

Differences between adult and teenage brain

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Differences between adult and teenage brain There are different phases of life that every human being has to go across. From an infant to an adult different changes can be witnessed in almost every aspect of the individual. Ranging from his physical characteristics to his mental capabilities one can see a huge difference as the individual grows. Previously a common notion was held regarding the brain of teenagers and adults that the brain in these two stages was almost similar, however this notion has been denied by the research in the recent years. It has been shown that the brain of teenagers and adults is different in a considerable way. The brain of teenagers is in the developing stages as found by the recent researches. The structural unit of brain is a neuron and these neurons help in transmitting signals all over the body. It has been seen that in teenagers the brain is merely developing whereas in adults the brain has already developed in its final stages (Knox 2010). One of the most important structures for processing information in the brain is known as the cerebral cortex. This cortex is composed of two materials known as the white matter and the gray matter respectively. Previously it was thought that the production of gray matter was only restricted till the age of 10 but nowadays it has been found that the production of gray matter is seen in teenagers too. This gray matter develops fully in an adult brain unlike the teenage brain. In the teen ages it has been seen that connections are made between the neurons and if a teenager does not develop these connections he might lose the efficiency of the respective area. Thus it can be said that a teenage brain can be moulded in the way that the teenager wants it to be (NIMH 2011). In science daily it has been clearly mentioned that the teenage brain undergoes integrative and structural processing because of which they can develop strong reflexes.

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Moreover a balance between the key areas of the brain is also developed during the teen ages. These teen ages help to determine as to how the brain would function when an individual turns into an adult. The balance of functionality of the areas in the brain would be in accordance to the use of these areas in teen ages (Science Daily 2008). Myelin is a type of covering over the terminals of the neurons. It helps in the transmission of signals and adjust the rigidity of them. Synaptic plasticity is a broad concept in neurology through which different connections can be made between the neurons. Usage of the neurons would lead to increased synaptic plasticity. In teen ages myelin is growing over the terminals so that it can make the neurons rigid. This myelination process helps in creating fast connections between the neurons. However as the neurons get rigid it becomes difficult for the process of synaptic plasticity to occur (Hoder 2008). It is because of these reasons that the teenagers can grasp stuff much more easily than can the adults. A part of the brain known as pre frontal cortex is important for an individual so that he can think and execute his actions successfully. It has been found that this part is the last part to develop fully in the teen ages. When a person reaches the adulthood the pre frontal cortex stops developing (Barry 2008). It has also been found that drug usage can have a great effect on the brains of teenagers. Because their neurons are still developing connections the drugs can inhibit these connections and make them more vulnerable to its effects. Teenagers who use alcohol and the adults who use alcohol react differently in most situations and this can be reasoned by providing the details of both the teenage and adult brain. In a teenager alcohol can impair their cognitive skills for a longer time than in the adults. Moreover it has also been found that the teenagers and adults use <https://assignbuster.com/differences-between-adult-and-teenage-brain/>

their brains differently in different situations. Research was done to find out as to which regions were they using respectively and it was found that a structure known as amygdala was more active in teenagers whereas the frontal lobe was more active in the adults. It is because of this reason that teenagers cannot recognize the reactions of other people whereas the adults can do so easily (NIMH 2011). It can be clearly said that the teenage brain is developing whereas the adult brain has already developed. More research is needed to find out as to how the synaptic connections can be made easily in the teenagers. References The Teen Brain: It's Just Not Grown Up Yet.

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