

# Memory - Essential Function of the Brain

By: Stephen Campbell, August 15, 2007

The concept of Memory is in the present times the center of research and debate amongst the experts in Cognitive Sciences. This is most probably due to the fact that it is impossible to describe a cognitive, biologic or artefactual system of organization without understanding the true principles behind memory. Two major theories are currently opposing researchers in the domain of Neuroscience. Whereas one school of thought considers long-term memory to be a unified functional system, another school of thought believes that memory is a psychological system that should be broken down further into several specialized subsystems so as to understand it better.

But a fact which remains undeniable are that memory is an essential function of our brain. It is continuously solicited in almost every single activity we perform throughout our daily existence. Some of our daily activities require minimal memory input - for instance, remembering to add sugar to our coffee or remembering to take some prescribed medication. Other activities require heavier memory input, as for example, learning by heart telephone numbers that we would be using regularly. Hence, it is absolutely necessary that we preserve as well as perpetually develop our memory. All in all, we will need our memory for as long as we will live. In fact, our memory can even take us a long way - just think of winners of Who Wants to be a Millionaire! Who wouldn't want to be a millionaire, after all?

In most cases, a decrease in intellectual performance and memory are mere results of underutilization of the brain. In other words, if you are experiencing mild and temporary memory losses, if you have difficulties in recalling names or in remembering faces, if words don't come to you so easily, if you have no idea what you had for dinner last night, chances are that your memory is, under normal circumstances, not solicited enough! When used sparsely, the brain regresses.

The monotonous activities and routine occupations that we perform in our daily life mobilize the same cerebral regions. As a result, the other regions fall asleep. Of course, there are other factors which may be causing temporary poor memory and amnesia as well. Examples of such factors are excessive, accumulated stress and tiredness, lack of sleep, and deficiency in amino acids - symptoms of which, unfortunately, a majority of people present - severe depression or emotional shock.

Indeed, intellectual stimulation contributes to preserve capacities of reflection as well as memory. Very often, mental illnesses like amnesia and Alzheimer are associated with old age. In truth, they may not always be directly related to old age itself, but rather to the growing latency of the memory due to underutilization of the brain. It is hence important that you keep your neurons active all the time.

It is true that, since birth, we lose neurons that are not replaced, contrary to the other body cells. However, there is no need to panic. At birth, our grey matter is made up of billions of brain cells. Even if we lose 100 000 of them each day, we will still have enough of them to live autonomously for 120 years. Besides, our brain alters permanently. When some neurons die, others reconstitute themselves and replace the former.

Playing scrabble and crosswords, watching quiz shows on television and trying to play along, or engaging in any other type of intellectual game of logic or strategy, not only effectively keeps the brain cells alive and active but also helps improve their retentive capacity. Those who are retired or whose profession does not require constant intellectual input can also

engage in creative activities such as writing songs or poems, or even painting; all of which effectively stimulate the right brain. Indeed, such intellectual activities effectively improve memory as well as develop memory capacity further.

However, more complex methods to activate the memory also exist. Researches in Neuropsychology have resulted in more scientifically accurate techniques to improve memory through stimulation of the brain. Some of these scientific techniques are stimulation of neurons, training to improve photographic memory, as well as memorization techniques. On an ending note, we would like to remind you that the more the brain works, the better it works. Gymnastics of neurons are as beneficial as gymnastics of the body. But of course, there is a big difference between working and overworking!