



## Stability of real idiothetic memory in men and women

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### POSTER

Idiothetic memory is a kind of memory crucial for our navigation in space and it is controlled mainly by the hippocampus. There is a great body of evidence that hippocampus is also one of structures involved in associative learning.

Thirty six subjects, 20 young (aged 20-29) and 16 elderly (aged 64-78) were examined with two tests: real idiothetic memory test and paired associates learning test due to reveal if there are any differences in learning between young and elderly people. We studied the age effect and learning effect on these two tests in healthy humans.

All subjects were tested with Paired Associates Learning (PAL) from CANTABclipse battery in which subjects were required to remember the spatial localization of 1-8 different visual patterns. Then the Real Idiothetic Memory Test was administered in special room equipped with a computerized tracking system connected to a camera to register the subjects' performance. We tested subjects' ability to walk from the *start place* (S) to the *target place* (T), specified by noise, and then returning to the S again (E-Exit)- ability to learn the path.

In PAL elderly subjects obtained poorer results than the young ones, what was evidenced by number of errors committed and number of trials required to complete the test (age-related declines in new learning abilities). In the Real Idiothetic Memory Test the differences between young and elderly subjects were nonsignificant, however, in both groups learning effects were observed. We revealed age related dissociation between performance of associative learning (PAL) and idiothetic navigation test, specifically age effect in PAL and no age related declines in real idiothetic navigation test.

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