

TO DISTINGUISH THE DIFFERENTIATION BETWEEN SHORT TERM MEMORY VS LONG TERM MEMORY

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ABSTRACT

Article is based on the memories. Different experiments have done to identify the theories of short term and long term memories. This article also gives a probable explanation about the neuro biology of memories. Lastly some Homoeopathic medicines are discussed for anxiety and stress. Management

Keywords: molecular, short-term memory, coding, long term memory

INTRODUCTION

The process of storing information over time so that it can influence actions in the future is known as memory. There are two types: declarative and procedural. The hippocampus is where memory consolidation takes place. Depending on the various perceptual properties, the long-term memories are distributed across various regions of the brain. The process of long-term potentiation and molecular changes occurring during memory formation are discussed in detail below. Encoding, storage, and recall (retrieval) are the three stages of memory formation in that order. Amnesia is a phenomenon in which there is the problem in memory formation which can be due to trauma to the brain, certain diseases, or stressors. While the assessment of memory has greatly improved, we are only beginning to understand the underlying mechanisms.

Memory is the process of storing knowledge over a period of time to influence future behavior. From a historical perspective, the area of memory research from 1870 to 1920 focused primarily on human memory. And Brenda Milner. [1] The results contributed significantly to memory understanding. Since then, many studies have been conducted in the memory area, leading to many advances. The 2000 Nobel Prize in Physiology or Medicine was awarded Eric Richard Kandel for his contributions to understanding the physiological foundations of neuronal storage. Prizes were shared by Arvid Carlsson and Paul Greengard.

Anderson divided memories into two categories: declarative (explicit) and procedural (implicit) memories. [1] Explicit memory can be defined as information about locations, objects, people, events, etc. It can be remembered by conscious effort. It is stored in the medial part of the brain and hippocampus temporary wrap. It can be divided into autobiographical memory and episodic memory, also known as semantic memory. The memories of episodes remember personal events and experiences. Semantic memory is reminiscent of facts that may be general or autobiographical. Implicit memories are unconsciously remembered, so it is not mentioned as non-clearing. It is stored in various areas of the brain, such as the cerebellum, neocortex, striatum, and amygdala.

NEUROBIOLOGY

Experiments have been demonstrated, and lesions were applied to the rat hippocampus at various times after learning. [2] From a molecular and cellular perspective, two perspectives are calcium spore module-dependent protein kinase II (CAMKII) [2] and protein phosphatase 1 (PP1). During memory formation, there is approximately Ca^{2+} Industrial current through an autophosphorylation process in which CAMKII converts into an activated kinase. Because PP1 has a memory suppression effect, CAMKII is back to rest. This opposing relationship with CAMKII and PP1 characterizes that push-pull systems actually have important parts of storage formation. The result is a balance between recall and

forgetting stored memories. However, short-term memory integration requires functional changes to occur in gentlemen's position and protein synthesis. During any learning process, sustained stimulation leads to the continuous activation of two paths: protein kinase A (PKA) and MAP-Kinase-K (MAPK)-Pade. PKA causes phosphorylation and activation of the transcriptional activator CREB1A, but also the phosphorylation and inactivation of the transcriptional repressor CREB2. The most unique feature of our brain is the ability to adapt to a constantly changing environment and improve functioning by learning through experience. Learning and memory formation involves a very interesting phenomenon of neuroplasticity. During learning, structural changes occur at synapses. This includes changes in performance of older synapses and changes in the amount of synaptic connections in a specific way. Synaptic associations that are less used ultimately weaken over a period of time. The number of people who use it often increases with each use. Studies suggest that long-term memory (LTM) memory can be stored through DNA methylation or prions.³

Richard Atkinson and Richard Shifflin, a memory model with several shops, presented a memory model known as the "multistore model or modal model." Data from the surrounding area and our senses is moved to memory via sensory registers. Short-term businesses, also known as RAM or short-term memory (STM), receive and receive entries from both sensory registers and long-term businesses. If information is practiced in a short-term business, it is transferred to a long-term business where it is kept indefinitely. Memory consists of the following step coding, memory, and recall. Coding is a process where our nervous system can change and store materials that reach a mode the system can manage. There are many different ways in which knowledge can be coded. This is done through visual, acoustic and semantic coding.⁴ STMs are primarily coded by acoustic coding. However, LTM usually includes semantic coding. Nevertheless, LTM data can also be encoded via visual and acoustic coding. When it comes to purchasing data from memory, the call process appears in the photos. Information about the information is not caused by the inability to call this information. Calls help you understand the difference between STM and LTM. The STM is saved and accessed in chronological order.⁵ In contrast, LTM storage and acquisitions are carried out by the association. Therefore, information structure facilitates the call process.

Sensory memory consists of three types. The first is a symbolic memory. This is a rapid decrease in visual data storage. The person has temporarily noticed that they keep the photographs for a moment. The second is echo memory. It is described as a short period of sound storage that can be heard for a short period of time. [5] Furthermore, tactile memory characterizes the TouchStimuli database. [6]

WORKING MEMORY MODEL

Baddeley and Hitch proposed a "RAM model." Working memory is a "central executive, phonological loop, visual sketchpad" and a multimodal episode buffer. [7] Working memory and STMs are often interchangeable. In his newspaper, The Magical Number, George A. Miller proved that the store with STM 7 ± 2 items is. However, modern approaches to STM capabilities are not characteristic of the size of 4-5 elements. 7]

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Forgetting and Problems with memory:

Forgotten was classified under various types of Paul Connerton. They are ready for forgotten and planned outdoor dating, the formation of new identities, oppressive developments, structural amnesia, cancellations, and humiliating silence. 8

On the other hand, aggressive obstacles occur when old information disrupts new memories. Herman Ebbinghaus proposed a forgotten curve in 1913. It theorizes deterioration of memory retention over a period of time. It represents a curve that shows how memory will be lost over a period of time without any effort to maintain it. 9

Amnesia:

Amnesia is an inevitable behind human abilities to remember. Of course, forgetting is normal and happens every day. The brain cannot be recorded forever by everything a person experiences and learns. Furthermore, memory loss is common among older people. There are strategies to deal with such losses - for example However, in more serious cases, dementia and other memory impairments can permanently damage your memory. Dementia is a loss of cognitive function and can have a variety of underlying causes, which is why the most known Alzheimer's disease. People with dementia experience progressive loss of function. Therefore, memory loss can be accompanied by mild forgetting (for example, a professional assessment can help determine whether a person's mild memory loss is a function of normal aging or a sign of a serious illness, such as the brain, a particular disease or stressor. Suffering from a longer period of amnesia after trauma is a prognostic indicator, and it has been observed that improving concussion symptoms takes more time than usual. [10]

ASSESSMENT

A healthy diet is key for self-care. Try to eat many grains, fruits, and veggies. Avoid unhealthy ways to deal with stress.

Some turn to bad habits when stressed. These include smoking or overeating. Others use drugs, too much alcohol, or coffee. These can make stress worse and harm health.

Try meditation to ease your mind. Meditation helps you focus and calm thoughts. It boosts calm, balance, and peace. This practice can improve how you feel.¹¹

You can meditate in many ways, anytime, anywhere. Try mindfulness or guided meditation. Meditate while waiting or walking. Deep breaths help anywhere. Use an app to learn these skills.

Laughter can lift your mood, even forced laughter. A good sense of humor helps. Laughing changes your body for the better. It eases mental stress and lessens your stress response.¹²

Read jokes or watch funny shows. Do things that make you laugh.¹³

Homoeopathic Medicines:

There are many Homoeopathic medicines which help to stimulate a patient.

1. Aconitum napellus: Waves of anxiety or outright panic attacks can be treated with homeopathic remedy aconite. This is also beneficial if the person is fearful, restless, agitated, or if he has recently experienced an accident or natural disaster.
2. Argentum nitricum: Anxiety often takes the form of apprehension and nervousness about the future. In such a case, homeopathy remedy Argentum nitricum (Arg-n.) can be an effective form of treatment. Such cases of anxiety can worsen with heat and in crowded spaces.
3. Kali phosphoricum: Stress caused by overworking or illness can be treated with Kali phosphoricum. In such cases, the patient may be jumpy, over-sensitive and can find it difficult to cope with normal life. Kali phosphoricum helps relax the nervous system and can also be used to treat insomnia caused by stress.
4. Lycopodium: If stress causes the person to feel inadequate and pretend to be someone they are not, a Lycopodium is a good form of homeopathic treatment. This can also treat irritability, crankiness, and social withdrawal that results from stress.

5. Aurum metallicum: Failure to succeed is a primary cause of depression in people focused on work. Aurum metallicum can be used to treat such cases of depression. These symptoms may also be accompanied by feelings of humiliation and discouragement.
6. Causticum: Depression caused by grief or loss can be treated with causticum. This also treats accompanying frequent crying, forgetfulness and mental dullness. If you wish to discuss any specific problem, you can consult a homeopath and ask a free question.¹⁴

CONCLUSION

Advances in knowledge have resulted in the realization that memory is a very complex system. While the assessment of memory has greatly improved, we are only beginning to understand the underlying mechanisms.

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