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CURRENT FINDINGS: HYPOGLYCEMIA IN DRINKERS AFTER 7-10 DAYS OF ALCOHOL USE IN DOSES OF 23 ML OF PURE ETHANOL

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Objectives: Moderate alcohol use might be detrimental under certain conditions. We examined the efficiency of maintenance of blood glucose level (BGL) at normal range among non-alcohol and moderate alcohol users under intensive mental activities.

Methods: Fourth year medical students - male volunteers (5 non-alcohol and 8 moderate alcohol users who had abstained from alcohol for the last 7-10 days before the study) were involved in the study, which took 6 hrs on fasting. AUDIT, texts and questions, tests on visual, auditory short-term memory and attention were used as a measure. BGL was measured at 2hrs interval. Hypoglycemia was defined according to Galan ED et al (Neth J Med 2006; 64 (8): 269-279) as BGL ≤ 4.5 mmole/L. The t-test was employed for statistical analysis.

Results: Alcohol users on the average drank 23ml of pure ethanol/session and 1-2 times/month. Non-alcohol users had increased BGL (4.02 as initial to 5.76mmole/L after 6hrs) in all phases of the experiment ($\delta < 0.001$). Alcohol users had increase in BGL (0.45mmole/L increase, initial - 4.20) within the first two hours and a significant fall in the 4-6 hrs ($p < 0.05$) up to 3.80mmole/L, and was accompanied by a significant decrease in mental work productivity coefficient.

Conclusion: Alcohol use even in moderate doses results in hypoglycemia, subsequently leading to low mental work productivity, especially under 4-6 hr intensive mental activities.