

## **A new approach to the study of memory aging: working memory updating**

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In every day life we use our memory not only for recollection but also to update and integrate information. In the present work we want to verify how the ability of updating changes with age. Recently it has been supposed that poor performance of the older adults in memory tasks and, in particular, in working memory (active memory involved in complex tasks as comprehension and problem solving) tasks was impaired by poor inhibition of irrelevant information that: this information kept active, overloads working memory. So memory is not working well. Sixty subjects (20 Young-Old with an age between 55 and 65 years; 20 Old with an age between 65 and 75 years; 20 Old-Old with an age over 75 years old) were involved in the present research and they were submitted a working memory updating task. The task was composed by 20 lists (five lists of animals, five lists of objects and ten lists of number), each one of 10 items: subjects were asked to remember, at the end of each list, the three smallest animals/objects or the three biggest numbers. We observed that subjects over 75 years old had a worse memory performance with lists of animal and objects nouns. Even with lists of numbers we observed that Old and Old-Old subjects had a poor performance than Young-Old adults. With aging we lose the mnemonic flexibility in order to rapidly update the contents of our memory and to eliminate information become irrelevant. Our results indicates that, although aging decline is not in discussion, it has an highly variability inter-individual.

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