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Poster Presentation

Thalamic Damage and Memory

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Abstract

Memory is the cognitive ability that allows acquiring, store and recalling information. Anterior thalamic dysfunction creates memory deficits in rats and humans. Anterior thalamus forms a memory network in connection with the hippocampus. This connectivity profile proposes that ventrolateral and anterior thalamus may display a nexus between reminder and control functions, such as action or attentional selection. The recent research indicates that, with a substantial delay between post-surgery tests, controls show repeated relearning on a spatial working memory task whereas rats with neurotoxic anterior thalamic lesions showed repeated relearning deficits. Thalamic damage may trigger disconnection between areas involved in perceptual selection and mnemonic control, leading to inhibition of memory-matching signals. Hence, the deployment of attention is directed away from those items. Studies of patients with thalamic damage show that thalamus plays a role in several aspects of recognition.

Keywords: Anterior Thalamic, Memory, Cognition.

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