

Alcohol and NREM Parasomnias: Evidence versus Opinions in the International Classification of Sleep Disorders, 3rd Edition

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The long ongoing debate about whether behaviors enacted during an arousal from slow wave sleep (SWS) following alcohol intoxication are to be diagnosed as a NREM parasomnia or as a discrete alcohol-related phenomenon has apparently been officially settled in the newly revised *International Classification of Sleep Disorders, 3rd Edition (ICSD-3)*.¹ It is stated there that “Disorders of arousal should not be diagnosed in the presence of alcohol intoxication” (p.237). However, this was quickly challenged in a letter to the editor of this journal which asked: where is the evidence?² In fact none was documented. The bibliography for this section lists only one title dealing with alcohol-induced sleepwalking.³ This review paper has four authors, three of whom are also members of the workgroup that revised the ICSD-3. The workgroups for all other sections were composed of members from major universities and health centers including international members from five different countries, thus assuring diverse points of view would be represented. The parasomnia workgroup had no member from another country, and three of the members frequently publish together. This homogeneity is, I believe, responsible for the one-sided, premature conclusion that excludes all alcohol-related arousals from being given a NREM parasomnia diagnosis in the absence of any hypothesis-testing studies supporting this decision.

While bowing to the need for further investigations, this revision ignores recent publications reporting the effects of alcohol versus placebo on sleep and post sleep cognitive and motor behaviors in healthy volunteers.^{4,5} These well-designed studies are a model for providing the evidence to prove whether the purported differences between the arousal behaviors with and without alcohol claimed in the ICSD-3 meet the usual significance criteria.

There is already a body of evidence that confirms the sleep of those with clinical diagnoses of disorders of arousal differs from that of controls. This work was given minimal attention in this revision. This evidence is the independently replicated finding of a significantly lower absolute delta activity in the initial NREM cycle of sleepwalkers in comparison to controls using spectral analysis scoring.⁶⁻⁸ As this is the

place in sleep when most sleepwalking events occur, the statement that the PSG is only useful on the rare occasions when a behavioral arousal takes place in the laboratory, is shortsighted. This statement is true only when the sleep study is scored by the less precise traditional scoring. The more precise spectral analysis scoring also shows the probable cause for the lower absolute delta activity in sleepwalkers; they have a higher frequency of arousals from SWS than controls. These differences allow manipulative studies to stratify groups as more or less vulnerable to disorders of arousal then to test whether pre-sleep alcohol has different effects on the arousal behaviors as hypothesized in this revision. In other words, there is now a consensus that the pathophysiology of disorders of arousal involves a dysfunction in the mechanism responsible for sustaining consolidated periods of SWS in adult sleepwalkers.⁹

It should be noted by those who consult this 3rd edition, that the NREM parasomnia section contains both sins of omission, (ignoring the power of spectral analysis scoring to discriminate sleepwalkers from controls) and sins of commission (the rush to exclude all alcohol-related arousals from a diagnosis as a NREM parasomnia before the appropriate studies have been done). Unfortunately these sins undermine the credibility of this opinion-heavy, evidence-light section of the ICSD-3.

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DISCLOSURE STATEMENT

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