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Impaired associative learning in chronic fatigue syndrome.

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Patients with chronic fatigue syndrome (CFS) report cognitive difficulties (impaired attention, memory and reasoning). Neuropsychological tests have failed to consistently find cognitive impairments to the degree reported by CFS patients. We tested patients with CFS and sedentary controls in protocols designed to measure sensory reactivity and acquisition of the classically conditioned eyeblink response. Patients with CFS exhibited normal sensitivity and responsivity to acoustic stimuli. However, CFS patients displayed impaired acquisition of the eyeblink response using a delayed-type conditioning paradigm. Sensitivity and responsivity to the airpuff stimulus were normal. In the absence of sensory/motor abnormalities, impaired acquisition of the classically conditioned eyeblink response indicates an associative deficit. These data suggest organic brain dysfunction within a defined neural substrate in CFS patients.

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