

Response Shifting and Inhibition, but Not Working Memory, Are Impaired After Long-Term Heavy Alcohol Consumption

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Chronic alcohol abuse leads to cognitive deficits. The authors investigated whether a systematic increase of interference in a 2-back working memory paradigm would lead to cognitive deficits in alcoholic participants and compared their performance in such a task with that in an alternate-response task. Twenty-four nonamnesic and nondemented alcohol abuse (AA) patients and 12 patients with Korsakoff's syndrome (KS) were compared with a control group. AA patients were impaired in the alternate-response task but not in working memory interference resolution. KS patients performed worse than the AA patients and the controls in both tasks. The neurotoxic side effects of alcohol therefore lead to a specific deficit in alternating between response rules but not in working memory, independently of whether the working memory task involves interference resolution or not.