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Psych 1010

11:30-12:45

Amnesia

Introduction

Amnesia is a condition in which a person’s memory is lost. It can be caused by damage or injuries to areas of the brain that are vital to certain aspects of memory processing, storage, or recall. Contrary to popular belief, people whose primary symptom is memory loss typically retain their sense of self; in some cases, they may even be aware that they are suffering from a memory disorder. The thing that people with amnesia generally struggle with is learning new information and forming new memories.

Analysis

Amnesia has several causes. Most can be traced back to brain injury related to some sort of physical trauma. This can include disease, infection, drug or alcohol abuse, or reduced blood flow to the brain. Inside the brain, the hippocampus and the temporal lobes are the most important part in short-term and long-term memory. Those are usually the areas that are damaged and cause amnesia.

The hippocampus is compared to cooking with a recipe. The first time you make something, you need the recipe. However, as you keep making that same thing, you eventually do not need the recipe anymore because it has transferred into your long-term store. This is a good way to understand that when the hippocampus is damaged, long-term memory suffers.

In 1953, there was a man named HM who suffered from epilepsy. To try and stop the seizures, his doctors removed parts of his temporal lobes, including the hippocampus. After the operation, he could talk and perform tests well, but he could not remember anything that happened to him after the operation. He could remember things that just happened, but after they left his short-term memory, they would be gone forever. This is an example of how it is a known fact that the hippocampus and temporal lobes are critical when talking about memory loss.

There are at least three general types of amnesia:

* Anterograde amnesia in the inability to transfer new information from the short-term store into the long-term store. This is usually caused by damage to the hippocampal region, which is critical for putting new information into the long-term store. Victims of this type of amnesia can usually recall events prior to the trauma.
* Retrograde amnesia in the inability to retrieve information that was acquired before a particular date, usually an injury or operation. The victim can recall events that occurred after a trauma, but cannot remember previously familiar information from before the trauma.
* Transient global amnesia has no consistently identifiable cause, but it has been suggested by researchers that that migraines or a transient ischemic attack (small stroke) may be the trigger. A victim experiences sudden confusion and forgetfulness. Attacks can be 30-60 minutes or even last as long as 24 hours. In severe attacks, the victim is completely disoriented and may experience retrograde amnesia that extends back several years.

Conclusion

In diagnosing amnesia, doctors look at many different things. They may ask about recent traumas or illnesses, drug and medication history, and they check the patient’s general health. Psychological exams may be ordered to determine the extent of the amnesia and the memory processes affected. The doctor may also ask for an MRI to see if the brain has been damaged. Treatment depends on the root cause of the amnesia and is handled on a case-by-case basis. However, no matter what the cause is, cognitive rehabilitation may be helpful in learning how to cope with memory impairment.

Some types of amnesia, such as transient global amnesia, are completely resolved and there is no permanent loss of memory. Others associated with prolonged alcohol abuse or caused by severe brain injury, may be permanent. Depending on the cause and severity of the amnesia, victims may be able to live relatively normal lives. Through therapy, victims can learn to rely on other memory systems to make up for what they have lost.