

# Neuropsychological changes following electrical injury

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## Abstract

The clinical presentation of electrical injury commonly involves physical, cognitive, and emotional complaints. Neuropsychological studies, including case reports, have indicated that electrical injury (EI) survivors may experience a broad range of impaired neuropsychological functions, although this has not been clarified through controlled investigation. In this study, we describe the neuropsychological test findings in a series of 29 EI patients carefully screened and matched to a group of 29 demographically similar healthy electricians. Participants were matched by their estimated premorbid intellectual ability. Multivariate analysis of variance was used to assess group differences in the following neuropsychological domains: attention and mental speed, working memory, verbal memory, visual memory, and motor skills. EI patients performed significantly worse on composite measures of attention/mental speed and motor skills, which could not be explained by demographic differences, injury parameters, litigation status, or mood disturbance. Results suggest that cognitive changes do occur in patients suffering from electrical injury.