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A Possible Neurological Mechanism for Age-Related Changes in the Formation of Problem-Solving Set

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A POSSIBLE NEUROLOGICAL MECHANISM FOR AGE-RELATED CHANGES IN THE FORMATION OF PROBLEM-SOLVING SET

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Studies of problem-solving set have shown no significant age differences in correct responses (Ransopher & Thompson, 1991). The current study investigates the effects of age on an anagram solution task designed to induce problem-solving set, with latency of response as the dependent measure. The inhibition-deficit view (Hasher & Zachs, 1988) suggests that elderly subjects may be less succeptible to the effects of problem-solving set. Dempster (1992) suggests that these inhibitory processes are associated with the frontal lobes. Alternatively, the perseverative characteristics seen in frontal lobe patients may suggest that the deterioration of the frontal lobes with age will cause the elderly to be more succeptible to the effects of problem-solving set. Results indicate that undergraduates were more succeptible to problem-solving set than elderly subjects at set sizes of 12 anagrams, but at a size of 15, strength of set is strong enough to affect the elderly as well. These results support a possible neuropsychological role in the formation of problem-solving set.