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**PERFORMANCE AND EFFECTIVENESS OF STRATEGY USE  
ON THE REY AUDITORY VERBAL LEARNING TEST  
AFTER TRAUMATIC BRAIN INJURY AND  
IN A CONTROL POPULATION**

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## ABSTRACT

Clinical assessment of memory is important for the diagnostic understanding, management and rehabilitation of individuals with significant brain dysfunction. The present study investigated ways in which disorganised thinking or impaired information processing contribute to memory problems in survivors of traumatic brain injury (TBI). Memory performance on the Rey Auditory-Verbal Learning Test was assessed for 141 TBI patients and 59 controls and the relative effectiveness of different strategies was evaluated. Results showed a significant main effect between group scores with controls demonstrating progressively superior performance across trials. The range of learning strategies observed across both groups were condensed into three sub-categories. Subjects who employed no strategies at all performed less well than those who used passive strategies, who in turn performed less well than subjects who adopted active strategies. This latter group obtained the highest memory scores in their respective TBI or control groups. However, a temporal effect was evident in that unlike controls who maintained their best performance from initial trials to delayed recall, TBI subjects showed a marked decline in long term memory recall. Taken together, these findings suggest that the ability to initiate, maintain and transfer learning strategies depends on intact meta-cognitive processes such as executive functioning and metamemory, whereby the individual actively employs effective learning strategies. This is an effortful and elaborative process that demands vigilance and planning. When such functions are compromised, as commonly occurs in TBI patients, subsequent learning abilities may be progressively constrained. Where some residual learning ability is indicated, retraining programmes should focus on the development of self-monitoring and other metacognitive skills before instruction in mnemonic techniques.

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