy? **(1 mark)**
8. What can cause epilepsy? **(2 marks)**
9. Why is surgery not a possible treatment for all patients? **(1 mark)**
10. 'The treatment of epilepsy has been transformed over the last century by the development of anti-epileptic drugs.' If drugs have transformed the treatment of epilepsy, why are new treatments still needed?  
**(1 mark)**

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### Answers

1. What is epilepsy characterised by?  
Epilepsy is characterised by abnormal patterns of electrical activity that build up and interfere with brain function. (1 mark)
2. Why was epilepsy known as the 'Sacred Disease'?  
It was attributed to the influence of Gods or other higher beings. (1 mark)
3. Where does the word epilepsy come from?  
Epilepsy comes from the Greek meaning 'to be seized upon'. (1 mark)
4. What should you not do to someone having a seizure?  
Put something in their mouth. (1 mark)
5. Why do people with epilepsy experience the condition differently?  
People experience epilepsy differently depending upon the type of epilepsy (1 mark) and the area of the brain affected. (1 mark)
6. Describe three different types of symptoms of a seizure?  
Experiencing an odd feeling. (1 mark)  
Going into a "trance-like" state. (1 mark)  
Loss of control of their body (shaking or tremors). (1 mark)  
Loss of consciousness. (1 mark)  
Maximum of 3 marks available.
7. Is it possible to always identify the cause of a person's epilepsy?  
No. (1 mark)
8. What can cause epilepsy?  
Faulty or damaged DNA / genes. (1 mark)  
Damage to the brain from stroke or head injury (1 mark)
9. Why is surgery not a possible treatment for all patients?  
Because of the side effects caused by removing some areas of the brain. (1 mark)
10. 'The treatment of epilepsy has been transformed over the last century by the development of anti-epileptic drugs.' If drugs have transformed the treatment of epilepsy, why are new treatments still needed?  
New treatments are still needed as they are only able to control seizures in around 70% of people. (1 mark)