

43 alcoholic patients, who had been undergoing anti-alcohol treatment at the Mental Health Research Institute, Russian Academy of Medical Sciences, Tomsk for one month, were subjects in the research. 32 alcoholic patients in the rehabilitation period took a 1.2 g daily dose of Sevitin (basic group) for 30 days, and the other 14 alcoholic patients were not given any medication treatment during the rehabilitation period (comparison group). Clinical dynamic of basic signs of the alcoholic patients pathological addiction to alcohol (affective, neurovegetative, ideator, dissonic and behavioral) was rated in scores. The scores were self-reported by patients twice: first – before the rehabilitative period and second – after 30 days of rehabilitation.

The reduction of affective, neurovegetative and dissonic symptoms after 30 days of rehabilitation was observed in the basic group, while the reduction of these symptoms in the comparison group was not reliable.

It was concluded that the use of Sevitin during the rehabilitation period contributes to reducing of the intensity of the pathological addiction to alcohol.

## P0051

Modulation of impulsivity by topiramate: Implications for the treatment of alcohol dependence

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Two laboratory paradigms identifying two behavioral processes have been used to measure impulsivity. The first relates to behavioral inhibition, i.e., the ability to inhibit thoughts or actions appropriately. The second pertains to the degree to which immediate rewarding consequences have more control over behavior than delayed consequences. Behavioral impulsivity disorders have been associated with alcohol dependence. Topiramate has been used to treat many disorders characterized by impulsivity symptoms. Reports also suggest that topiramate has utility in treating a variety of addictive disorders. Little is known, however, about whether its anticraving effects are related to its impulsivity-reducing actions. The aim of this preliminary study was to investigate which type/dimension of behavioral impulsivity was associated with topiramate's anticraving effects. A 12-week, double-blind, placebo-controlled pilot study of topiramate for treating alcohol dependence was conducted. Subjects were men recruited from alcoholism treatment units (topiramate=21; placebo=20). The continuous performance test and stop-signal task assessed behavioural inhibition. Differential reinforcement for low-rate responding was used to evaluate the delay discounting dimension. Alcohol craving and the amount of alcohol consumed during the study also were assessed. Topiramate-treated patients had lower rates of alcohol consumption and significantly lower alcohol craving scale scores than controls, and exhibited greater improvements in the behavioural inhibition and delay discounting paradigms. Improvement in alcohol craving was associated with better performance on the behavioural inhibition paradigm. Our findings suggest that topiramate's anticraving actions could be related to its effects on behavioural inhibition. More studies are needed to confirm and understand this link.

## P0052

Psychophysiological correlation between alcohol craving scale (ACS-3F) and startle reflex modulation

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**Introduction:** Alcohol Craving Scale-3Factors (ACS-3F) retrospectively assesses the period during which the subject consumed alcohol. It includes 33 descriptions grouped in three scales: positive reinforcement, negative reinforcement and impaired control. Tiffany emphasized the poor correlation between self-reported drug urges and the physiological effects of drug-associated stimuli. Our main objective in this project was to investigate the psychophysiological relationship between ACS-3F and the startle reflex modulation.

**Objective:** We hypothesized that the assessment of self-reported craving with ACS-3F would correlate with the non-conscious emotional response to these cues represented by the modulation of the acoustic startle response.

**Sample and Methods:** 55 alcoholic patients (29 abstainers and 26 relapsers) were exposed to acoustic startle test after three weeks of detoxification treatment. In this study, the difference between the amplitude of the startle reflex associated to images related to alcohol and the one associated to neutral images was used as dependent variable (motivational value of alcohol cues [MVAC]=startle amplitude in the presence of alcohol images-startle amplitude of neutral images).

**Results:** The abstainer group showed a significant inverse correlation ( $r=-0.475$ ,  $p<0.05$ ) between craving total score in ACS-3F and the motivational value of alcohol cues [MVAC]. With regards to craving, the group of relapsers did not correlate with startle modulation.

**Conclusion:** ACS-3F has adequate properties of concurrent validity. Results in abstainers showed a good correlation between retrospective craving self-reported and non-conscious emotional response to alcohol cues.

## P0053

Differences in the modulation of the startle reflex in abstainers and relapsers alcoholics

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**Introduction:** The study of the acoustic startle reflex modulation in alcoholics subjects in the presence of positive, aversive, neutral images and images related to alcohol consumption will allow us to measure the implicit affective valence of these cues.

**Objective:** To compare the emotional valence of the stimuli related to alcohol consumption between two groups of alcoholic patients (abstainers vs relapsers).

**Methods:** 55 alcoholic patients (29 abstainers and 26 relapsers) were exposed to acoustic startle test after three weeks of detoxification treatment. Difference between the amplitude of the startle reflex associated to images related to alcohol and the one associated to neutral images was used as dependent variable (motivational value of alcohol cues=startle amplitude in the presence of alcohol images-startle amplitude of neutral images).

**Results:** Abstainers patients showed a decrease of the startle reflex in the presence of visualization of alcohol associated stimuli compared to the registered ones in the presence of neutral stimuli ( $\mu=-0.041$ ). For the group of relapsers an increase ( $\mu=0.034$ ) of the amplitude of the startle reflex when they were exposed to alcohol related images was registered in contrast with the amplitude registered in the presence of neutral images. Differences between groups were significant ( $p<0.01$ ).

**Conclusion:** Abstainers process alcohol-related images as positive stimuli. Conversely, relapsers will stop processing alcohol-related images as appetizing or positive stimuli.